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 A look at the career of Pittsburgh's
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Radio World



August 14, 2002

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The Newspaper for Radio Managers and Engineers

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NEWS MAKER

Kline Hits the Road for Cumulus

by Randy J. Stine

ATLANTA Working as on-site engineer for Learfield Sports in 1991, Gary Kline had the task of wiring Indiana University head basketball coach Bobby Knight for an interview. Sounds simple enough, until one considers that Knight had just emerged from the shower and was in a state of undress.

Kline was faced with attaching a wireless microphone to a naked and famously ill-tempered basketball coach.

Engineering destiny

"I'm standing there with the lavalier microphone, and we have just moments before we go live for his talk show, and he's all wet."

So Kline had to get creative. As the coach sat down in a chair, the engineer gingerly rested the mic on Knight's ample stomach.

"By that time he had thrown on a pair of pants, at least," Kline said, laughing. While he doesn't count the Knight incident as a career highlight, Kline said it's a good example of how engineers are expected to think on their feet.

Kline has improvised his way to the post of corporate director of engineering for Cumulus Broadcasting, where he oversees technical aspects of operations at the group's approximately 260 radio stations in 60 markets.

"Ultimately, my responsibility is to keep our stations on the air. I do it with the

See KLINE, page 6 ▶



Gary Kline

NEWS ANALYSIS

Florida LPFM Blooms in The Keys

by Naina N. Chernoff

BIG PINE KEY, Fla. In the far reaches of the 110-mile stretch of islands known as the Florida Keys, a local church has built what it says is the first low-power FM station in the region.

WGGP(LP), which stands for "Where God's Grace is Present," began transmitting a 100-watt signal in late June from the three-acre grounds of the First Baptist Church.

The religious broadcasting station joins a group of about 30 holders of LPFM licenses or construction permits with temporary authorizations to be on the air across the nation. With more than 300 CPs in total issued by the FCC since last year, first-time broadcasters are learning how to create community-based low-power radio stations.

What sets WGGP apart from the others is not its location, say church officials, but their planning and execution. After receiving its construction permit on June 1, the station began broadcasting in less than a month. The rapid build-out,

See LPFM, page 8 ▶



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◆ NEWSWATCH ◆

NAB: Authorize IBOC Now

WASHINGTON NAB believes the FCC should endorse Ibiqity Digital Corp.'s AM and FM in-band, on-channel digital audio broadcasting systems immediately. The trade association has suggested the commission authorize interim AM and FM IBOC transmissions, so that the agency and broadcasters "fully understand the benefits and tradeoffs of IBOC technology for the AM and FM bands prior to IBOC standardization and the establishment of final service rules."

NAB stated, "Immediate interim authorization will allow broadcasters, receiver manufacturers, ancillary (data) service providers and others to further study the performance of IBOC DAB in a real-world environment as IBOC products are readied for the marketplace."

After the interim period, NAB believes, the FCC should adopt Ibiqity's AM and FM technology as the single technical standard for digital broadcasting in this country and develop appropriate service rules.

AM IBOC daytime service rules require further evaluation, but need not delay action to immediately authorize

interim AM and FM IBOC operation, NAB stated, while nighttime AM IBOC should be studied further.

AM broadcasters who support rapid IBOC authorization include Susquehanna Radio Co., Journal Broadcast Corp., Greater Media, Inc., Cox Radio, Inc., National Public Radio, Infinity Broadcasting Corp. and Clear Channel Communications, according to NAB.

To commenters who question AM IBOC service as "not as problem-free as new band service, limited by skywave interference concerns, incompatible with analog AM stereo operation, etc.," NAB responds that IBOC can transform AM,

but it must happen now, or else it's likely to never make the transition.

As an example, NAB quoted from the comments of Journal Broadcast Group, stating that while Journal believes the AM service should be full-time, it encourages the commission to endorse AM IBOC for daytime while night testing occurs, stressing that "immediate endorsement will encourage receiver manufacturers to include AM IBOC in their first-generation receivers."

Ibiqity Testing On WOR(AM)

NEW YORK Buckley Broadcasting's WOR is slated to be a test station for IBOC digital AM radio. Buckley said WOR would be the first AM station in New York City to broadcast a digital signal, with tests to begin this month. The average listener would not notice any difference in WOR's signal, according to the station.

Ibiqity must do additional tests for AM IBOC at night for both groundwave and skywave conditions. The National Radio Systems Committee has recommended FM IBOC for day and night use, but has endorsed the AM system only for daytime use so far.

WOR employs a directional transmitting antenna and is in the test protocol to

See NEWSWATCH, page 10 ▶

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Arbitron Works to Smooth Out PPM

by Leslie Stimson

COLUMBIA, Md. Arbitron officials say they've fixed some technical anomalies of the Portable People Meter and made improvements requested by engineers participating in PPM trials in Philadelphia.

New devices to monitor the status of the PPM encoding process were to ship to the 45 radio stations, 11 TV stations and 25 cable networks participating in the trials in early August (see related story, page 27).

Arbitron is using a proprietary psychoacoustic critical band masking technology to encode a station's audio. The encoding is placed between 1 and 3 kHz in the spectrum in a way that makes it inaudible to the listener, according to the audience measurement firm.

Is it on?

Typically, the Arbitron encoder is installed near the end of the audio chain, but before the audio processor. To differentiate stations, each encoder transmits a unique code that Arbitron programs into the device before delivering the unit to the station.

The program material to be encoded is applied to the input of the Arbitron encoder, which continually analyzes the frequency and amplitude of the input signal using DSP technology.

The signals are received and may be



An Arbitron employee demonstrates the PPM docking procedure at the 2001 NAB Radio Show.

decoded by a decoder or a PPM.

Engineers had asked Arbitron for a way to know whether the encoder is operating, saying the light on the encoder was not always a reliable indicator.

The new monitors are installed in the return air feed of a station. They will be set up to alert the station if the monitor fails to see the PPM encoding in the station's signal.

This alert is provided in several ways,

said David Forr, Arbitron's director of U.S. encoding operations. One is an LED on the front panel of the monitor that turns on green, indicating that encoding is OK, to flashing red, when encoding is not present. Further, a set of relay contact connections available via a rear panel connector can be incorporated into a station's existing air-fault alarm system.

Also, a serial port can be connected to a station's computer system for a contin-

uous feed of the status of the encoding reported by the monitor, Forr said.

Arbitron's goal is to make these monitors available to every station encoding its signal for the PPM.

Another technical issue Arbitron believes it has solved is the so-called headset effect, in which the encoding process was audible in some instances.

Robert Patchen, Arbitron vice president of research standards and practices, said that of 47 radio stations encoding, jocks from three stations noticed the artifacts in their headphones. Last year, some told Radio World they were distracted by the noise.

Software upgrades

Arbitron said an encoding software upgrade has fixed the problem and that the artifacts, though heard in some jocks headphones, could not be heard over the air.

The encoder bypass function now comes with a key, a comfort factor for engineers who were worried that station employees might accidentally brush up against the old button used on the unit and turn off the encoding process.

Knowing that stations may face using PPM technology as they also transition to in-band, on-channel digital audio broadcasting, Arbitron and Ibiqity Digital Corp. are discussing how their two systems can be compatible.

Though the PPM encoder comes with both analog and digital versions of the software, Arbitron said it is talking to Ibiqity to develop a test plan, for lab tests

See PPM, page 5 ▶

FY '02 Regulatory Fees Rise 9%

The FCC is increasing regulatory fees nearly across the board for fiscal year 2002. Congress has required the FCC to collect \$218.7 million to recover the costs of its competition, enforcement, spectrum management policies and informational activities for the fiscal year. This is just over \$18.6 million, or 9.3 percent, more than Congress told it to collect for 2001.

Stations must pay the fees for any licenses or authorizations that were transferred or assigned on or before Oct. 1, 2001. In cases where the service license or authorization is assigned or transferred after that date, the payment is still due, and the agency suggests the party that holds the license on the due date pay the fees.

Stations must pay the fees in the period Sept. 10-25 so the FCC can process them over several days.

Radio fees range from \$500 for a Class A AM station serving a population of fewer than 20,000 to nearly \$5,000 for a Class B, C, C1 or C2 FM that serves a population of more than 1 million.

Noncommercial stations and RPU's used in conjunction with noncoms are exempt from annual regulatory fees. EAS licenses for auxiliary service facilities also are exempt.

Fiscal 2002 fees not included in the chart are AM construction permits (\$370), FM construction permits (\$1,500), FM translators and boosters (\$320), and broadcast auxiliary stations, including RPU's and STLs (\$10).

For more information, call (888) 225-5322.

— Leslie Stimson

FY 2002 Radio Station Regulatory Fees

Population Served	AM Class A	AM Class B	AM Class C	AM Class D	FM Classes A, B1 & C3	FM Classes B, C, C1 & C2
≤20,000	500	375	275	325	375	500
20,001 - 50,000	925	725	375	525	725	925
50,001-125,000	1,500	975	525	775	975	1,500
125,001-400,000	2,250	1,575	800	950	1,575	2,250
400,001-1,000,000	3,125	2,525	1,425	1,700	2,525	3,125
>1,000,000	4,975	4,100	2,075	2,625	4,100	4,975

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If These Old Walls Could Speak ...

Popular Washington Post columnist Bob Levey recently took a reader's question about the decorum of office decorations. The reader wondered whether her "helter-skelter" style — comic strips and kids' drawings — might be looked down upon by her bosses, as though she had shown up not dressed for success. Perhaps Monets and Renoirs would be more suitable.

Levey replied with a list of his own office decorations, ranging from bumper stickers to photos of Buffalo Bob and Howdy Doody. "Your walls belong to you, not Renoir," he wrote.

This prompted me to wonder, what do your walls say about you?

What do mine say about me?

In addition to the stacks of paper, story schedules, Post-It notes, reference books, old issues and assignment sheets you'd expect to find on the desk of an editor, here's what I see as I look around my office in Falls Church, Va.:

✓A poster of William Shakespeare on my office door;

✓A dramatic black-and-white photo by Volkmar Kurt Wentzel from the 1993 art show "Washington by Night" at the Corcoran Gallery of Art, showing the

Capitol and Washington Monument as seen from the Lincoln Memorial;

✓A Gary Larson "Far Side" calendar (August: Moby Dick smashes his little red car into another vehicle only to realize he has just rear-ended Captain Ahab);

✓A framed copy of my column in March 2000 about the late Jesse Maxenchs;

✓A framed copy of my column from last fall, saluting the victims of Sept. 11;

✓A framed copy of a 1997 letter from Jim Quello, then an FCC commissioner;

✓A poster with the entire text of the play "Romeo & Juliet";

✓Seven photos of my three-year-old nephew, and several of other family members;

✓My beloved leather WHN belt buckle from Jim Nedelka, proudly visible on a shelf;

✓A photo of me presenting a framed article to Andy Butler, then president of the SBE;

✓A photo of myself in Ireland by a welcome sign reading, "Fáilte go dtí Áth Dara," which I think means "Welcome to Adaire" but probably means "This way to men's room";

✓Two photos of myself and my "bride" from a recent production at Classika Theatre, in which I played a reluctant Russian bachelor in the Nikolai Gogol play "The Marriage";

✓A black-and-white photo of myself and my three siblings in the guise of a faux rock band called The Rude Dogs;

✓A photo of myself (hmm, *that* might be a trend) accepting an award from the regional Associated Press for a radio series I wrote in the mid-1980s;

✓A crayon drawing made by my girlfriend showing us living in a house with two cats, two kids and a tennis court;

✓A plastic, futuristic six-inch police officer atop my computer, a gift from an actress after my stage debut in 2000 (the cop is holding a pen that I stuck into his hand in place of his spage-age ray gun);

✓A postcard showing the Eiffel Tower, half-built, from 1888;

✓Photos of the sales crew at Bradley Broadcast Sales circa 1995, and of me with a customer at a Radio Systems booth circa 1988;

✓A letter from the late Steve Allen;

✓A black-and-white poster of mid-town Manhattan in 1945 by Andreas Feininger from the Metropolitan Museum of Art;

✓Several "Cool Stuff" Award trophies and plaques;

✓A 12-string Jasmine guitar, in its case on the floor;

✓A baseball, on my desk;

From the Editor



Paul J. McLane

✓A tiny piece of KDKA's old tower, sold as a fundraiser for Children's Hospital of Pittsburgh, on my desk;

✓A photo of the production studio at the former WEGX(FM), a Malrite station in Philadelphia, from my days selling and helping to design studios at Radio Systems;

✓A photo of tennis starlet Anna Kournikova;

✓A considerable stack of books to review and to read;

✓An autographed photo of Cousin Brucie Morrow;

✓And photos of my best friend and his wife, as well as Orson Welles, Audrey Hepburn, Edward R. Murrow, Don Williams, Patrick Stewart, James Doohan, Aaron Copland and a Curtiss P-40N "Warhawk" airplane.

Conclusions?

A stranger could see that I'm in radio; I love architecture and the theater; I act and I play the guitar; I think the pen is mightier than the sword; I have my heroes in the fields of journalism, broadcasting and "Star Trek"; I treasure my friends and family; I fawn over my fabulous nephew; I have an eye for the ladies; and I think a bit much of myself.

Tell me about your unusual office decorations and what they say about you via e-mail to radioworld@imaspub.com.



Robert Geckler of Ecumenical Communications in Terryville, Conn., wins a Henry Engineering PatchBox in the Radio World Reader's Choice

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PatchBox is a passive stereo "output multiplier" that can eliminate the need for DAs and patchbays. It takes the stereo output of a mixer and creates 11 stereo outputs to feed to other equipment. It gives the user five balanced outputs on XLR and 1/4-inch TRS connectors, plus six unbalanced outputs on RCA connectors.

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GUEST COMMENTARY

Test More AM IBOC Antennas

by Mario Hieb

I was working as the frequency coordinator of the 2002 Olympic Winter Games when I participated in my first National Radio Systems Committee AM in-band, on-channel conference call. I listened quietly in my office, contributing nothing to the conversation.

My phone would ring frequently with requests for spectrum. Every time I took a call, I put the NRSC sub-committee on hold and each time inadvertently treated them to a medley of Olympic "music-on-hold."

After realizing my faux pas and overcoming the embarrassment, I continued to listen to the discussion. One of the participants asked about the effects of transmission system reactance on the AM IBOC system. The reply was, "We're not testing for that right now." That comment stuck in my mind.

AM is critical

Nine people gave presentations at the IBOC implementation session at this spring's NAB 2002 convention. Four of them specifically covered directional antenna transmission system bandwidth requirements for AM IBOC.

None of the four presenters agreed on what the bandwidth requirements should be, but they agreed that, because of the orthogonal frequency division multiplexing sidebands, bandwidth requirements are more critical for AM IBOC than for analog AM.

It seems that when you have impedance bandwidth problems with analog AM, you lose the high end of your audio. But when you have the same problem with hybrid-mode AM IBOC, you lose bits and, at some point, the digital signal.

PPM

► Continued from page 3 and later station trials, to see specifically how stations using IBOC can encode.

What about the other form of digital radio, satellite-delivered? An Arbitron spokesman said whether Sirius Satellite Radio or XM Satellite Radio choose to encode is not a technical issue, but a business decision.

"If they choose to encode, we can do it," he said. Presumably, they might choose to encode when their audience grows, sources said.

Arbitron also is looking at how to increase the battery life of its PPMs. That will become more of an issue if stations in more markets use the technology and PPM wearers travel.

Battery life of the meter is about 27 hours, said Patchen. When it reaches that limit, the PPM shuts down when its battery dies, and some data can be lost. Arbitron said there is enough memory in the meter to store about a week's worth of data. Executives are pondering having portable battery chargers manufactured.

Whether the PPM is commercialized in this country is an open question.

To respond to the commentary, an Ibiqity representative said that the only bandwidth requirement for the hybrid-mode is flat response +/- 5 kHz from carrier. He also said that some directional arrays would have trouble with AM IBOC.

The conclusion that the antenna systems had no detrimental impact on IBOC performance seems a bit of a stretch.

"If you only need +/- 5 kHz," I later asked an Ibiqity representative, "then why do you have OFDM subcarriers out to +/- 15 kHz.?" He agreed that the IBOC system required more bandwidth.

The NRSC report states that, "No detrimental impact on IBOC performance or durability was observed due to the transmitting antenna system employed," which I assume means that the NRSC concluded that non-directional and directional antenna systems performed equally. This conclusion was based on the testing of four major-market AM stations.

Only one of the test stations used a non-directional antenna system. The tests were conducted on the four test radials of each station. They were chosen for their proximity to grounded and ungrounded conductive structures, adjacent channel interferers and power lines, and not for pattern maxima and minima where system bandwidth

Arbitron hopes to know by the end of the year whether research partner Nielsen Media Research will contribute funding for the project. Owen Charlebois, president of Arbitron's U.S. Media Services, said, "We believe the PPM is too expensive as a radio-only service. We need participation from Nielsen."

Until it has that answer, Arbitron cannot address a big issue for stations, the cost of the PPM vs. the cost of the traditional diaries.

If the project is a go in this country, Arbitron said it doesn't need every station in a market to encode, but it does need "a critical mass" to make the project worthwhile, Charlebois said.

Philadelphia would be the first PPM market, likely by the middle of next year, followed by an additional four of the top 10 markets in the next 12 to 18 months, he said. Arbitron hopes to have stations encoding in 100 designated market areas, which would be 170 Radio Metros, by the end of 2008.

If Nielsen's answer is no, Arbitron would try to commercialize the PPM overseas. It plans to start a 650-person trial in London in October. Arbitron has plans to test in Latin America, and tests are possible in Canada this year, the ratings firm said.

problems manifest themselves.

To me, the conclusion that the antenna systems had no detrimental impact on IBOC performance seems a bit of a stretch.

Curiously, the report later states, "While these test stations provide a

mission systems are complex and esoteric, and each is unique in its performance. Ibiqity needs to conduct rigorous tests based on real-world transmission systems and not just 50+j0 ohm laboratory dummy loads.

While at it, take a hard look at the AM IBOC test methodology. Rather than conducting tests with a multitude of interference sources, limit the degradation source to one and study its impact on coverage. Also, using FCC AM coverage contours for digital radio is like comparing apples to oranges. The NRSC should do as digital television has and develop revised contours and interference criteria based on the characteristics of digital modulation.

Don't know enough

We're on the road to adopting a digital AM standard about which we don't know that much. Before we consider adopting the proposed AM IBOC system, we need to know what the minimum antenna system criteria are to achieve digital service on par with present-day analog service.


Consulting engineers as well as transmitter and phasor manufacturers need to be able to market their systems as "AM-IBOC ready." Station owners need to know if, in addition to purchasing AM IBOC hardware and paying licensing fees, they have to shell out additional money to fix antenna systems.

Reach Mario Hieb, CPBE, CBNT, via e-mail to mario@xmission.com.

Radio World welcomes other points of view to radioworld@imaspub.com.

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Kline

► Continued from page 1

help of a great engineering staff at the station clusters," Kline said.

Kline, 37, was born and raised in Queens, N.Y. Early on he seemed destined to become a broadcast engineer.

"I played with electronics and took apart radios at my grandparents' house as a kid. As I got older I could actually put them back together. They were happy about that," he said.

Young scientist

Kline played with an old Teac reel-to-reel deck his father owned. He even put together a mock demo tape on 8-track tape. Then he was told about a ham radio club at the Hall of Science in New York. Kline joined at the age of 12.

"That's where I started to learn about current, voltage and tubes in a radio. That really formalized my beginnings in electronics."

Kline got his first glimpse of a radio station at age 14 or so when he called a New York radio station to report signal interference.

"I called WYNY(FM) and told them there was classical music in the background. Their chief engineer called me back a few days later and said they had discovered bleed-over from an STL. He thanked me for pointing out the problem and invited me for a station visit," Kline said.



In 1983 Kline was working at what was then WXUS(FM), Lafayette, Ind.

under my belt going to college."

Kline chose to attend Purdue University in West Lafayette, Ind., in part because of its electrical engineering program. But he heeded the advice of his father when selecting a major.

"My father was a civil engineer, and he always told me, 'Gary, go into business. Be the guy who tells the engineers what to do.' So I chose business as my

Southern Baptist Convention Media Technology Group.

Before graduating with a degree in business management in 1991, Kline had helped build radio stations in Indianapolis and worked several summers as a vacation relief engineer for NBC Radio and ABC Radio in New York.

"My schedule during school was incredibly busy. I was so immersed in radio ... I was also working on several projects in Colorado. It slowed my schooling down, and didn't help my grades all that much, either," Kline said.

He joined University Broadcasting while in school and went to work full-time for the Indianapolis-based broadcaster upon graduation.

"The day after I graduated, I was in a car on my way to Fort Collins, Colo., to build some studios as the group's director of engineering," Kline said.

The company, now known as Artistic Media Partners, owned stations in Colorado and Indiana.

Kline especially liked the opportunity to travel.

"I still think the travel is the best part of my job at Cumulus. That's good, because I'm on the road just about every day," he said.

The engineer left Artistic Media Partners in 1994 to work for a real-estate development company as business manager, only to rejoin the broadcaster in 1998 as group technical director after missing radio badly.

In 1999, Kline received an e-mail from Terry Baun, then director of engineering for Cumulus. It would set his ensuing career path. It's a message Kline still saves on his computer.

In part Baun wrote, "We are thinking about hiring another corporate-level person, perhaps to plan and manage build-outs/consolidations and perhaps be our processing guru. Any interest there?"

Kline said he was immediately intrigued. "It felt as if I was working myself to death ... building new studios while working around the clock with very little help. I was ready for a change."

The Cumulus Broadcasting job offered plenty of opportunity for travel. The company owned more than 300 radio stations before a series of investor

lawsuits in early 2000 forced it to sell off some assets. The Atlanta-based Cumulus now has 260 stations in 60 mid-size and smaller U.S. media markets.

Kline joined Cumulus in the fall of 1999 and originally did a lot of automation system installs and audio processing for its stations.

He officially became corporate director of engineering for Cumulus in January of this year. He had been acting in that capacity and running his own consulting engineering company since Baun's departure in October of 2000.

Kline is responsible for day-to-day technical and special project expenditures and reports to Cumulus Media Inc. Executive Vice President John Dickey.

"I don't have a large staff like a few of the other group engineering directors do. So I have to get out and do most of the travel myself. I'm usually on the road from Sunday night through Friday night," Kline said.

Studio builds

"I still get a kick out of visiting radio stations and seeing what their studios and transmitter facilities are like. And believe it or not, even though I enjoy the new studios we build, I am especially fond of older studios that remind me of the '80s," he said.

Kline said Cumulus has seven regional directors of engineering who are responsible for their own stations and typically stations in several neighboring states. In total, Cumulus has 60 to 70 engineers.

'When we spec transmitters, every one we buy, we consider IBOC.'

"The majority of our stations have at least one full-time engineer. Many of those are backed up by local contract firms," he said.

Cumulus just completed new studios in Harrisburg, Pa., and has plans for new studio facilities in Mobile, Ala.; Topeka, Kan.; and Eugene, Ore. Kline said the studio projects will be digital facilities with digital consoles. However, he said the company has not standardized on consoles or other critical studio components for buildouts.

"I like to keep an open mind for new products or other vendors. I'm always open to new concepts in design and technology."

The fact that Cumulus owns automation software provider Broadcast Software International plays no role in his decision-making when it comes to choosing an automation system, he said. Cumulus originally announced plans to standardize its stations with BSI

See KLINE, page 7 ►



At about age 12, Kline was a finalist in a New York City science fair.

After seeing radio studios for the first time in his life, he was hooked.

During the summers of his sophomore and junior years in high school, Kline received National Science Foundation grants to attend college.

"I spent seven weeks in the summer of 1980 studying digital and analog electronics with college professors at Ball State University and got college credit for it," Kline said.

The next summer he was invited to study solar-energy engineering at the University of Colorado at Boulder. Kline says the summer studies gave him an advantage when he graduated high school in 1982.

"I don't know if I would go through all of that again, because it was a lot of work; but I'm glad I did. I had a great deal of electronics experience already

major," Kline said.

Kline worked for Purdue University radio station WBAA(AM) his first year. He announced and learned about equipment by watching the station's veteran engineers.

"I also worked for my dorm's radio station. Each dorm had its own radio station with turntables, a cable modulator and maybe a couple of cart decks ... whatever they could scrounge up to work. I eventually became program director for my dorm's student-run WLAY. I loved it."

His first professional radio experience came at what was then WXUS(FM) in Lafayette, Ind. "I worked the midnight-to-9 a.m. shift Sunday mornings. And yes, that included running 'Powerline,'" Kline said, referring to the long-running Christian radio program from the

Kline

► Continued from page 6
 automation software products after acquiring the company in 1999, but later said it would move away from standardization (RW, May 8).

"We choose an automation system based on the needs of the market. That can vary. Sometimes we simply move over existing systems if it is in usable shape," Kline said.

Planning for new studio and transmitter projects includes consideration of future conversions to in-band, on-channel digital audio broadcasting, Kline said.

"When we spec transmitters, every

one we buy we consider IBOC. We make sure the transmitter has enough power for combiner loss and that we leave enough space in the buildings to

company would have to examine each market to determine return on investment before giving IBOC the go-ahead.

"I expect you'll see some of the big-

'I still get a kick out of visiting radio stations and seeing what their studios and transmitter facilities are like.'

allow for IBOC equipment in the future," he said.

Kline declined to discuss specific IBOC plans for Cumulus. He said the

ger market groups spending money on it in the next year. Some people I know are already setting money aside for conversion. I'm just not sure when it's going to

happen for us. We'll wait to see what the consumer radio manufacturers roll out."

Kline is proud in particular of the Cumulus Broadcasting mission statement, which includes the following: "We strive to create the next-generation radio broadcasting enterprise, based on great people and technological excellence that will provide high-quality, local programming choices for our listeners."

It's the "technological excellence" part that gets Kline excited.

"That means a lot to me. I tell all of my guys that (Cumulus) takes what we do very seriously and that they recognize the contributions of the engineering department," Kline said. "My goal is to make sure each of our markets has the best technical facilities possible." ●

Kline's Peers Say ...

Gary's been a great mentor and has taught me everything I know about engineering. He's a first-rate engineer and is non-stop radio. For Gary, it's all about engineering and getting the job done. We have a friendly competition going when we work together on projects to see who can outperform whom. He's hard to beat.

— Michael Gay
 Manager Engineering Services
 IT Telecom Division
 Purdue University



CUMULUS

During the 13 years he worked for us, Gary kept Artistic Media's stations ahead of the technology curve. Gary has always seen where radio is going from a technology standpoint.

Our stations were voice-tracking 10 years ago, and WAZY(FM) was one of the first stations in the country to have a Web site. He's impatient to implement new technology to the low-tech business of radio.

— Art Angotti
 Chairman and CEO
 Artistic Media Partners

Gary is one of the most energetic and enthusiastic engineers I've encountered. Whenever Cumulus needed a high level of expertise to roll out a project, Gary was the logical go-to guy.

He has a particularly good ear for audio processing and interfaces extremely well with the programmers he works with. He also knows how to read a balance sheet. All of these skills make him ideally suited to be working in today's consolidated radio industry.

— Terry Baun
 President
 Criterion Broadcast Services
 Former DOE for Cumulus
 Broadcasting

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Host, *Good Day USA.*

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LPFM

► Continued from page 1

according to the pastor and station manager, Charles Sexton, was a result of the congregation's work for the past two years.

In 2000, about a year before the church applied to the FCC for a frequency, Sexton made plans to start constructing a tower on the church grounds, knowing it would take some time for island officials to approve a building permit.

Big gift

After receiving a major gift of \$10,000 for the tower from a family that belongs to the church, the church decided to start building it even prior to receiving the FCC's go-ahead for the station.

Using the talent of some congregants who have construction experience, Sexton and a group of church members dug a 16-by-16-foot hole for the footer, poured the concrete and erected the tower according to a state-certified blueprint provided by tower manufacturer Rohn Industries.

For three months, Sexton said, members worked during weekends to construct the three-pole, freestanding tower, which had to meet rigorous wind-resistance standards because the island sits in a hurricane-prone area.

Item	Manufacturer	Model	Approx. Cost
Tower (100 foot)	Rohn Industries	custom	\$10,000
Antenna	OMB America	GP1	\$250
Transmitter	JT Communications	FT300	\$2,495
Mixer	Behringer	MX1604A	\$170
Processor	Behringer	DSP9024A	\$179
Stereo generator	JT Communications	CSG-1	\$449
Automation software	JT Communications	Automatronix	\$549
Microphones	Samsung		\$160
Music library	Christian Music Library	custom	\$1,000

Sources: Charles Sexton

WGGP(LP) Equipment List

"We had it inspected by the county and there were no modifications that had to be made," Sexton said. "Anyone along the coastline of Florida requires a strong tower."

The custom-built tower was among the equipment bought by the church. Sexton estimates that it spent close to \$50,000, funds raised mostly by its members. Most applicants are spending less than the half of that; and the pastor admits the church's budget is uncommon in the LPFM world.

"It could have been done cheaper," Sexton said. "But you get what you pay for."

Professional advice

The church chose to use the services of an engineering consultant to purchase and install the station equipment inside the church.

First Baptist hired JT Communications in Ocala, Fla. The firm helped it purchase a single-bay antenna, transmitter, mixer, processor and various types of studio equipment, including microphones, stands and an audio processor, Sexton said. The antenna is 50 feet from the studio.

JT also provided a refurbished stereo generator, a 30-watt exciter for the main transmitter, and Automatronix, a comput-

erized music and event-scheduling program.

Many LPFM stations have opted to

First Baptist will offer free half-hour spots to other churches in the area on Sunday mornings.

use automation equipment due to the lack of employees to staff studios 24 hours a day, said Jim Trapani, president of JT Communications. According to FCC rules, LPFM stations are required to produce up to eight hours per day of local programming, which can include songs selected by staff and managed by automation.

Programming

Sexton said the station broadcasts a mix of contemporary Christian music, ranging from "audio adrenaline," a brand of "head-banging" Christian music directed at teenagers, to Gathers, a classic hymn format.

Besides music, Sexton said, the station transmits live broadcasts of the church's Sunday morning and evening services.

Later this summer, First Baptist will offer free half-hour spots 7-11 a.m. on Sundays to other area churches to use for their own broadcasts.

"We want to make the station available to all denominations," the pastor said.

The station doesn't plan to seek on-air underwriting despite having to raise \$70,000 to \$75,000 each year for its operating costs, Sexton said. The church plans to provide the radio station with \$120 each month at first, and most likely will increase the amount in the future, Sexton said, adding that WGGP itself will need to raise the remainder.

"We don't want to tie up our time with underwritten programming," he said. "We want to leave time for music and community outreach. We're striving to be listener-supported."

Sexton has other programming plans for WGGP. After receiving a license, which Sexton hopes will be come this year, he plans to purchase a satellite system to obtain syndicated Christian programming, including "Focus on the Family" with Dr. James Dobson and Larry Burquett's "Money Matters," a Christian-based financial planning program. The church has hired a part-time announcer for the daytime and is considering whether to hire another next year.

Sexton attributes WGGP's build-out pace to the extensive planning he and other church members have done over the

readily endorsed it, but then had to wait many years before it was implemented.

"When we understood that the FCC was opening windows, the fact that we were in the last window was discouraging," Sexton said.

Things have moved relatively quickly since then, he said. The church did not face any competition for a frequency on the island, which has a population of around 5,000. He said Big Pine Key is an affordable place to live for the area's working-class community compared to Key West, 25 miles to the south.

Sexton struggled to find time for himself while building WGGP.

Trying to pastor a church and head up a station, he said, "It's kind of like doing two full-time jobs." ●

DIGITAL NEWS

Many Americans 'Get' Sat Radio

MINNEAPOLIS Less than a year after satellite radio hit the market, and before one of the two services was available nationwide, many Americans already were aware of satellite radio.

That's according to a study by market research firm Ipsos-Reid. About 100 million people age 12 and up have heard of XM Satellite Radio or Sirius Satellite Radio. Roughly three-fifths, or 59 percent, of the 100 million are men, mostly in their 20s and 30s, according to the research firm.

"Whether the currently strong awareness levels will translate into subscriptions for both XM and Sirius remains to be seen, but certainly the pump has been primed," said Ipsos-Reid's Matt Kleinschmit. About 1,100 respondents participated in the survey, which can be seen at www.ipsos-reid.com/tempo.cfm.

Europe to Allocate More DAB Spectrum

MAASTRICHT, Netherlands The European Conference for Posts and Telecommunications will allocate an additional seven blocks of L-Band spectrum across Europe to terrestrial DAB.

The World DAB Forum, which represents companies and organizations from various sectors of the radio broadcasting industry in 25 countries, was pleased. This is the third such allocation of spectrum to the Eureka-147 DAB system.

The group reached its decision at a planning meeting in Maastricht in the Netherlands.

"The extra L-Band (spectrum) now available will create more opportunities for digital broadcasting services and will pave the way for competition, particularly in densely populated areas," said WorldDAB President Annika Nyberg.

Overseas DAB supporters hope that in 2005, a revision of the Stockholm Plan, drawn up in 1961 to organize and plan frequencies across Europe and northern Africa, will address the issue of extra spectrum for terrestrial DAB in Band III.

Affordable Portables Touted in U.K.

LONDON This month, portable Eureka-147 radios that cost the equivalent of about \$150 should be available to listeners in the United Kingdom.

VideoLogic's Pure Evoke-1 was set to go on sale through independent retailers. Unlike a predecessor that sold for a similar amount last year, this is not a limited edition, subsidized, product, according to the company.

The Digital Radio Development Bureau is supporting the Evoke-1 launch with an on-air radio campaign and point-of-sale material for stores promoting the product and DAB listening in general.

The first batches of radios were to be available in London by the end of July, and stocks were expected to roll out across the country in August.

The radio also can be used in Spain, Scandinavia, Singapore and Korea. It uses a Frontier Silicon chip and third-generation DAB technology and comes with an auxiliary speaker output, headphone socket, line out, power input, telescopic aerial and aerial connector. An optional matching speaker turns it from mono to stereo.

For information visit www.videologic.co.uk.

XM Reaches 136,500

WASHINGTON XM Satellite Radio ended the second quarter of the year with about 136,500 subscribers.

Although most of those listeners came through aftermarket retail sales, XM expects receivers installed by carmakers eventually will make up the majority of its purchases.

General Motors is expanding factory installation of XM to 23 additional models in the 2003 model year.

"Our focus is now shifting to making XM part of the sale of GM vehicles as well," said XM President/CEO Hugh Panero. "In preparation for availability at dealers beginning later this summer, XM is now being factory-installed in 25 models of GM cars,

See DIGITAL NEWS, page 10 ►

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Omnia is used in 4 of 5 leading stations in New York, 2 of the 3 top stations in Los Angeles and 5 of 6 of the most listened to stations in the US. It's on the leading stations in Paris, all of the BBC's FM stations in the UK, and the number one stations in Canada, Ireland, Germany, Finland, Australia, India, China, Denmark, and Sweden.

*\$3,880 (US) MSRP for Omnia-3m model. Prices may be slightly higher outside the U.S. due to duties, freight and other costs.

NEWS WATCH

► Continued from page 2
help answer questions as to how AM IBOC will perform with skywave interference. WOR also was chosen as a test station to help answer questions about how the digital portion of an AM signal will react in the "concrete canyons" of New York other major cities.

Thomas Ray III, corporate director of engineering for Buckley Broadcasting/WOR, said, "I take great pride in having our radio station be part of the development of one of the biggest technical advancements in radio broadcasting since FM stereo in the 1960s.

"WOR has been a pioneer since being one of the only radio stations on the air in the United States in 1922. We have been part of the development of the profanity delay, were pioneers in the development of the AM directional transmitting antenna, and were one of the major players during radio's 'golden era' by forming the Mutual Radio Network."

Adelstein on His Way?

WASHINGTON There may be a fifth FCC commissioner confirmed soon.

The Commerce Committee sent the nomination of Jonathan Adelstein to the full Senate for a vote to fill the open commissioner seat on the FCC.

During a non-contentious nomination hearing in July, the nominee said he believes there is a crisis in the telecommunications industry due to the market downturn.

"If confirmed, I will work to enhance

competition, promote universal access and efficiently manage the public spectrum."

NAB supports the nomination of the Democrat, a 15-year Senate staffer and longtime aide to Majority Leader Tom Daschle, D-S.D.

Though the president intended to nominate Adelstein in February, the nomination was not sent to the Senate until July because of negotiations among Senate leaders over this and other nominees.

Although Sen. John McCain, R-Ariz., former committee chairman and now its ranking Republican, has been blocking the nomination over disputes with senators over an FEC nominee, during the hearing he seemed eager to get the commission slot filled.

"This is not an obscure agency," said McCain.

At presstime, it was unclear when the Senate would vote on the Adelstein nomination. When pressed, Adelstein said he could not talk to the press until after his confirmation.

Adelstein was nominated to fill out the term of former commissioner Gloria Tristani, who left in September 2001 in order to run for a seat in the Senate from her home state of New Mexico.

Infinity, ABC Extend Arbitron Pacts

NEW YORK Infinity Broadcasting Corp. and ABC Radio have extended their contracts with Arbitron for audience measurement data.

The one-year extensions give the radio groups access to measurement data up to

the release of the Spring 2003 survey. The groups and Arbitron held off on inking longer extensions until the ratings firm figures out if it can commercialize the Portable People Meter in the United States, and if so, what the cost would be to stations.

"As we make progress in our market trial of the Portable People Meter and in our joint venture discussions with Nielsen Media Research, we will be better able to articulate the value proposition for the new ratings service," said Arbitron President/CEO Steve Morris.

"This contract extension is specifically designed to provide the time we need to give our customers the information they have requested in our continuing discussions for the long-term renewals of their ratings contracts."

Mays Blasts Back at Labels

Clear Channel Communications President Mark Mays estimates his company receives \$10 million to \$13 million a year from independent promoters — but the money is not related to airplay.

In a July interview with the Los Angeles Times, Mays said Clear Channel has encouraged record companies to stop the payments. But some labels fear that if they stop payments to independent promoters, their rivals would have an edge in getting airplay, the report said.

"The record labels are sitting here with a very old business model that is going to be difficult to reinvent. And they're lashing out instead," said Mays.

Referring to Sen. Russ Feingold's bill to curb such promotion practices and limit consolidation, Mays said involving Congress essentially is asking lawmakers to step in and prevent the record companies themselves from writing checks to independent promoters.

Mays says labels have no business "screaming about radio consolidation." In radio, he said, the top 10 companies account for 44 percent of industry revenues, whereas the top five record companies control 85 percent of theirs.

DIGITAL NEWS

► Continued from page 8
with an aggressive rollout plan encompassing household names such as Buick, Cadillac, Chevrolet, Oldsmobile, Pontiac and GMC."

XM said Pontiac is offering free XM radios to those who buy a 2003 Grand Am, Sunfire, Aztek or Bonneville through November.

Isuzu dealers offer XM radios to buyers of its Axiom and Rodeo models. XM and rival Sirius Satellite Radio will be available as options this fall on six Infiniti and Nissan 2003 models as well as on future Audi and Volkswagen models.

XM gained about 60,000 subscribers in its third quarter since launch, most from retail sales at Circuit City, Best Buy, Tweeter, Radio Shack and other retailers. The satcaster remains on track to end the year with an anticipated 350,000 subscribers, Panero said.

Distributor Gulf States Toyota planned to offer XM as a dealer-installed option on all vehicles sold at its 141 dealerships

RTNDA: Women, Minorities Lose Newsroom Jobs

WASHINGTON There are more women and minority news directors, but there has been a decrease in the percentage of minority and women in radio news overall, according to the Radio-Television News Directors Association.

The results of RTNDA's annual survey show that minorities hold 8 percent of radio news jobs, down from 10.7 percent in 2001. Minorities make up just more than 5 percent of news directors, up from 4.4 percent in 2001, and they hold 3.8 percent of general manager jobs in radio.

Also, women hold 32.5 percent of jobs in radio news, down from 37.4 percent in 2001. In radio, the percentage of women news directors rose to 22.3 percent from 21.9 percent in 2001; women hold 11 percent of general manager jobs.

"It's good news that women and minorities are increasing their numbers in management ranks," says Barbara Cochran, RTNDA president. "But the decline in total staff percentages is a cause for concern. We will continue to watch these numbers closely and help news organizations diversify their staffs."

There are two possibilities as to why the minority percentages are down from last year, says Bob Papper, the Ball State University professor who conducted the research with colleague Michael Gerhard.

"First, last year's data could simply represent a statistical anomaly. We're always at the mercy of those who return the survey, and last year's sample could have over-represented the minority population," Papper said.

"Another possibility is that the downturn in the economy has hurt minority numbers. As minority journalists moved up in market size, stations were unable to replace them. That could lead to an overall drop in percentage."

RTNDA published the RTNDA/Ball State University Women & Minorities Survey in the July/August issue of Communicator. Visit www.rtnda.org/research/womin.shtml.

beginning in July. Gulf States is one of two independent Toyota distributors with exclusive rights to distribute Toyota vehicles in Texas, Oklahoma, Arkansas, Louisiana and Mississippi.

CFO for XM

XM Satellite Radio has named former Comcast executive Joseph Euteneuer as chief financial officer and executive vice president.

Euteneuer will oversee XM financial operations as the company seeks to expand its service. He served as executive vice president and CFO of a subsidiary of cable TV firm Comcast, Broadnet Europe; prior to that he was Comcast's corporate controller.

During his tenure, Comcast subscribers grew from 1.3 million in 1988 to 8.5 million in 2001; revenue grew from \$500 million to \$9.7 billion in the same period.

— Leslie Stimson



FCC Nominee Jonathan Adelstein testifies as Senate Majority Leader Tom Daschle, D-S.D., looks on.

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Pictured Above:

E. Curtis Johnson,
Program Director

Pamela Whitmire, aka - 'PK the Redhead'
Air Personality

Dave Case,
Chief Engineer



P.K.: Well, unlike some previous boards that I've used – I never have to beat on this console to get it to work. My music just always sounds great on it. And the board's features are great. Our engineers wired it so that I've got lots of extra sources on my B inputs so I can use my air studios to do production. And, they've got the remote keys on the right hand side of the board wired for EAS and even the back door intercom, which is really convenient.

The built-in talkback system is excellent, too. It really saves time and it's really fun to use it to annoy my co-workers in the other studios.

The console layout is uncluttered, with everything where I'd expect it to be. It makes it really easy for me to train part-timers on the board. Oh, and I LOVE the squishy push buttons.

Dave Case: Two years ago when I began this build-out I had a big decision to make. I was going to be able to throw out a hodge-podge of old consoles and buy all brand-sparking new boards. I knew that I wanted to standardize on one manufacturer, and budget was definitely an issue – but still, which should I buy?! Frankly, I was all set to go with another brand that I was more familiar with until Dan Braverman, President of Radio Systems, asked if he could stop by. Boy was I surprised when he arrived with one of his 18 channel consoles almost literally under his arm.

While I was previously aware of Radio Systems' older RS series line of boards, I hadn't seen the Milleniums before. And within a half hour of Dan's presentation we were sold on the console's construction, features, specification and looks. Of course, two hours later Dan was still talking, so finally we had to take him out to lunch to get him to shut up.

In the end, we bought and installed thirteen 18 and 12 channel Millenium consoles, and now 2 years later, I can honestly say that we've never regretted our decision. These consoles are really unusually well featured and optioned for inexpensive consoles. Every board is equipped with 4 extra mix-minus outputs, which are probably more than we need. This freed the TEL bus up for any special phone mixes that I need, and it's nice to have some extra outputs if I ever need them for additional connectivity in the future.

I'd like to be able to comment on the serviceability of our Radio Systems consoles, but I can't. That's because since they've gone on the air, they really haven't needed any! Aside from some initial shipping problems, which the factory fixed for us right after delivery, I've got some consoles that I don't even think we've opened up a second time since they've been installed.

We were also able to use Radio Systems' StudioHub wiring system for this installation – which was really a lifesaver. We were really under the gun time wise, and StudioHub made the entire 13 studio complex and engineering area go together quick and easy. Another real time saver was that with all the inter-studio cables being CAT-5, we were able to utilize local telephone and network crews to install this wiring. And those guys are much easier to come by than degreed broadcast engineers, who you don't need with StudioHub.

Oh yeah, and one more thing. I love the fact that all the illumination in these boards uses high-brightness LED's. Thank God that with over 150 console channels in my plant – I have yet to have to replace even one light bulb!

E. Curtis Johnson: Mainly, I like the looks of the Millenium consoles. I think that my disc jockeys have to look at a board and say, "you know what - these look good." They have kind of a soft touch to them, so it's not like dealing with a piece of hard plastic. And they look cool with the track lighting.

The ergonomics on them feels right. They're the right size. Some boards try to cram too many things in which means the faders are too close to where the buttons are. When push comes to shove, you end up pushing the wrong button. Here, everything's just right!

There's very little maintenance on them. Of 13 units we bought, I've only seen one on the bench, and that was for only a couple of minutes. The bottom line is, in 2 years of using these boards I have never had a disc jockey be unable to do his or her job—because these boards always work.



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Lightning Strikes; So Do Thieves

by John Bisset

John Stortz of the Moody stations in Florida protects his VRC-2000 remote control from the southern lightning by using an Optilator from Stormin' Products, available through most broadcast equipment vendors.

This device interfaces your remote control to the telco world by isolating the copper phone line through a few inches of fiber-optic cable. The risk of lightning damage, coming in from the phone line, virtually is eliminated.

Recently, however, John's Optilator at WKES(FM) failed. Talking to Mr. Optilator, John Pencore, at Stormin' Products, John learned of a situation that can occur. He passes it on to *Workbench* readers.

The WKES remote control normally is used only to call out alarm conditions. Because there are few alarms at this site, the call-out feature is used rarely. There is a rechargeable battery on the line side of the Optilator, which must be charged while the phone is off-hook. If the battery discharges too much, there will be no dial tone passing through the Optilator.

To overcome the problem, the Optilator has a black, recessed switch on the telco end of the unit that can force the device to connect to the phone line. Pressing and holding this switch for about 20 seconds will recharge the battery enough to get a dial tone and place a call. If this works, leave the Optilator connected to a phone that is off-hook for about 20 minutes, and the battery should recharge.

We thank both Johns for this tip. This occasional maintenance procedure is a small price to pay for the protection this device offers dial-up remote control systems.

How are your coaxial grounds? Fig. 1 shows the proper method of attachment. Note how the ground kits sweep down

from the coax toward the ground plate.

I can't begin to tell you how many I see that loop or connect "up" only to loop back down to ground. Remember, the purpose of the ground kits is to provide an easy path to ground. Lightning will seek the easiest path to ground; the sweep from the line down to the ground plate in the photo achieves this.

Note also that the ground wire leading from the ground plate is protected by a piece of PVC pipe (see arrow).

Thanks to Jeff Caudell, Harrisonburg market engineer for Clear Channel, for sharing how it's done right.

★ ★ ★

While we're on the subject of transmission line, Fig. 2 shows what can happen when line is not mounted properly on a tower. Looks like the line on the left was used as a climbing step!

Crushed line, as seen here, can affect your voltage standing wave ratio — VSWR — or reflected power; and the higher the frequency, the bigger the effect.

Protect cables by mounting them properly to the tower, keeping them clear of climbing pegs or ladders.

★ ★ ★

Radio World's online NewsBytes recently carried a story about theft of

transmission line at a Citadel tower site in Spokane, Wash. Thieves hacked off about 250 feet of line from a 10-foot spool of Andrew 3-inch Heliac, a crime that cost the station about \$14,000 in materials and crew time.

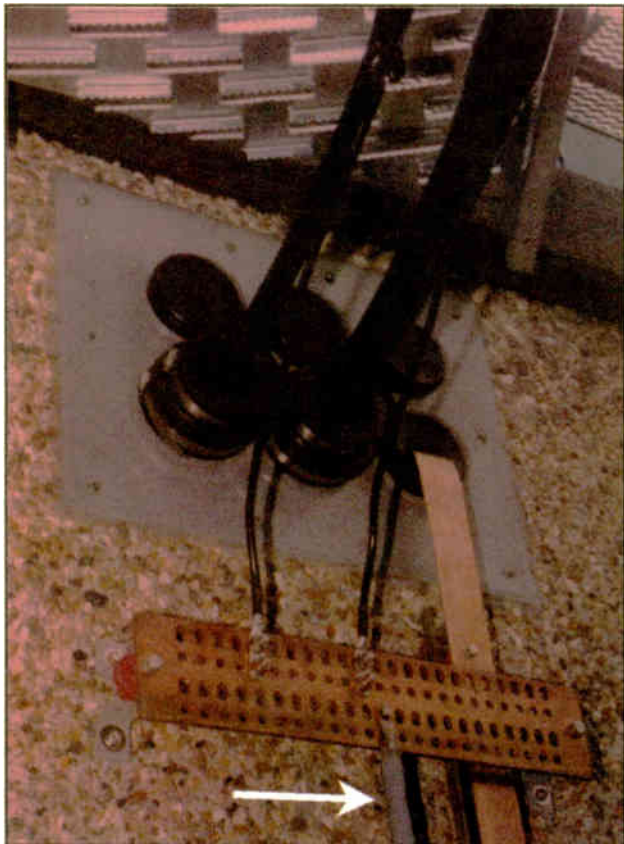


Fig. 1: How are your coaxial grounds?

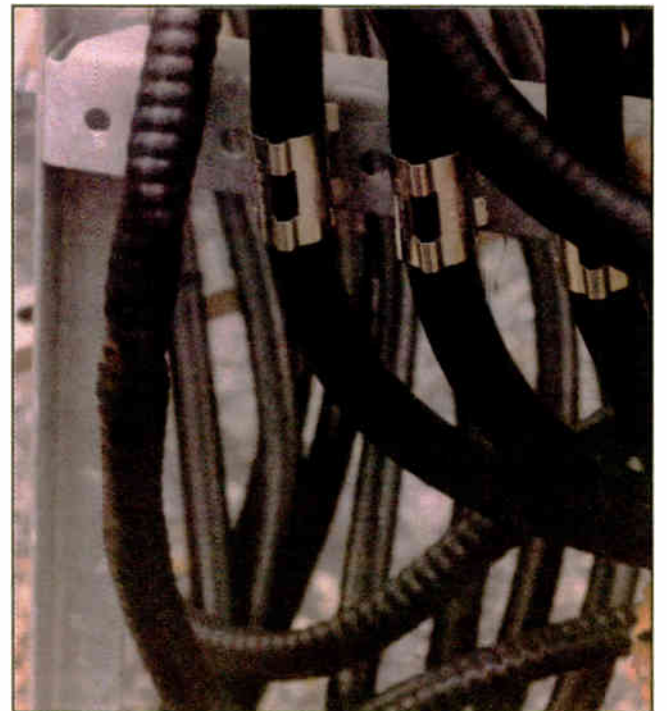


Fig. 2: Crushed line like the one on the left can cause VSWR problems. Keep lines clear of climbing pegs or ladders.

The station's misfortune brought some hard-earned suggestions from Entercom-Seattle's Clay Freinwald to the SBE-PDX newsletter of SBE Chapter 124 in Portland, Ore. One of Clay's stations recently was hit as well; several hundred feet of 3- and 5-inch line was stolen.

Some was retrieved when an alert policeman spotted a truck with a piece of the line sticking out of the back. But, Clay writes, the owners did not get all of it back; and what was retrieved had been cut into 8-foot lengths. Scrap-metal See WORKBENCH, page 14 ▶

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ERI won the contract from Clear Channel to supply antennas, combiner, tower and tower erection services for the Sandridge Tower project in Dayton, Ohio.

The director of engineering for Clear Channel in Dayton is Jeff Bennett. He said this will be a challenging project.

"The Sandridge Tower is a large structure which must be placed on a small parcel of land. It will be within 14 feet of an existing 540-foot tower, alongside a warehouse and an industrial office-building complex. The existing 540-foot tower will remain in use until the new tower/antennas are completed."

The project will permit four stations to collocate, consolidating from other tower locations. An ERI Cogwheel style antenna will allow Clear Channel Class B FM stations WMMX, WTUE and WLQT to share a facility. A separate ERI 1084DA panel antenna on the tower will be a major upgrade for WXEG.

Target completion: late summer. ...

Sirius Satellite Radio is among those using MaxxStream products from Waves Ltd. for digital audio streaming requirements.

MaxxStream integrates audio encoding supporting multiple encoders' formats and bitrates simultaneously with audio capture, processing, archiving and transmission. Sirius installed 15 MaxxStream M200/4 systems for its broadcast studios and transmission facilities in New York. They let Sirius support audio conditioning on 60 stereo channels. Jake Glanz is assistant director of broadcast engineering at Sirius. ...

Netia won the contract to fit out the facilities of Sporting News Radio in Chicago with a Radio-Assist 7 digital audio system.

The network has 430 affiliates. ...

Also in that city, Multicultural

Broadcasting of Chicago chose Ram Broadcast Systems to design and build on-air and production facilities in Zion, Ill. Ram will build the studios at its facility in Wauconda, Ill., then ship and install them at WPJX(AM). ...

Rick Dees, syndicated personality at KIIS(FM) in Los Angeles, uses Zephyr

Xstream, according to Telos Systems. Jerry Burnham is the station's special projects engineer in charge of Dees' personal studio and remote equipment.

Separately, Talk America Radio Networks completed a major new studio complex in Newark, N.J., and is using Telos talk-show systems there.

Talk America is the source of programs including Bruce Williams, Doug Stephan and Barry Farber. TWO-x-12 ISDN talkshow systems and a dozen Zephyr Xstream ISDN Transceivers are in place. Jerry McDonald is assistant engineer and

See WBW, page 16 ▶



Rick Dees and Jerry Burnham hoist their Zephyr Xstream.

Workbench

★ ★ ★

▶ Continued from page 12
dealers will pay about 40 cents per pound for line — with the jacket on.

In the end, Clay had his line transported to the scrap yard and got a check for a few hundred dollars.

After that experience, Clay offers the following suggestions: If you have transmission line on the ground, keep the spools in a locked yard with an alarm. Keep the spools covered with a large tarp. But, better yet, keep the spools out of sight, if possible.

★ ★ ★

We've had a few tips recently about jumper and test cables.

The time spent on making up an assortment of cables is always appreciated when you're under the gun to get something tested in a hurry.

Joe Schloss of KICD(FM) in Spencer, Iowa, suggests taking the step further. He writes, "It costs next to nothing!"

Take an assortment of DB connectors — male and female DB-9s, -15s, -25s and -37s. Get some existing jumpers from your workbench and cut them in half. Solder the jumper to each mating male/female pair.

The adapters will give you an easy way to hook a VOM or other device to a DB port to pick up a temporary audio feed.

If you're planning to attend the NAB Radio Show in Seattle next month, build an extra day into your schedule to drive up to Bellingham, Wash. There you will find the American Museum of Radio at 1312 Bay Street.

Fig. 3 will greet you as you enter the museum. It's a late-1930s Wurlitzer Juke Box, Model 258, and it would make Dick Clark proud. It plays only 78-rpm records and holds 24 tunes.

What's unique about the design is that the tone arm is fixed and the turntable moves up and down vertically, bringing the record up to the stylus, then lowering the record to its appropriate location after playing. It's ingenious, and the jukebox still works.

The museum features an abundance of radios, early vacuum tubes, meters and amplifiers. Admission is free, donations are appreciated. Note that the museum is open Wednesdays through Saturdays from 11 a.m. to 4 p.m., and by appointment. For information call (360) 738-3886 or go online to www.americanradiomuseum.org.

It's another reason to "see you in Seattle."
John Bisset has worked as a chief engi-



Fig. 3: The American Museum of Radio in Washington state includes this Wurlitzer Juke Box that plays 78s using a fixed tone arm.

neer and contract engineer for more than 30 years. He is a district sales manager for Harris Corp. Reach him at (703) 323-8011.

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

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Amazing Adaptability with easy storage, recall and reconfiguration of set-ups for various day parts, and built in connectivity to routing switchers, digital storage systems and other networked sources.

Low Cost of Ownership by design, Harris' BMXdigital's true cost of installation, operation and maintenance is markedly lower than other consoles.

Legendary BMX Reliability is what you expect in a Harris console by Pacific. The table pounding of your resident shock jock won't faze this beauty.

Harris' BMXdigital by Pacific. Beauty that's a lot more than skin deep.

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SBE NEWS

Certification, Benchmark of Skill

by David Carr, CPBE

RW provides space for commentary from the Society of Broadcast Engineers as a service to the industry.

In past years, the FCC required that a broadcast maintenance engineer obtain a Radiotelephone License. An engineer could obtain a Third, Second or First Class Radiotelephone License by taking different-level exams administered by the FCC.

These levels were sequential; a person could test for the Second Class only if he had obtained a Third Class license and so on. The higher the class of license obtained, the broader the scope of maintenance that person was allowed to perform.

These licenses could be renewed every five years by submitting documentation attesting to an individual's satisfactory job performance in the field of broadcasting.

Later, the FCC deleted the Third Class License and combined the Second and First Class into the General Class License. The General Class License required no renewal; it was granted for life.

Untested

There were two basic problems with this system of licensing. First, an engineer could renew his license without any verification that he was maintaining his technical skills, so a renewed license did not necessarily attest to the engineer's current skill set. Second, once the General Class License was granted in perpetuity, verification of technical skill was completely lost.

Later, the FCC deleted the requirement for the broadcast engineer to be licensed. The commission stopped testing altogether.

During this time, the Society of Broadcast Engineers recognized the need for a program that would attest to a broadcast engineer's competency. This need gave rise to the program of certification in 1975. Broadcast pioneers Jim Wulliman, Ben Wolfe and John Wilner created the SBE Certification Program.

The following objectives of the Program of Certification were established:

- To raise the status of broadcast engineers by providing standards of professional competence in the practice of broadcast engineering and related technologies.
- To recognize those individuals who, by fulfilling the requirements of knowledge, experience, responsibility and conduct, meet those standards of professional competence.
- To encourage broadcast engineers to continue their professional development.

To accomplish these objectives, the program was established and has at its core four classes of Certification. They are Certified Broadcast Technologist (CBT); Certified Broadcast Engineer (CBE); Certified Senior Broadcast Engineer (CSBE) or television (CSRE) expertise; and Certified Professional Broadcast Engineer (CPBE).

Although many more classes of Certification now exist, these four remain the center of the Certification Program.

While the Certified Broadcast Technologist does not carry a work experience prerequisite to take the exam, it does establish a starting point to gauge an individual's knowledge.

Testing is not the only way candidates may earn the CBT designation. SBE also recognizes other means of establishing an individual's competency. A valid General Class License or Amateur-Extra Class License can be substituted if the applicant also has two years of

broadcast engineering experience.

The candidate testing for Certified Broadcast Engineer must have five years of experience in broadcast engineering and must demonstrate mastery in the technical field. The candidate testing for Certified Senior Broadcast Engineer must have 10 years of experience in broadcast engineering and must demonstrate mastery in the technical field.

Seasoning

The Certified Professional Broadcast Engineer requires that an applicant have at least 20 years of professional broadcast engineering or related technologies experience and hold a valid SBE Certified Senior Broadcast Engineer or



state Professional Electrical Engineer license.

It is this engineering experience and mastery that the Certification Program was set up to verify. This level of professional competence, recognized by one's peers, often is used by managers to evaluate a job applicant. An increasing

See CERTIFICATION, page 17 ▶

WBW

▶ Continued from page 14
recording studio consultant. ...

Cumulus Media was the first organization to go on the air this spring with **Wheatstone D-4000** digital consoles. The "significant" order included 12 consoles, both D-4000 and D-5000 models, for Cumulus projects in Harrisburg, Pa., and Mobile, Ala.

Separately, **Auditronics** named **RDA Systems** and its on-line division **SystemsStore.com** as a national dealer for its line of audio broadcast consoles. Rick Dearborn is president of RDA. ...

Performance Racing Network, a subsidiary of Speedway Motorsports Inc., signed an affiliate marketing agreement with **PGA Tour Radio**, a division of Santa Rosa Broadcasters, LLC.

Santa Rosa Broadcasters is the exclusive radio licensee for the PGA Tour.

Performance Racing Network will market PGA Tour Radio programming to its affiliates. ...

Dielectric said **Cumulus Media** signed a Preferred Customer Agreement under which Dielectric will be Cumulus' preferred supplier of antennas, transmission line and RF systems for its 254 stations.

Cumulus is the No. 2 U.S. radio group owner based on number of stations. ...

The **Motor Racing Network** picked **Broadcast Electronics** to automate its network serving 700 affiliates.

The network, which covers NASCAR racing, said it entered an alliance with the supplier that builds upon the AudioVault automation engine as its base for live-assist race coverage and show production.

MRN is using a customized AudioVault for its master studio in Daytona Beach, Fla., and three others for mobile production trucks. The system had to be rugged enough for the network's semi-truck studios used at various speedways. ...

Mayah Communications said **Radio Free Europe** purchased its Centauri 3001 model for live IP transmissions from remote studios in Moscow, Kiev, Bucharest, Bratislava and Sarajevo.

Manfred Hanspeter is director of the Telecom and Network Department of Radio Free Europe.



MRN chose Broadcast Electronics to automate its network.

"Six devices at the main studio in Prague will handle the incoming connections via V-SAT in Layer II mono. ISDN connections act as a fall-back solution," he said. "One key argument for us is the wide range of compatibility with existing ISDN audio codecs." ...

Kostow Greenwood Architects, a New York designer of media facilities, was awarded the design of CNN's New York Broadcast studio, to be located at AOL Time Warner Center at Columbus Circle.

The 240,000-square-foot facility will house CNN's New York on-air broadcast, broadcast production and post-production facilities and is scheduled for completion in 2004. AOL Time Warner Center will house the bulk of CNN's New York operations. KGA will design the broadcast studios, production and editing rooms, the newsroom and personnel offices, as well as common areas. ...

JT Communications wired, installed and provided training for the first station to be issued a low-power FM construction permit in the Florida Keys.

First Baptist Church of Big Pine Key, Fla. was the client. The contract included a JT Communications FMT300 transmitter and an Automatronix computerized music and event scheduling automation system. ...

Codec supplier APT is part of a rebuilding program at Serbian radio station **Radio Televizija Srbije**, or RTS.

APT said the station lost most of its technical assets to NATO bombers and

anti-Milosevic protestors, and is trying to transform itself into a national public broadcasting system.

"The transformation is being spearheaded by a new board of directors, which was appointed by the new Serbian government after Milosevic was ousted from power in October 2000," APT said in a statement. "This includes journalists and independent professionals ... many of whom were actively opposed to Milosevic."

Milan Orlic, chief technical director for RTS, told the supplier, "We are still trying to rebuild the studios and transmission facilities and we are back on air broadcasting more than 100 hours of programming a day. But there is much to be done and very little money with which to do it."

RTS bought a dozen codecs from APT to transmit stereo signals via multiplex to the radio station's main switching rooms. ...

Worldspace purchased 100 TC **Electronic DBMAX** compressor/limiters. The satellite broadcaster uses the processor in Singapore, Johannesburg and London to perform A to D conversions while controlling the level of audio uplinked to the satellites. Worldspace supplies service to Africa, the Middle East, Asia, Latin America and the Caribbean.

"Who's Buying What" is printed as a service to our readers who are interested in how their peers choose equipment and services. Information is provided by suppliers.

Companies with news of unusual or prominent sales should e-mail information and photos to radioworld@imaspub.com.

Certification

► Continued from page 16

number of firms are stating "SBE Certification" as preferred or required of candidates. The Certified Broadcast Technologist has shown an understanding of broadcast engineering and demonstrated his interest in providing a recognized benchmark of this skill.

The Certified Broadcast Engineer, Certified Senior Broadcast Engineer and Certified Professional Broadcast Engineer are seasoned professionals. These certification classes do not measure entry-level engineers. They measure well-developed engineering professionals who have not only been in the business for years but have maintained their level of competency throughout their broadcasting career.

To obtain certification, applicants must answer questions that are continually updated by the National Certification Committee. The question pool is reviewed regularly by the Committee to remove outdated questions and to add questions on new technologies. This attests to the fact that recently-certified engineers are familiar with the latest rules and practices.

Retest

Certification is valid for five years, after which an engineer can retest at the same level, test at a higher level or provide proof that he has maintained his technical competency.

For the CBT level, one must meet a service requirement to recertify at the same level. For the other levels, a system of points was created to measure an individual's experience. The Broadcast Engineer must earn 20 points during the previous five years. The Senior Broadcast Engineer must earn 25; the Professional Broadcast Engineer must earn 30.

There are 10 categories in which recertification points can be earned:

- Employment in the broadcast engineering or allied field;
- Successful completion of an accredited course in broadcast engineering;

- Presentation of a significant paper on a broadcast engineering topic;
- Publication of a technical article in a national broadcast periodical;

- appointed officer or committee member in SBE or other technical society;
- Attendance at local, regional or national technical conferences;

- Other activities involved in the broadcast engineering field.

The credits must be earned in no less than four categories.

Although other classes of certification were added later, the Certified Broadcast Technologist, the Certified Broadcast Engineer, the Certified Senior Broadcast Engineer and the Certified Professional Broadcast Engineer remain at the heart of the Certification Program because they recognize a broadcast engineer's technical competency in our profession.

David Carr, CPBE, is a member of the SBE's National Certification Committee and a past chairman of that committee. He is director of engineering for Telemundo Group Inc.

An increasing number of firms are stating 'SBE Certification' as preferred or required of job candidates.

- Active membership and participation in SBE or other national technical society;
- Participation as an elected or

- Attendance at factory schools or in-station schools;
- Successful completion of home-study courses in broadcast engineering

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SRPT-40A

The SRPT-40A is highly reliable and feature packed. Now, the exact frequency can be dialed in from the front panel, from 430 MHz through 480 MHz, making it easier than ever to use. Other frequency bands available in 2002.

Radio Operator's Book Updated

Last year, the SBE Certification Committee received approval to create a new handbook and certification for radio operators. A previous edition was released several years ago but never updated.

Recognizing the need for such a resource, particularly with the success of the "SBE Television Operator's Certification Handbook," it was decided to start from scratch and create an all-new text and exam.

While the FCC Rules have changed regarding transmitter operators, radio stations still need a convenient way to train and educate new board operators and station operations personnel.

The author of this project is Ron Bartlebaugh, CBNT, director of engineering for the WKSU stations in Kent, Ohio. The book will be available later this year. Watch for its release on the SBE Web site at www.sbe.org.

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PRODUCT EVALUATION

Stardraw Gets Symbolic for Radio

Documentation Software Has Library of 10,000 Symbols; Vendor Plans to Enhance Radio Content

by Tom Vernon

Radio broadcasters have long been in need of their own documentation software. The ongoing consolidation of broadcast facilities and potential for thousands of digital transmitter upgrades ensure that most engineers will be busy documenting construction projects for some time.

At the same time, systems integrators and equipment vendors need a quick and easy way to generate proposals, price lists and other documents. New software from Stardraw.com may make designing and documenting radio installations quick and easy, and perhaps even fun.

Drag and draw

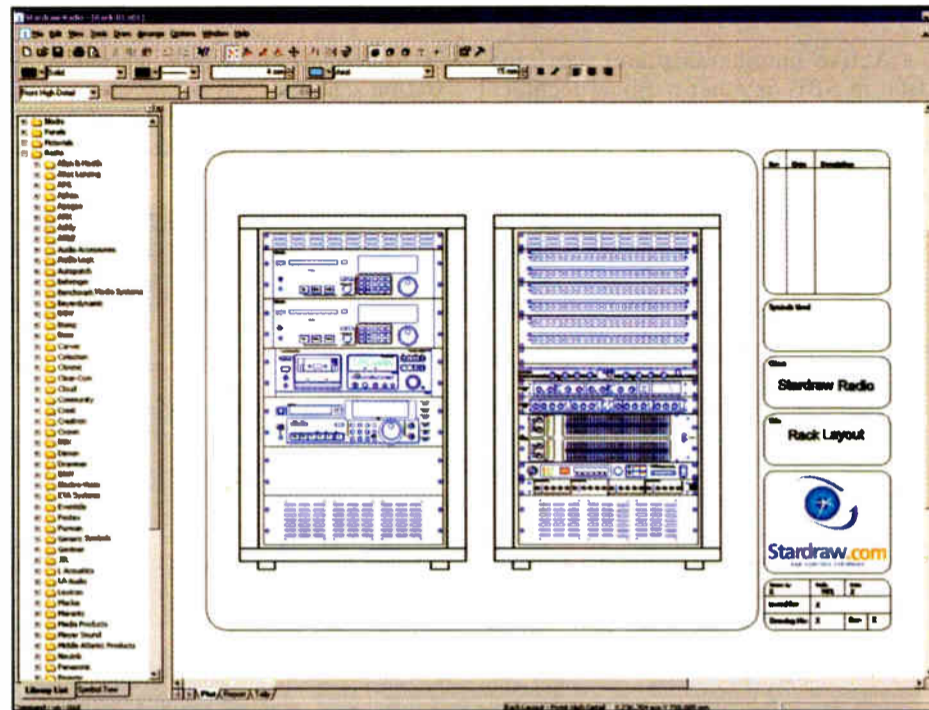
Stardraw Radio made a splash with its debut at the spring NAB convention, winning a Radio World "Cool Stuff" Award. Still, the company is an unknown among broadcasters.

The company and its software have been around for seven years. The basic Stardraw core graphics program is sold with different shapes for other users including stage and theatre lighting, pro audio installations and AV.

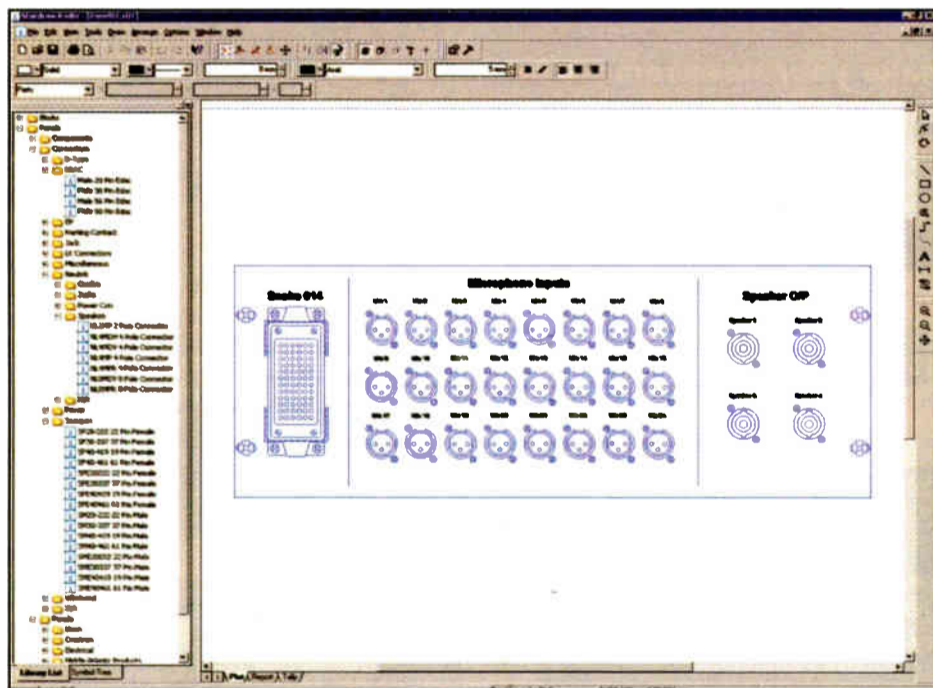
Customers can purchase Stardraw

scale drawings of 19-inch standard electrical and custom panels; "Pictorial Schematics" offers an environment where artistic representations

way that links work in Stardraw. You cannot display text, such as wire numbers on links. Also, links don't "stick" to symbols, meaning that if you need to move symbols as the drawing progresses, you'll need to re-do all the links to relocated shapes. Stardraw.com's developers are working on these fea-



The Rack Layout template lets the user create scale drawings of equipment racks and their contents.



This tool lets you make scale drawings of 19-inch panels using the symbol library.

Radio and a one-year subscription to the Web-based update of symbols and new software features for \$2,000 — soon to be \$3,000 after the introductory period. After the first 12 months, users pay a yearly fee of \$500 for Web access to the additional symbols and new features.

Your first step when working with Stardraw Radio is to select one of the four environments and an appropriate library of symbols.

The names of the environments are self-explanatory. The "Block Schematic" template allows you to draw schematic single-line representations of systems without regard to scale; "Panel Layout" lets you create

of systems can be produced, usually for the purpose of presentations; and the "Rack Layout" template lets you create scale drawings of industry-standard 19-inch equipment racks and their contents.

The Block Schematic view will be familiar to users of Microsoft Visio. Here you'll work with a library of symbols on the left side of the screen, which you drag onto the drawing surface. Once symbols are located on this surface, inputs and outputs can be connected together. There are tools to fine-tune your drawings so symbols line up exactly, and links are neat and symmetrical.

Those who are accustomed to MS Visio may be disappointed with the

tures, and hope to have sticky links and callouts for text by the end of the year.

While there is a large library of symbols that come with the program, few are radio-specific, and there are no computer or IT symbols. Stardraw.com has provided symbols from its pro audio version of the software, so you'll get familiar product lines like Tascam, Electro-Voice and Crown; but our test version had no symbols for broadcast-specific gear.

Radio symbols to come

This situation will be changing soon, as Stardraw.com is working on symbols for Cisco's IT equipment as well as Wheatstone and Broadcast Electronics gear. Discussions are underway with more than 50 broadcast manufacturers, so the symbols situation should improve in the coming months.

In the meantime, the company provides an extensive library of generic shapes for amplifiers, limiters, speakers, mics and rack enclosures. You also may elect to create your own symbols.

Having worked out a block diagram of equipment and connected inputs and outputs, you'll probably want to assign wire numbers or other text to the links. At present, this is a slightly awkward task executed through the edit attributes button. You can have wire numbers automatically increment, but you must click on each link to make it happen. Assigned numbers and text aren't visible on the screen, but do show up in the reports. More on that later.

With the click of one button, your block diagram can be envisioned as rack-mount equipment, with consoles, speakers and other non-rack gear excluded. Equipment easily can be

dragged into a rack enclosure of your choosing, a task made simpler with the snap-to-grid feature. Within the Rack Layout view, you can switch from front, side and rear views of rack equipment.

How many times have you assembled a rack full of equipment only to discover you can't close the back door once the XLR connectors are installed? OK, don't answer that, but with Stardraw's side view clearance feature, that mistake should be a thing of the past. With the click of a button, the manufacturer's recommended front and rear clearances for a piece of gear are shown on the side view in dotted lines. If trouble looms ahead, you can order a deeper rack or right-angle XLR connectors and avoid an 11th-hour crisis.

Runlists

With the drawing tasks done, you may want to finish your documentation chores by creating cable runlists or other reports. Stardraw contains a library of MS Excel templates which will generate reports from the information in your design.

Although still in a maturation phase, this robust design and documentation product should appeal to chief engineers, equipment manufacturers and contractors.

Simply click on the report you want and wait a few moments while Excel starts and the data is inserted. Available reports include cable schedule, cost summary, installation summary and weight summary. If none of Stardraw's report templates suits your fancy, you can modify them or design one of your own and add it to the menu.

Stardraw Radio offers a versatile array of print options. If a to-scale print is too big to fit on one page, it automatically will tile the drawing across as many printed pages as required. You can selectively print different layers of a drawing, a nice feature if you want to create prints for different contractors installing power, computer and audio wiring.

If you'd like to have a third party such as Kinko's print larger pages, you can either print to file and give them a disk, or have them download the free Stardraw Viewer.

Compatibility with other drafting and documentation programs is important, and if you already have a large number of Visio or CAD files, Stardraw can work with them. The

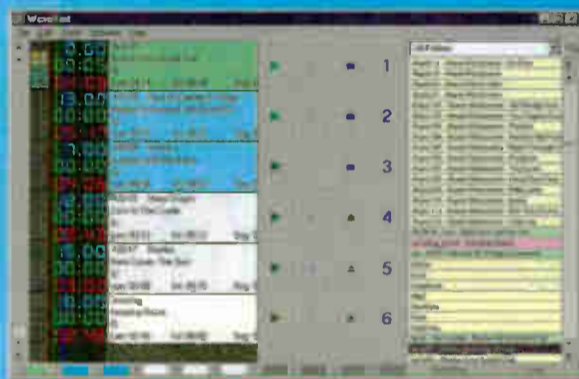
Great Software from BSI

BSI produces Simian digital automation, but did you know that we have a whole family of products for Radio?

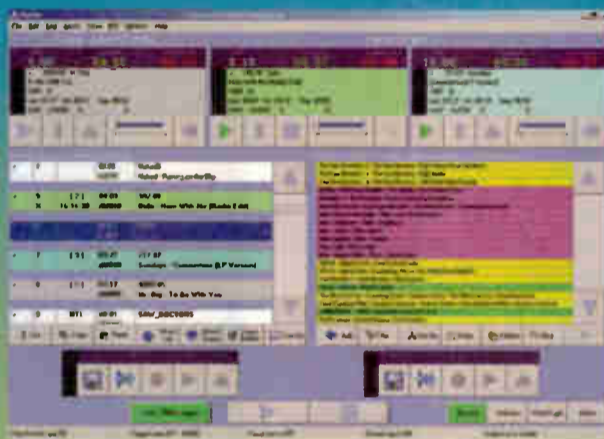
WaveCart, Stinger, Speedy, Skimmer and WebConnect can all work together to make your station function professionally and sound amazing. In addition to the software that we have created, we offer partner products like AudioScience sound cards, Natural Broadcast Systems traffic and billing software, Syntrillium's new Cool Edit Pro 2.0 and various other hardware accessories.

Any and all of our programs are available on our website for download. So install our software and play with it for as long as you want. Once you've decided that it's the software for your station, give us a call or order online.

WaveCart digital cart machine

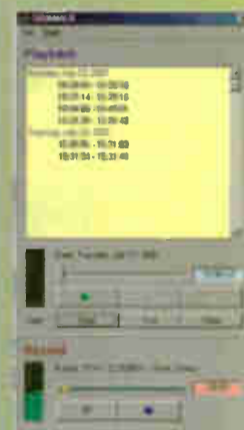


\$299



Simian digital automation

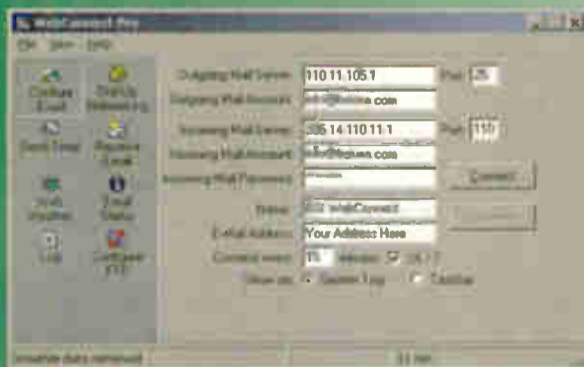
\$1499



Skimmer easy audio logging

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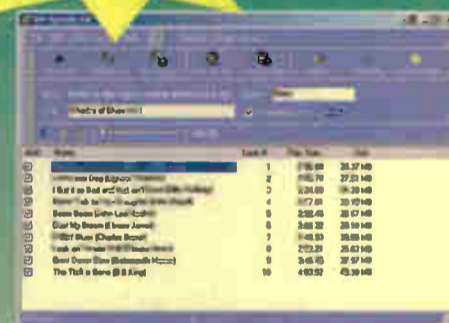
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GUEST COMMENTARY

Chedwick: Radio's Ignored Pioneer

by Ed Weigle

In the 55 years he's been Pittsburgh's "Daddio of the Raddio," Porky Chedwick has become a radio legend, as familiar to four generations as Pirates, Steelers, Iron City Beer and Heinz Ketchup.

For two years, the annual "Porkstock" summer oldies festival drew thousands. He's hosted more than 7,000 sock hops — that's seven thousand — since first spinning his 78s at social gatherings around the city's racially integrated suburbs in the 1940s.

The Rock and Roll Hall of Fame and

Museum included him among its roster of legendary disc jockeys in 1996, although it fails to tell his complete story. He's been honored by U.S. Rep. Ron Klink on the floor of Congress as an oldies pioneer.

The importance of Chedwick's accomplishments in the dawning days of rock and roll far transcends the Steel City.

Still, more than half a century later, the history books continue to exclude him.

Craig "Porky" Chedwick blazed a dual trail by establishing a foundation for what Alan Freed would call rock and roll four years later. The trails were musical and racial. Chedwick was the first DJ to present a program of R&B, gospel and jazz by black artists within earshot of a major East Coast city.

The "dusty discs" he featured also made him the first bona-fide oldies DJ in America. The trend he started, days after launching his career at WHOD in Homestead, Pa., on Aug. 1, 1948, gave rise to a still-thriving, billion-dollar industry of record labels and station formats dedicated to meeting the demand for rock nostalgia.

Influence

In fact, years later, when promoter Richard Nader organized his first rock-and-roll revival concerts — essentially the catalyst for the '50s music craze of the 1970s — he cited his influence as his hometown hero, Porky Chedwick.

Chedwick had been a popular public address announcer at local school athletic events and a sports stringer for the newspaper in his native Homestead, just up the river from Pittsburgh. He learned that a small, daytime-only radio station was debuting in the suburb to present ethnic and foreign-language programming to Pittsburgh's vast immigrant blue collar population.

He was given a five-minute sports commentary program on Saturday afternoons, then convinced station management to allow him to play records from his collection.

His music was so well-received that the sports portion was dropped and his "Masterful Rhythm, Blues and Jazz Show" was expanded to five hours, seven days a week. It eventually occupied the afternoon weekday slot as "The Porky Chedwick Show."

With only 250 watts of power, the station's signal was sufficient to garner Chedwick a large following. Unlike most other white R&B pioneers, his first efforts in the fall of 1948 were in broad daylight.

He recalls that in his impoverished steel-working neighborhood, blacks and whites and other ethnic groups lived side by side, secluded from much of the prejudices known beyond their tedious world. As the second of 10 children, he took it upon himself to look after the kids in his extended neighborhood family. He offered them refuge through the records he'd been collecting.

"I was mainly looking for the gospel sound and down-home rhythm and blues," he says now, "the songs that spoke of the problems of poor people. That was my music."

In the '30s and '40s, "race" or "sepia" records were banished to back shelves and often simply given to Porky

by record store owners who couldn't sell them.

"I used to have to blow the dust off them before I could play them. On the air I called them 'dusty discs,' and the Porky Chedwick sound was born."



Porky Chedwick

That "sound" established the rich R&B-based repertoire of uniquely Pittsburgh oldies, most of which never felt the regular kiss of a turntable stylus anywhere else on the planet.

Scores of these records may have been forgotten because they were released only on 78-rpm discs, which, by the time radio began to embrace black records, were being phased out in favor of the more-durable 45s.

By 1949, when the black independent labels heard of his success with old catalog material, they inundated Porky Chedwick with new records. He launched many recording careers and established Pittsburgh as a major industry testing ground for R&B. Still, oldies would always dominate his playlist.

Nothing could ever make "The Bossman" play a record he wasn't confident his "movers and groovers" would "dig" — a reputation that served in his defense when payola witch-hunters came knocking in 1960.

From his WHOD "Spinner Sanctum," situated by the Ohio River, the sounds of Roy Brown, Wynonie Harris and Hank Ballard — and their often-provocative lyrics — reached young white ears in that part of the country.

In 1956, "The Station of Nations," WHOD, abandoned its ethnic manifest and assumed a country format, with Porky's show the only exception to the twang. The station became WAMO, an acronym for the rivers Allegheny, Monongahela and Ohio. Two years later, it underwent its most revolutionary change by switching from "hillbilly" to R&B, with an entirely black air staff.

All except for Porky, that is.

His youthful legions — most of whom thought he was black —

responded to the "Pied Piper of Platter" with such fierce loyalty, one can only look back in wonder.

The fact that he didn't even have 1,000 watts behind his signal until 1960 makes it all the more extraordinary. When he'd open the microphone to shout over the record, "Blow your horn" during a wailing sax solo, Pittsburgh would respond with a cacophony of car-horn blasts.

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Stardraw

► Continued from page 18

program is CAD-compliant, importing, editing and exporting FCD, DWG and DXF files. You also can save files in GIF, TIF, PNG and JPEG formats.

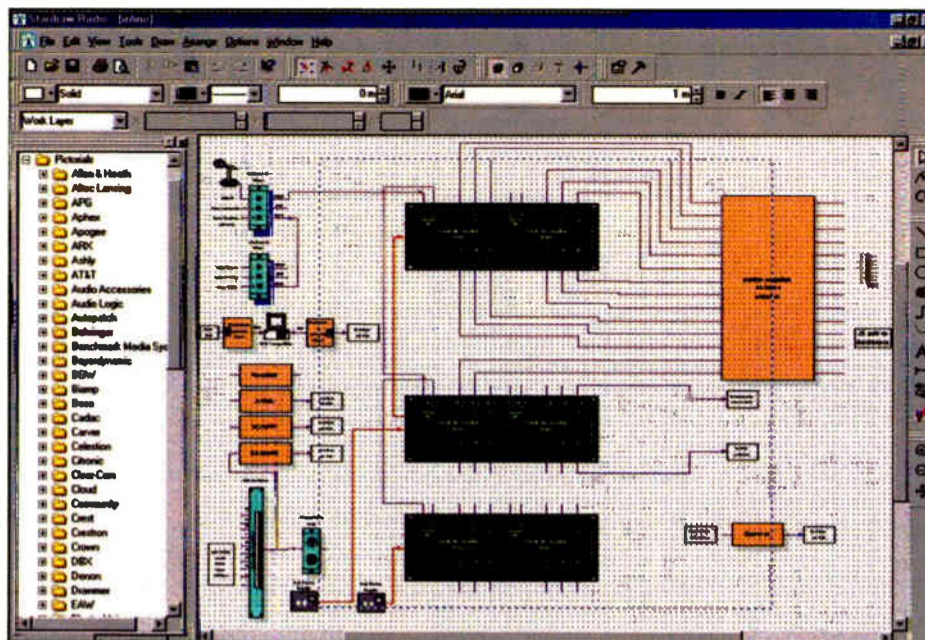
Sadly, there is no direct route from Stardraw to or from Visio files; users must first save in a CAD format to go either way. All is not lost, however. Through a feature called inline editing, you can run Visio (or any other application) as a client within Stardraw.

While Stardraw currently reports to MS Excel, plans are underway to make it report to XML, adding flexibility to the program. The object model for Stardraw can be accessed from any development language including VB, C++, Javascript, Python, VBScript and others.

Robust

The implication for broadcasters of this openness is that a drawing can really be the front end for more-elaborate monitoring and control schemes. Software mavens who want to delve into the innards of Stardraw to make it do cool things may be interested in the software developers kit, due later this year.

Included with the Stardraw CD is a 213-page manual that includes reference material and a six-part tutorial. A



The program also helps you to draw single-line representations of a facility.

walk through this introduction brings the novice up to speed quickly. The informal writing style ensures that you don't take things too seriously. The manual is spiral-bound, so it lies flat on the table, a nice touch.

Stardraw Radio offers a robust design and documentation environment that should appeal to station chief engineers, equipment manufacturers and contractors. Through some clever software design, it has managed to create a program that combines the simplicity of Visio with the power of

AutoCAD.

The product still seems to be in a maturation phase, and issues such as adding smart links between shapes, the ability to add text to links, and developing a robust library of symbols need to be addressed.

Stardraw Radio requires a PC with a Pentium processor running Windows

Product Capsule:
Stardraw.com Stardraw Radio Design & Documentation Software

Thumbs Up

- ✓ Easy to use
- ✓ Good user documentation/help
- ✓ Generate reports with ease
- ✓ Excellent printer support
- ✓ CAD-compliant

Thumbs Down

- ✓ Not many radio shapes yet
- ✓ No IT shapes yet
- ✓ Can't import/export directly from Visio
- ✓ Links don't 'stick' to symbols
- ✓ Can't place text on links

Price: \$3,000/year plus \$500 annual fee after first year

For information visit www.stardraw.com or call the company in New York at (212) 672-1855.

98SE, ME, 2000 or XP. The program requires 25 Mb of space on your hard drive, and the symbols need another 150 Mb of real estate. 16 Meg of RAM is required.

Tom Vernon is a multimedia consultant working in Philadelphia.

Name/Number	Description	Signal	From	To	Via	Start Label	End Label
1	mic jack	audio	mic 1	mixer 1 in		mic 1	mic 1
2	CD 1 left	audio	CD1 L	mixer 2 in		CD1 L	CD1L
3	CD 1 right	audio	CD1 R	mixer 3 in		CD1 R	CD1R
4	CD 2 left	audio	CD2 L	mixer 4 in		CD2 L	CD2 L
5	CD 2 right	audio	CD2 R	mixer 5 in		CD2 R	CD2 R
6	TT 1	audio	TT1	mixer 6 in		TT1	TT1
7	TT2	audio	TT2	mixer 7 in		TT2	TT2
8	mixer left out	audio	mixL out	amp left in		mixL out	mixL out
9	mixer right out	audio	mixR out	amp right in		mixR out	mixR out
10	amp left out	audio	ampL out	L splr		ampL out	ampL out
11	amp right out	audio	ampR out	R splr		ampR out	ampR out

This is a sample cable schedule created in Excel from the information in Stardraw.

BUSINESS DIGEST

Harris Signs on With D.A.V.I.D.

Expect to hear the name DigaSystem more often in coming months.

In the ever-competitive U.S. marketplace for digital audio management systems, there is a new business partnership. Harris Corp.'s Broadcast Communication Division has signed a nonexclusive reseller agreement with Digital Audio Video Integration and Development (D.A.V.I.D.) Systems Inc., manufacturer of the DigaSystem digital radio operating system.

Relationships among manufacturers of such systems and their resellers tend to be the subject of scrutiny because the systems are considered a "backbone" product for radio stations and because contracts for such systems can involve large dollar amounts in today's consolidated environment.

Harris, a manufacturer, dealer and installer of radio products and systems, has had relationships with several system vendors in the past.

Little more than a year ago, Harris announced a relationship with Computer Concepts. Asked the status of that relationship in light of the D.A.V.I.D. deal, James Hauptstueck, manager of resale products for Harris Broadcast said, "It's fine."

"Harris has wonderful relationships with a number of HDD companies," said Hauptstueck. Among them, he said, are 360 Systems, ENCO and Computer Concepts.

D.A.V.I.D. is based in Munich and has an office in Warrenton, Va., run by Marty Martin. It claims 7,500 workstations in the field, mostly in Europe; but it is relatively unknown in the United States.

It appears that Harris was attracted by the company's expertise in large, IT-style systems and its experience with distribution and content management via wide-area networks — the kind of systems being installed now that radio groups are bigger and more spread out.

A main selling point of the DigaSystem is its scaleable, modular open architecture that lets broadcasters access digital audio files over a LAN or WAN with content management capabilities. A big appeal, according to Harris, was its Web-enhanced capabilities.

"I don't think there's anyone out there that's going to beat this team," Martin said of the partnership.



Marty Martin

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-Todd Murray, KFWB, Los Angeles

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-Phil Hall, VP, ABC Radio Networks

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-Al Connors, WQLD, Montgomery



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The Spot Player Wanted by Thousands of Jocks

Buttons auto-load from the log as spots end. At the end of a stop set, a jingle, liner, memo or CD title appears on the next line. It can auto-start if desired.

At the right, you get 20 sets of 20 Hot Buttons. They play jingles, beds, PSAs and comedy instantly. Hot Keys have labels that say what they play and countdowns until they end. You can stack Hot Buttons into mini-schedules for automatic sequencing.

Spot Box is complete. It comes with a production rack computer including "cart" recorder, multi-track editor, CD ripper and importer from most digital systems.

Several Spot Boxes can be networked together to play the same spots.

Scott also offers Hot Box, with 400 sets of 40 Instant Play buttons or Scott Studios' Music Box for music and spots from hard drive. Go to www.SpotBox.Info on the Internet, call Scott toll-free for a free demonstration, or see it at the Seattle NAB Radio Show in Booth 801.

Scott Studios
888-GET-SCOTT



Scott Studios' Spot Box is 10" x 13" size (the size of this tabloid page). Scott Studios' Spot Box is shown above at 75% of actual size. Start buttons are as wide as a quarter and as tall as a nickel.

Announcers want a way to play spots with the simplicity of carts, but without flutter, hiss, broken or missing tapes. Thousands of jocks are uncomfortable with computers, mice and keyboards in the air studio. Scott's new Spot Box is the answer: 40 buttons to instantly play commercials, jingles and sound effects. Spot Box buttons look like colorful 1-inch-wide LCD displays from cell phones.

Four buttons left to right show the sponsor name, end cue, length, voice, cut number and logged time for spots. The advertiser name is also on an LCD at the top of the unit.

Spot Box connects to your traffic computer and auto-loads logged recordings. Cuts can also load by 10-key or by name from alphabetical Cart Walls.

Traffic gets a report showing exact times, names and numbers for every aired spot. Most billing software can import this report for automatic affidavits.

Spots play to four separate console faders for perfect level control, or they can combine to one if desired.

A timer counts down as spots play. You start other cuts or use Scott's Cruise Control for an auto-start of the next spot from the log.

Chedwick

► Continued from page 20

Fate would not reciprocate where his own family was concerned. He would lose two daughters as infants and one of his three sons at age 16.

According to him and to many Pittsburgh record dealers of that time, Chedwick was never motivated by money, and his lack of business acumen and reputation for being too kind kept him at the mercy of charlatans, who absconded with most of the profits generated from the numerous record albums and other projects to which he lent his name and likeness.

"I made a million dollars, but I never saw it," he says, with only a hint of regret. He never enjoyed the benefit of a six-digit salary like many better-known radio luminaries who came after him. He didn't even make union wages for most of his career.

In 1991, a year after surgery to remove a large, benign brain tumor, he declared personal bankruptcy. He continues to live from sock hop to sock hop.

Chedwick moved on to several other suburban stations after leaving WAMO in 1984, a casualty of a new era of radio, where "personality" was no more understood by young program directors than the non-traditional, regional oldies, which made his show what it was.

His illness in 1990 sent a shock wave

through Pittsburgh and a large national community of early rock-and-roll stars, who gave a benefit concert to help pay his medical bills.

when he was eight, his health is excellent. Jeannie, his wife since shortly before his illness, has taken the reins of his business affairs. His return to WAMO

Chedwick legend in Pittsburgh.

He's heard Saturday afternoons on WAMO and Sunday nights on WLSW(FM) in Connellsville.

Still, far too few people realize what Chedwick's trailblazing achievements have meant to a global audience.

Scholars should take a closer look at Porky Chedwick, one the last living radio pioneers of the roots of rock and roll. It is intolerable that a man who was one of the first to perpetuate the music of an era should be one of the last to be given credit. Without him, no radio history book can be complete.

Ed Weigle is a voiceover talent with Nick Sommers Productions in Englewood, Fla. He creates and voices all radio spots for World Wrestling Entertainment and other live event tours.

When he'd open the microphone to shout 'Blow your horn' during a sax solo, Pittsburgh would respond with a cacophony of car-horn blasts.

Today, at age 84, in spite of slightly diminished hearing and the uselessness of an eye injured in a slingshot mishap

after nearly eight years, his inclusion in The Rock Hall and the "Porkstock" honors have sparked a new life for the Porky

Source, XRN Launch New Network

A new radio network is up and running. The Source Entertainment has teamed up with Excelsior Radio Networks (XRN) to co-produce, distribute and market the newly created "The Source Radio Network."

The network — providing programming and prep service content to hip-hop stations — is available to radio stations nationwide.

For more information contact Excelsior Radio Network at (646) 254-9159.

NRB Sets '03 Show For Nashville

The National Religious Broadcasters has set the dates for its 2003 convention and exposition.

NRB 2003 will mark the 60th annual show. Events are scheduled for Feb. 8-11 in Nashville.

The theme for the 2003 show is "Changing World — Unchanging Message." Events include educational sessions; an array of programs, producers and services for Christian communicators; networking opportunities; and the opportunity to "recharge your spiritual batteries as you join with over 5,000 Christian broadcasters in celebration of the mighty work God is doing through mass communications."

For more information visit www.nrb.org.

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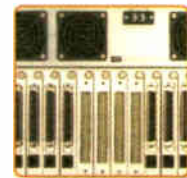
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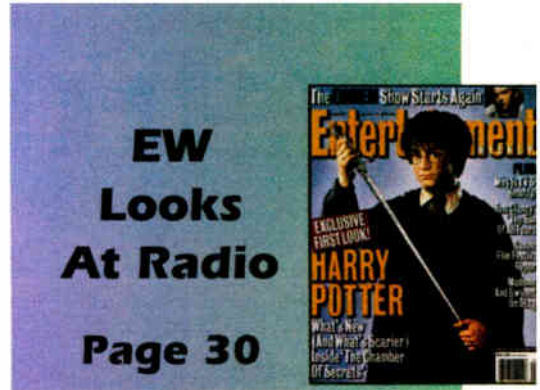
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NEWS ANALYSIS

Will PPM Deliver What It Promises?

Tests of the Portable People Meter Show Potential, But Some in Broadcast Industry Call for More

by Susan Ashworth

Eliminating the need to keep track of radio listening hours with time-consuming diaries was one of Arbitron's major goals when it began developing and testing the Portable People Meter listening tracking system in 1992.

expensive, isn't adequately tracking listening hours and could be too ephemeral to be successful in the real world.

Recent round

Though Arbitron has published details on what it called a "very successful" round of recent PPM tests in

industry while simultaneously looking for a partner to help bring an affordable PPM system to the U.S. radio market.

"Customers seem to have a strong positive reaction to the idea of metering radio in this way, (though) we know we have lots of questions to answer," said Owen Charlebois, Arbitron president, U.S. Media Services.

With an investment of \$100 million in the newest pager-like measurement device, Arbitron in 2000 began U.S. testing of the PPM technology at closely watched trials in Wilmington, Del., and Philadelphia.

Three hundred meters were passed out in the initial Wilmington deployment, followed by 1,500 meters when the trials were expanded to include the entire Philadelphia DMA.

Many, but not all, of the latest test results seemed to argue in PPM's favor.

To Arbitron's delight, the first three months of tests from 46 stations in the Philadelphia DMA seemed to address a problem that has hounded radio stations and advertisers for years: finding a way to gather more-accurate listener data.

The results released in May found that cumulative audiences were significantly higher for all radio stations compared to the diary method for the same listening period, with second- and

See PPM, page 32 ▶

As much as we moaned and groaned about the diary system all these years, at least we know that devil.

— A Wilmington PD

In the decade since, Arbitron's other major goal for the PPM has been to keep the much-debated ratings system afloat amid comments that the technology is too

the Philadelphia Designated Market Area (DMA), the organization has agreed to set up an additional test to secure the confidence of the radio

Stations Lay Plans for Sept. 11 Anniversary

by Ken R.

It may have been the saddest day in our country's recent history, but it also brought out the best in many Americans. All who lived through it will remember Sept. 11, 2001.

For radio and TV broadcasters it was a shining hour. Music stations found themselves suspending normal programming in favor of letting listeners express their feelings on the air. News and talk personnel worked around the clock updating reports, performing ad hoc public services and donating time and money. Our world changed on that day and many broadcasters can be proud of their contributions.

As the one-year anniversary of "9-11" approaches, most stations regardless of format will be commemorating those events in some way. Radio World talked to

See COMMEMORATION, page 30 ▶



Jim Turner



Elements of Arbitron's PPM

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MATRIX List \$2,700.00 **Call for Price**
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If you can connect to ISDN from your remote facility, this is the best way to send audio back to the station. Zephyr Xstream MPX (model #9502) is Telos' new ISDN transceiver with the utility of a digital four-channel stereo mixer, all in a rugged, portable chassis. Transmit and receive 20 kHz stereo audio to and from a single location over a single ISDN line (or two mono channels to and from separate locations). The full-featured stereo mixer offers 4 mic line switchable inputs (main mixer stage feeds codec directly), selectable AGC limiter processing presets, and built-in 48-volt phantom power for two mic inputs. Other features include: G.722, G.711 and MPEG Layer-3 and Layer-2 coding for compatibility; MPEG4 AAC coding for CD-quality audio; MPEG4 AAC-LD coding for high audio quality with low delay; 10Base-T Ethernet port al-

lows remote control and streaming of MP3-coded audio over a LAN, WAN or the Internet.

Zephyr Xstream MX (model #9602) is a full-featured rack mount codec with mixing capabilities similar to the Xstream MPX.

Zephyr Xstream (model #9402) is the studio rack mount codec without the mixing capabilities. It offers analog and AES EBU I/O with independent sample rate converters; 10Base-T Ethernet port; and headphone jack.

9502 portable ISDN codec with mixer List \$4,800.00 **Call for Price**
9602 rack-mount ISDN codec with mixer List \$5,800.00 **Call for Price**
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MICROTEL1 \$259⁰⁰

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The HMD 280 is perfect for broadcasting in high-noise environments. The headphone pads are tightly sealed around the ear and the noise-compensating microphone rejects external noise. Features: easily-recessed, single-sided coiled cable; hard-wired XLR and 1/4" connectors. Headphone frequency response 8 Hz to 25 kHz; impedance 300 ohms. Microphone frequency response 50 Hz to 13.5 kHz; impedance 200 ohms.

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This audio tester accepts XLR, mono and TRS phone (1/4", 1/8", TT), RCA and MIDI. The LED display shows which input pin is connected to which output pin. Separate shield and phantom power LEDs indicate proper shield connection and phantom power presence. The CT100 indicates shorts and opens, as well as a continuity check. A test tone generator (1 kHz and 440 Hz) is also included.

CT100 \$39⁹⁹



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World Radio History

Commemoration

► Continued from page 27

programmers and consultants to discover how they plan to pay tribute to the people who lost their lives on 9/11.

WDBO(AM) is an Orlando, Fla., news/talk operation. Program Director Kipper McGee said his morning hosts would travel to "ground zero" in New York City to broadcast live from 5 to 9 a.m. on Sept. 11. Thirty-year station veteran host Jim Turner and his sidekick, retired police officer Jim Bishop, will be on hand to cover events in the area.

Station tributes

"We're also planning a series of interview segments with our street reporter, Mike Synan," McGee said. "We'll have some pre-produced material and we may do our station imaging differently on that day as well."



McGee said his station will carry news specials from both ABC and CNN radio networks.

"A lot depends on what happens between now and Sept. 11," he said. "We'll be doing some remembrances, but our primary focus will be on the future, how we're rebuilding and how people's lives will be changed by the events."

The more you can do to mirror what your listeners feel, the more in touch your station will sound.

— Jim Richards,
Vallie-Richards Consulting

Brendan Hurley, marketing director for WASH(FM) and WBIG(FM) in the nation's capital, said his stations will try to coordinate efforts with the Pentagon to provide brief biographies of those who were killed at that site, perhaps highlighting one victim each hour. He also said this effort could extend to the rest of the Clear Channel properties in his cluster. While details were not firm at press time, plans will be updated at www.washfm.com and www.big100.com.

Infinity Broadcasting's news outlet in Philadelphia, KYW(AM), will send a crew to New York. Maria Corsaro, marketing director, said air talent Tony Hanson, who reported from New York last September, and reporter Mike Dunn will make the trip. The station also plans to run a half-hour pre-produced program centered on the events of the day.

Stations farther from the events of 9/11 also will have a presence.

"Prior to sending our people (to New York), we'll be holding a lunch at Monument Circle here in Indianapolis," said Ashley Harris, promotional director of WIBC(AM). "We'll have every-

one sign a big banner with their names and messages, which we'll bring to New York with us. Our morning team, Jeff Pigeon, Terri Stacy and Steve Simpson, will be making the trip, and we're also sending Greg Garrison, another air personality."

WLNG(FM), Sag Harbor/Long Island, N.Y., has been an oldies station since 1963. President Paul Sidney will take a different approach.

"My feeling is that I'm so upset about it that I don't like to see everyone overdramatizing it," said Sidney. "I might have our guys play 'God Bless America' by Kate Smith and the DJs certainly have the freedom to make their own statements; but we're not going to be running specials or anything."

Holland Cooke, news/talk specialist for Cleveland-based McVay Media, said one potential stumbling block to handling the anniversary concerns the changing staffing levels at many AM stations.

"These stations were caught short-handed by this big news story, and I'm afraid that in radio as in life, too many people have gone back to business as usual, and barely managed clusters will miss the boat," said Cooke.

"The promos say 'your information station,' but many so-called news/talk stations are just waypoints for syndicated long-form shows. The GMs just wish the AM would go off in a corner somewhere."

Cooke said owners of news/talk AM stations could make better profits if they would staff their stations properly and work to earn the right to call themselves service providers.

"Does your station have plans for the next horrible news day? The smart ones

heard the blast; but unfortunately, for many, nothing has changed," he said. "Are there pillows and blankets at your station? Do you have a bunch of people you can bring in? The smart guys do."

Listener concern

Cooke warned programmers that replaying audio actualities Sept. 11 could cause listener concern if not handled appropriately.

"Don't let people mistake it for another attack. Produce it with music or indicate in some way that it is archival audio," he said.

Jim Richards, president of Vallie-Richards Consulting, reminds stations that commemorating these events must be handled from the listeners' perspectives.

"We let our listeners hear a lot of other people on the air, talking about how they feel and where they were at the time," he said. "The more you can do to mirror what your listeners feel, the more in touch your station will sound."

Many of Richards' client stations will use pre-produced tributes, play the

national anthem each hour and air patriotic songs with testimonial drop-ins inserted between the vocal lines.

"The important thing is not to let it sound too sad," Richards said. "Make it positive, talk about the heroes, not just the tragedies."

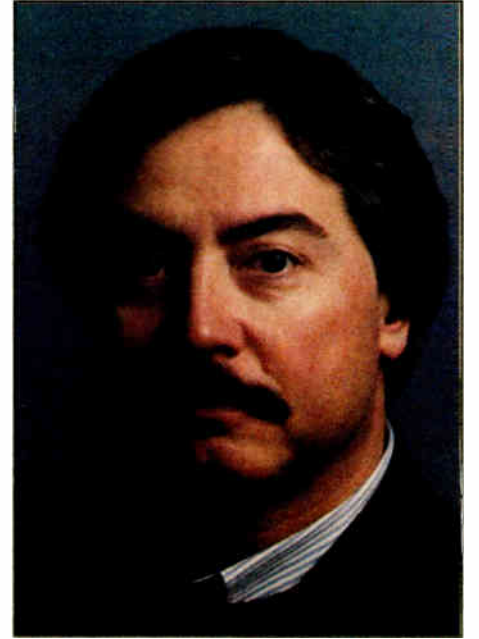
Walter Sabo, CEO of Sabo Media, said that there is no cookie-cutter answer to the question, "What should stations do to commemorate Sept. 11?"

"It depends on the demographics you're going after, the city you are in and other factors," he said. "But you might want to talk to some of the New York firefighters on the air. Talk to civilians who have lost loved ones and ask them what the year has been like for them."

Definition

Sabo said a big underexplored story involves the 12-18 year olds.

"For those kids, this is their Kennedy assassination. It's their Challenger explosion. It's a moment that will define their lives forever. Their perceptions of what is safe and what is not safe, what the government did right and what they did wrong, will become profound markers



Holland Cooke

for that generation."

Ken R. is a former broadcaster who writes frequently for Radio World.

What is your station doing to commemorate Sept. 11? Tell us at radioworld@imaspub.com.

'Changing the Dial'

Entertainment Weekly turned its attention to radio in a recent issue, with an article about the impact of satellite radio. The magazine also published comments by music stars about their views on our medium:

Wanna make a rock star shut up? Ask him or her about radio. Still, a few brave musicians shared their thoughts on the current state of FM.

Bonnie Raitt — "I'm for diversity and not having everything coagulated into one corporate monster. The same thing that's going on in Washington is happening in radio, and we ought to break it open."

Rob Thomas (matchbox twenty) — "Years ago, Frank Zappa [said] he foresaw the music business changing and how he saw radio changing. He predicted that one day there would be a big Clear Channel thing that owned all these different stations — and that's correct."

Ludacris — "It's definitely becoming too corporate, but that's what the whole music industry is — a political game. You have to learn how to play the game; it's a business. It's about knowing the right people and having the kinds of sons everybody in the audience is looking for. Music catalogs are getting a lot bigger — especially in hip-hop. Now you have hip-hop that's 15 years old. So you not only have to come out with old-

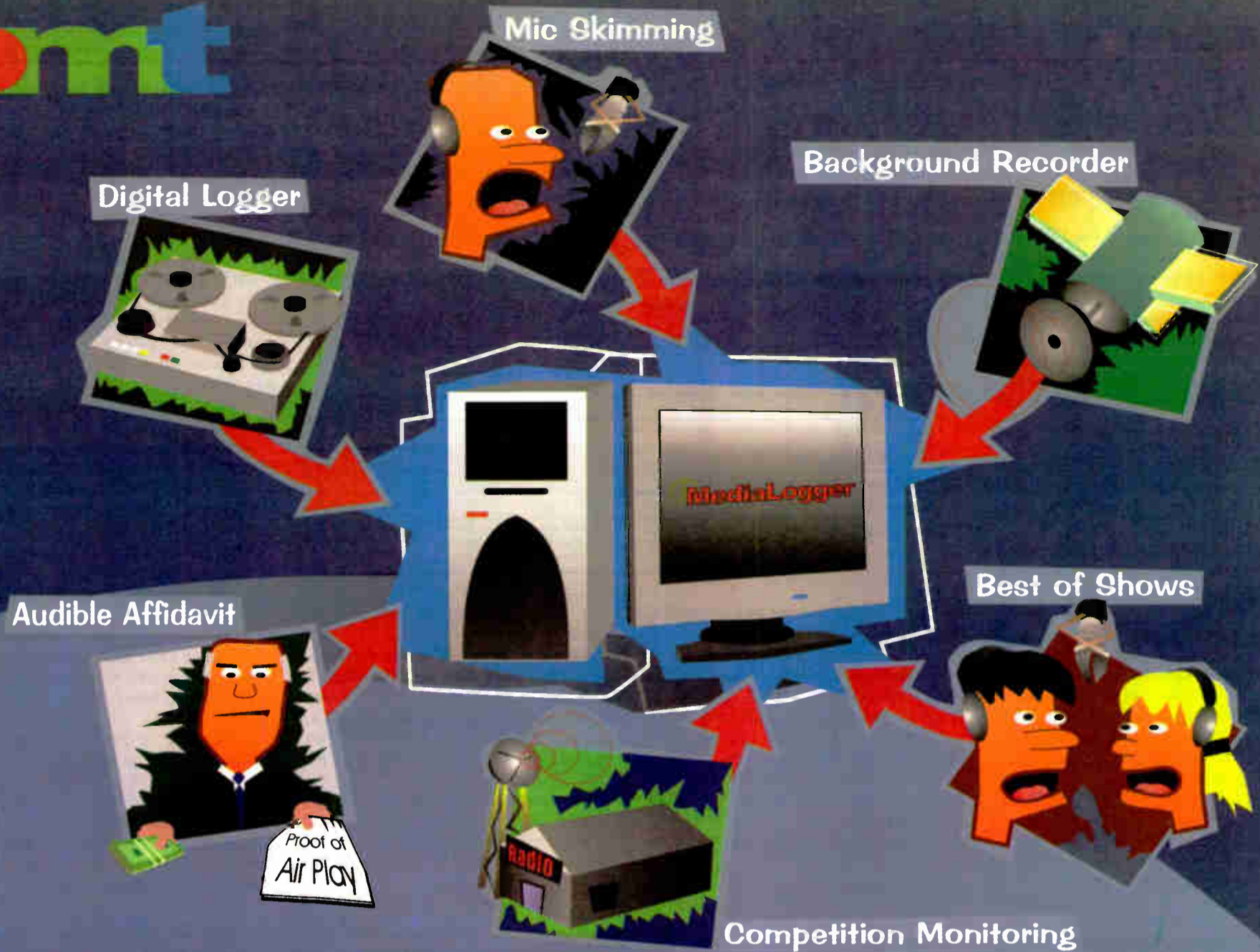
school hip-hop stations but one to showcase songs from four or five years ago. Then you have satellite radio. You have more competition, which is how it's supposed to be."

Art Alexakis (Everclear) — "Sometimes I think radio is really sad and pathetic, and sometimes I think it's horrible. No, sometimes I get very depressed listening to radio, and then sometimes I listen to certain songs and I think it is going to be okay. I think of bands like the Strokes who are getting a lot of play. I'm amazed, and I think it's very cool."

Sir Elton John — "I listen [to radio] when I'm in Atlanta. I just find it too categorized. It's either pop, hard rock or alternative. I like radio to play everything. I hope it will change because it's so boring."



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PPM

► Continued from page 27

third-favorite stations experiencing the largest increases.

This occurred because the PPM captures all radio listening time, even those minutes that people wouldn't traditionally write down, said Thom Mocarisky, vice president, communications, Arbitron.

"It's easy to remember the station you listen to the most," he said. Second- and third-favorite stations experienced increases because the PPM was tracking all stations listened to, not just those on the top of the listeners' minds.

"PPM records all stations listened to," not just someone's favorite station, he said.

Reporting

The PPM also reported higher total-day average quarter hour audiences than the diary for persons in the age groups of 12-17, 18-24, 25-34, 35-44 and 45-54. But the diary revealed higher audiences for persons aged 55-64 and 65-plus. PPM audiences were equivalent for women 12-plus, but were lower than the diary for African-Americans.

In terms of hour-by-hour audiences, the PPM reported lower 12-plus audiences for morning drive, the so-called PPM "morning gap"; but it showed equivalent or slightly higher audiences than the diary in other dayparts. Persons 55-plus account for most, if not all of the difference in the morning gap, Arbitron said. Arbitron speculated

that the 55-plus audience may be rounding up their average listening hours at that time of the day, though more research needs to be done to finalize an answer, Arbitron said.

As compared with the traditional diary results, total day AQH ratings were higher on average for 16 of 46 stations,

Demographic	Number of stations		
	PPM>diary	PPM = diary	PPM<diary
Persons 12+	14	26	6
Men 18+	15	26	5
Women 18+	12	21	13
Persons 12-17	22	15	9
Persons 18-34	15	21	10
Persons 25-54	18	20	8
Persons 35+	13	25	8
Average #of stations	16	22	8

Information courtesy Arbitron

the same for 22 stations and lower than the diary for eight stations (see Fig. 1).

To make these conclusions, Arbitron compared the test PPM data from the survey period of March 28 to April 24 to traditional diaries collected in the same period. The most recent figures also include comparisons to Arbitron radio estimates for the Philadelphia metro for the winter survey period of Jan. 3 to March 27.

More detailed findings are available at www.arbitron.com.

A number of stations involved in the PPM tests have expressed concerns

about both the methodology Arbitron is using and the technology, citing specifically the "in-studio headset effect."

"It was like a digital delay," said one program director based at a station in Wilmington.

Though Arbitron said the encoding system would not affect on-air broad-

represent only 25 percent of what normally we would see in returns on diaries," the program director said.

"There are still so many unknowns. As much as we moaned and groaned about the diary system all these years, at least we know that devil."

Other broadcasters, however, see the PPM as a boon for the industry.

"It's a fabulous technology," said Jerry Lee, president of WBEB (FM) in Bala Cynwyd, Pa. "It picks up listening automatically and will be great for showing cause and effect in advertising."

Concerns

An ad-hoc committee of station group owners was organized in mid-June, led by RAB President and CEO Gary Fries, to share concerns about the PPM testing methodology.

"There are many ramifications to using the PPM technology, some positive and some that could be negative," Fries said.

"But before the industry jumps into (embracing PPM technology), we want to evaluate more extensive results and have a little more voice in shaping (the process)."

According to Fries, the first step involves testing in additional markets. He said Philadelphia could present a unique situation that might not give reliable data, he said.

The ad-hoc group also is calling for additional side-by-side tests between PPM data and traditional Arbitron diaries.

See PPM, page 34 ►

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Arbitron's Portable People Meter System

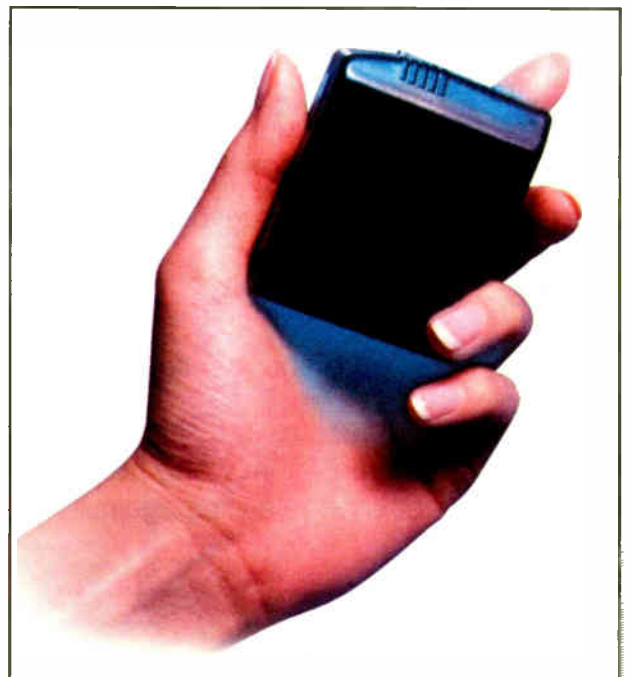
Haven't been paying close attention for the last few years? The Portable People Meter system consists of four components:

- **Encoder** — An encoder installed at the programming or distribution source inserts an inaudible identification code based on psychoacoustic masking into the audio stream. This added sound energy creates a fingerprint that corresponds to a specific series of digits that in turn identifies the specific source of the encoded signal.

- **Portable People Meter** — The PPM is a pager-sized, 4-cubic-inch, 2.6-ounce device that consists of an audio transducer, digital signal processing circuitry to analyze input for code detection, memory chip, rechargeable battery and motion detector. The PPM unit is worn by a consumer to detect and record the inaudible codes in the programming to which the consumer is exposed.

- **Base Station** — Each evening, the survey participant places the meter into a stationary base station to recharge the battery and to send collected codes to a household collection device, known as a hub. Respondents are awarded points based on the time that the meter was actively in motion throughout the day. Points and other data are displayed on a LCD messaging screen.

- **Household Hub** — The hub collects the codes from all the base stations in the survey household and transmits them to Arbitron overnight via a standard phone connection. The hub also has an LCD screen for instructions and problem diagnosis.



— Susan Ashworth

Charlebois Pleased With Tests so Far

Owen Charlebois, president of Arbitron U.S. Media Services, spoke with Radio World about the most recent PPM test results and the future of the technology for the radio industry.

RW: What are your perceptions of the PPM tests at this point?

Charlebois: Like Wilmington (Del.) and Manchester (England), the technology has performed the way we had expected — that broadcasters can encode their signals, that a random sample of respondents will actually agree to carry these devices around, and that they will comply with what we ask them to do. We're pleased with the tests and the data so far.

RW: What are your thoughts on some of the concerns raised by the newly formed ad-hoc committee?

Charlebois: I believe the most important issue for them is not what PPM is doing, but the fact that we haven't been able to quote a price for PPM.

In my opinion it's probably the most important issue standing at the moment — more important than early morning, more important than exposure vs. listening. We are trying to work as quickly as we can to provide our customers with a business proposition.

'Our older respondents have among the highest carry-around rate of any demographic.'

RW: What can you tell us about the "morning gap" concerns raised by some in the industry?

Charlebois: If you look at PPM vs. diary on hour-by-hour listening across the day, what you see are two curves that look remarkably similar in every daypart except for early morning.

The "morning gap" is something that the radio industry has focused on a lot. It's important to remember that gap is very much demographically given on persons 12-plus but when you separate out younger people 18-34, particular those in 25-54, what you see is the two lines converge almost completely. Where the gap is coming from is from persons 55-plus.

RW: And to what do you attribute that gap?

Charlebois: The first thing people think is that older people are not complying with PPM, that perhaps there is a rejection of the technology. That's not the case.

Our older respondents have among the highest carry-around rate of any demographic. For certain people, when they're reporting their listening in the diary, they tend to report what they do on average, and tend to round their listening, whereas PPM captures tuning in much finer increments. It will pick up 8:08 a.m. to 8:23 a.m., for example, and then there will be

a gap until 8:35 a.m. or so.

If you look at the cume in early morning, there doesn't seem to be as much of a gap in the cume hour-by-hour when you compare PPM vs. diary as there is with average quarter hour (AQH). That suggests that it's a TSL-driven gap as opposed to a cume-driven gap.

RW: Where do things stand with Infinity, which had made overtures that it might pull out of the PPM tests?

Charlebois: I can only say we continue to negotiate with Infinity. We are working as hard as we can to get the contract agreement renewed.

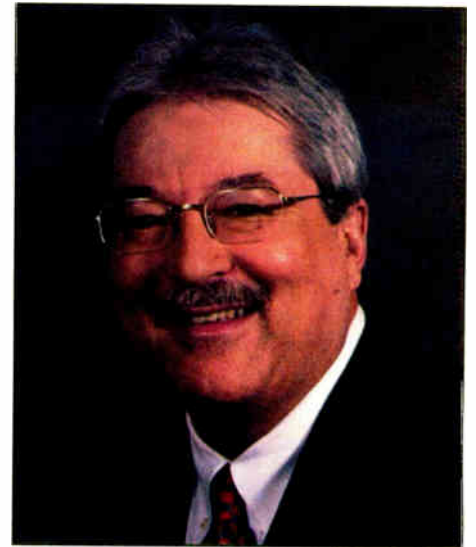
RW: Some have said the technology may be better suited to TV than radio. Your perceptions?

Charlebois: I would heartily disagree. The fact that it's audio-based makes it perfectly suited to both radio and television.

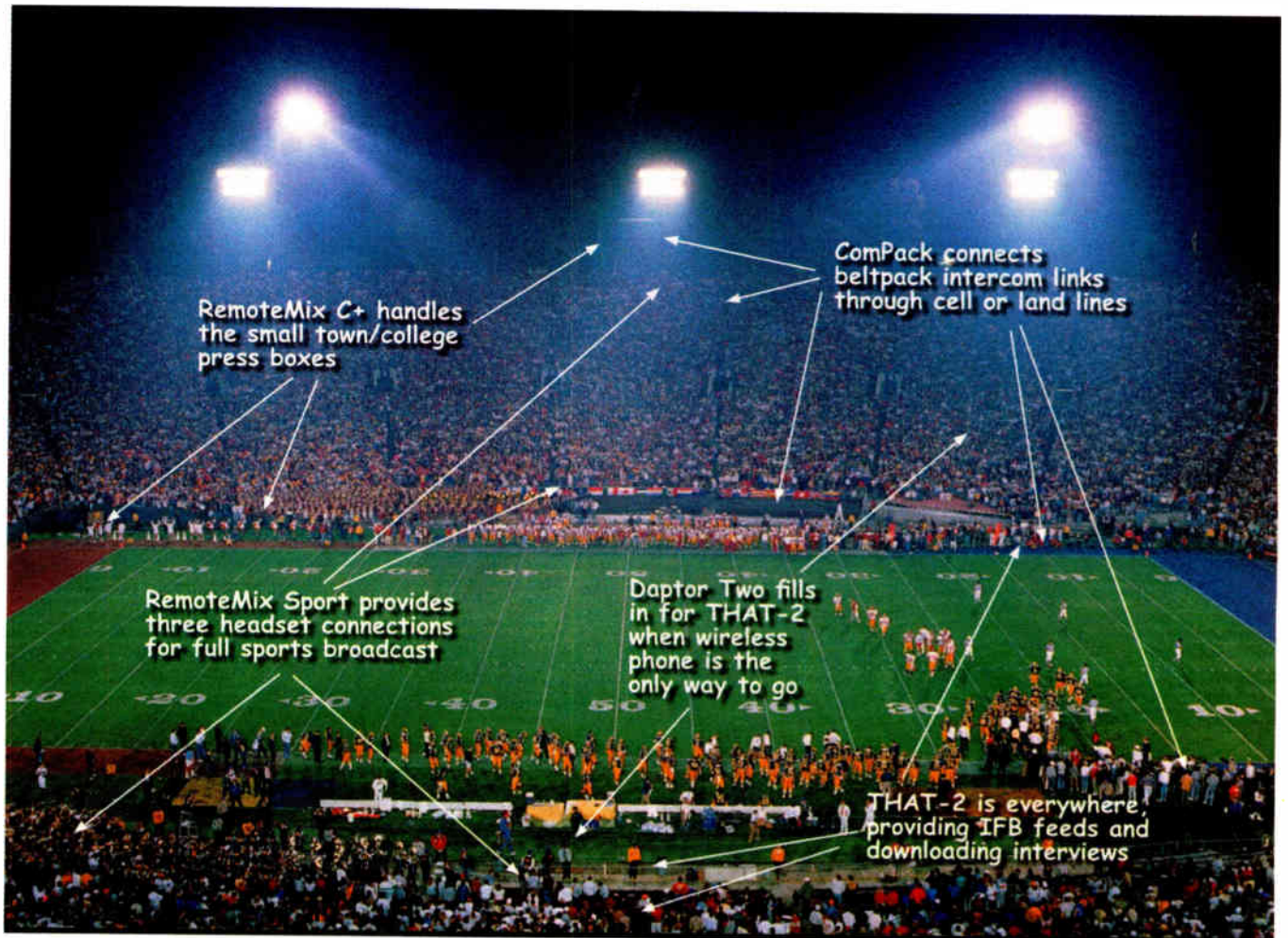
RW: What is the next step for Arbitron?

Charlebois: To keep working on the methodological aspects, to answer the questions that we're getting, to continue our tests in Philadelphia, and to working to form a joint venture with Nielsen.

— Susan Ashworth



Owen Charlebois



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PPM

► Continued from page 32

The committee has expressed concern about other issues, including the potential price tag for the technology as well as the "morning gap."

"There are just a lot of questions," Fries said. "We need to have more confidence that we've looked at all aspects and avenues before the radio industry moves ahead."

Charlebois has welcomed the committee's comments, agreeing that "one of the most important issues is that we haven't been able to quote a price for PPM," Charlebois said. "We haven't got a business proposition to be able to

talk to our customers yet."

However, the two sides seemed to disagree on the question of testing in additional markets. The issue was to be addressed when the organizations met in late July.

Arbitron also is hoping to form a joint venture with Nielsen Media Research, which is using the same PPM technology to track television ratings in the Philadelphia market.

According to Jack Loftus, senior vice president at Nielsen, the company hopes to make a decision about forming a joint venture with Arbitron before the end of the year.

"We are now evaluating the difference in the data between the PPM and what Nielsen's meter diary is reporting," Loftus said. "When we finish (that process), we'll decide how best to proceed."

Charlebois stressed the importance of such a joint venture, adding that two criteria must be met for PPM to be a success.

"The first is that Nielsen has to be a participant for the commercialization of PPM" due to the relatively costly process of deploying the technology nationwide, he said. "Secondly, we need financial support and participation from our customers (as well as the industry)."

Arbitron also is focusing on the international marketplace, talking with broadcasters in Latin America, Europe, Asia and Australia about the technology.

Susan Ashworth is former editor of TV Technology, sister publication to Radio World, and is a contributing technology writer/editor based in San Francisco.

Arbitron Agrees To Further PPM Test

VAIL, Colo. Arbitron has agreed to conduct a second PPM test in Philadelphia as a result of talks with radio executives. There may also be a further PPM test in a market with a high number of Hispanic listeners.

Additional PPM tests were a major focus of the Arbitron Advisory Council meeting held here in July.

In addition to receiving results from recent tests in Philadelphia, an ad-hoc group made up of radio group owners and industry executives were able to ask questions, share concerns about the technology, and hear Arbitron's responses.

The council has been vocal in its issues, laying out a series of steps it hopes Arbitron will follow to give the radio industry more time to evaluate PPM implementation.

Parallel panel

After the meeting, Arbitron agreed to one of the group's requests and decided to expand its PPM trial. Arbitron will equip a new parallel panel of approximately 1,000 listeners in the Philadelphia area with the PPM technology. When the new trial would begin remained to be decided.

Arbitron is also considering adopting one of the council's other requests: organizing a study in the one of the top 25 Hispanic markets that would better track that population's listening levels. But setting up this test depends on whether Nielsen Media Research joins Arbitron to form a joint venture to commercialize the PPM in this country.

The radio executives also asked that the ratings firm study listeners' lifestyles to better determine their listening habits in mornings and to determine how reporting varies between the PPM and the diaries.

These steps are crucial, the council said, because "reported audience levels and respondent behavior must be fully understood before any potential benefits to our business can be discussed and evaluated".

While acknowledging that the PPM methodology holds significant promise for radio audience measurement, the council said the available data leaves far more questions asked than answered regarding respondent behavior, respondent audience levels and the radio industry's business processes.

Arbitron consistently has said it is willing to listen to the council's concerns. After announcing its plans for a second Philadelphia market study, Arbitron President and CEO Steve Morris said the company welcomes the continued involvement of radio customers in the PPM development process. "We are confident that any expansion of the trial would further demonstrate the validity of PPM, paving the way for industry-wide acceptance of our new audience measurement system."

— Susan Ashworth

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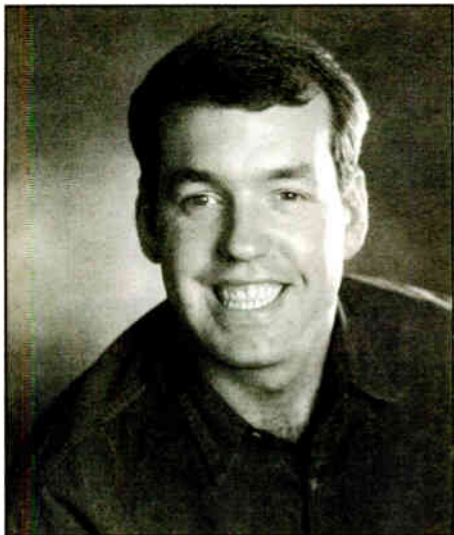
Labels Change Their Tune?

by Craig Johnston

Once again, Web Watcher's mother has been reading his columns, dominated by the Copyright Arbitration Royalty Panel and Librarian of Congress' determination. She asks: "Isn't there any good news?" Actually, there is.



"Bingo!" Web Watcher thinks that's what they shouted in late June at Listen.com, when the Web streamer successfully completed negotiations on a licensing agreement to offer songs from Vivendi Universal's Universal Music Group.



Sean Ryan

That means Listen.com now can offer music from all five major labels and a slough of lesser-known labels on its Rhapsody online music service.

And that may be good news for more than just Listen. Company CEO Sean Ryan told Web Watcher, "In general, the labels, in the last six months, have started to change their tune really significantly."

"They're starting to look at the digital music business as one that isn't necessarily a cannibalizing factor, but is looking like it will be an incremental factor, or a necessary factor, because the physical business is under such pressure that they need to find other revenue."

Ryan said he also thinks the labels look at legitimate digital music outlets as

See WEB WATCH, page 38 ▶

What Webcasters Must Do Now

by Craig Johnston

The long-awaited determination of Internet radio copyright royalty rates and procedures from the Librarian of Congress in June started the clock ticking for compliance.

While speculation swirled that a rescuer would arrive on a white horse (perhaps Congress, perhaps the courts), as of mid-July the first statutory license payments to copyright holders will be due Oct. 20.

(Webcasters do not have to use the statutory license. They have the option of negotiating directly with copyright holders for the right to play their music over the Internet. But Congress, accurately predicting the contentiousness between the record labels and Webcasters, put provisions for the statutory license into the Digital Millennium Copyright Act.)

Rates and rules

The Librarian's decision can be thought of as having divided Internet radio's recent timeline into three parts:

- From Oct. 28, 1998, the effective date of the governing Digital Millennium Copyright Act, through Aug. 31, 2002, the day before the effective date of the Librarian of Congress' determination. Fees for this period will be due on Oct. 20, 2002.
- From Sept. 1, 2002 through Dec. 31,

2002, during which the rates and rules of the Librarian's determination will continue to apply. Payment periods are monthly, with payments to be made on or before the 45th day following the end of a month. (For instance, September 2002's fee will be due on or before Nov. 14, 2002.)

device, those persons collectively constitute a single listener.")

The Librarian set the fees at seven one-hundredths of a cent per performance for commercial licensees, including commercial terrestrial radio stations, and two one-hundredths of a cent per performance for non-commer-

The licensee has the choice of paying fees based on actual records of performances, or estimating listeners and recordings played based on a formula prescribed by the Librarian.

• From Jan. 1, 2003 forward, for which a newly empanelled Copyright Arbitration Royalty Panel will recommend new rates and rules.

Copyright fees for music played over the Internet are determined "per sound recording, per listener," which is collectively referred to as a "performance." (A listener is defined as a machine, not a person. As stated in the Librarian's determination, "if more than one person is listening to a transmission made to a single machine or

cial licensees.

The licensee has the choice of paying those fees based on actual records of performances, or estimating listeners and recordings played based on a formula prescribed by the Librarian.

In either case, the Librarian stipulated that the receiving agent is obligated to provide a form, most likely a database template, with which to file this information; but at press time, that agent, SoundExchange, did not have such materials available.

See NOW WHAT? page 36 ▶

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Now What?

► Continued from page 35

Using the Librarian's formula for estimating the number of performances, an Internet-only Webcaster plays 15 sound recordings an hour, an AM or FM broadcaster simulcasting his programming over the Internet plays 12 sound recordings an hour, except in the case of a news, business, talk or sports station, which plays one sound recording an hour.

The streamer can use those numbers to come up with his fees owed, or use his actual sound recording playlist to calculate his fees owed. The licensee still has to come up with his Aggregate Tuning Hours in order to have a "number of listeners" to multiply the Librarian's suggested "number of songs" per hour.

Crunching numbers

The appropriate number of sound recordings is multiplied by the Aggregate Tuning Hours to determine the total number of performances. Aggregate Tuning Hours are defined in the determination as "the total hours of programming that the Licensee has transmitted over the Internet during the relevant period to all end users from all channels and stations that provide audio programming consisting, in whole or in part, of eligible non-subscription transmissions."

In other words, if a Webcaster sent streams to 10 different PCs or other Internet listening devices for one hour, that would equal 10 Aggregate Tuning Hours.

Once the number of performances is multiplied times the applicable (commercial or non-commercial) copyright rate, there is one additional step. An additional 8.8 percent of the copyright

fee is added to pay for ephemeral recordings. Ephemeral recordings are incidental recordings made to hard drives in the process of Webcasting a stream over the Internet.

In summary, the first job of the Webcaster using the statutory license is to calculate the number of "performances" for the period from Oct. 28, 1998 through Aug. 31, 2002, using either actual listening and sound recording play figures, or using actual listening and the Librarian's suggested sound recording play figures.

That number of performances, multiplied times the appropriate copyright fee (seven one-hundredths of a cent for commercial Webcasters), is the amount due to the copyright holder's designated agent on or before Oct. 20, 2002.

The Librarian set a minimum rate for statutory licensees of \$500 per year. Payment of the fees is to be made to the designated agent, Sound Exchange, which will disburse the fees to the appropriate copyright holder.

Payment of these fees does not absolve Internet radio operators for responsibility to pay music composer and publisher fees to the respective agencies.

Almost as onerous as the fee for Internet music play were the record-keeping requirements proposed by the CARP. In a separate announcement, the Library of Congress announced that, on an interim basis, these requirements would be greatly simplified. At press time, the interim requirements had not been announced, nor was there a schedule to do so.

Those who opt for the statutory license also agree to comply with a number of rules that prevent pre-announcement of upcoming sound recordings to be played, and limit the number of recordings by a single artist that may be played during a specific time period. 🌐

Sample Webcaster Copyright Fee Calculation

The following is an example of how a Webcaster would calculate the fees owed to copyright holders for sound recordings Webcast during the period from Oct. 28, 1998 through Aug. 31, 2002. The example assumes it is now September 2002.

Station W!!!(FM) began simulcasting its broadcast programming over the Internet in January 1999. According to bills received from the station's bandwidth provider, it streamed 802,854 cumulative hours of programming from that date through Aug. 31, 2002. (That's an average of 25 listeners an hour through that three-year, eight-month period.) The 802,854 hours of streaming is defined as the station's Aggregate Tuning Hours.

The station did not keep careful records of all sound recordings played over that three-plus year period, so it has chosen to use the formula supplied by the Librarian of Congress. For a terrestrial station simulcasting its broadcast programming over the Internet, the Librarian has established 12 as the number of sound recordings played per hour for copyright calculations.

1. The station multiplies Aggregate Tuning Hours (802,854) by the number

of sound recordings per hour (12), yielding the number of performances, 9,634,248.

2. The number of performances is then multiplied by the copyright fee (seven one-hundredths of a cent per performance), yielding \$6,743.97.

3. There is one additional computation, adding 8.8 percent of copyright fees for ephemeral recordings (incidental recordings made to hard drives in the process of streaming over the Internet). Multiplying \$6,743.97 by 1.088 yields \$7,337.44, the copyright fees to be paid to the designated receiving agent, SoundExchange. The instructions for where and how to send it are expected to be posted at www.soundexchange.com.

Had the station kept records of the actual sound recording played to the actual number of listeners, it could have come up with an actual number of performances and carried out the math from step two on. A station with such records might still want to calculate fees owed using the Librarian's 12 sound recordings per hour figure. Stations have the option of paying the lesser of the two fees.

— Craig Johnston

Four New Stations Ranked in Top-25 Arbitron Webcast Report

Several new stations made the top 25 in the Arbitron June Webcast ratings. WFXZ(FM), Live365 - KSBAdmin, WWDC(FM) and WOXY(FM) all made their debuts on the Webcast channels list. Virgin Radio maintained its top channel ratings spot. Jazz FM UK came in at No. 2 while WQXR-FM ranked No. 3. New to the rankings, Sea-Comm Media's WFXZ-FM was ranked No. 12. Live365 continued its dominance at the top spot in the network ratings, not shown. Clear Channel Worldwide ranked No. 2, while ChainCast/StreamAudio came in at No. 3.

ARBITRON WEBCAST CHANNEL TOP 10 RATINGS REPORT JUNE 2002

Channel	URL (Corporate Affiliate)	Format	ATH
1 Virgin Radio	www.virginradio.co.uk (SMG plc)	Hot Adult Contemporary	1,217,900
2 Jazz FM UK	www.jazzfm.com (Clear Channel Worldwide)	Jazz	853,500
3 WQXR-FM	www.wqxr.com (New York Times)	Classical	702,600
4 KING-FM	www.king.org (Classic Radio, Inc.)	Classical	501,200
5 Radioio	www.radioio.com (Radioio.com)	Album Adult Alternative	445,100
6 MEDIAmazing	www.mediamazing.com (MEDIAmazing)	Variety	323,500
7 Radio Margaritaville	www.radiomargaritaville.com (Radio Margaritaville, LLC)	Adult Contemporary	316,700
8 KPLU - Jazz	www.kplu.org (Pacific Lutheran University)	Jazz	314,800
9 KNAC.COM	www.knac.com (KNAC.COM)	Album Oriented Rock	303,100
10 WHTZ-FM	www.z100.com (Clear Channel Worldwide)	Contemporary Hit Radio	247,200



Internet Radio 'Staying Afloat,' Researcher Says

"Despite rough market conditions for Webcasters, thousands of online stations continue to stream their unique brand of entertainment," said the CEO of research firm MeasureCast, Randy Hill. "Internet radio may be sailing troubled waters, but it is staying afloat."

The company's June Internet Radio report showed some 4.3 million people listening to Web radio stations measured by the company, roughly the same number recorded in May, and 400,000 more people than measured in April.

The company provided audience data for 1,346 stations in June. Those stations streamed 37.6 million hours of entertainment, down slightly from May; the company said the drop was due to the summer holidays. For the fourth month in a row, Virgin Radio took the top slot in the MeasureCast Top 50 Internet radio stations ranking, with 1.6 million hours. MusicMatch placed five stations in the Top 50 ranking, giving it the No. 4 spot in the MeasureCast Top 10 Internet Radio Networks chart.

THE MEASURECAST TOP 10 INTERNET RADIO NETWORKS JUNE 2002

Rank	Network	URL	Total TSL ¹ (in hours)	Cume Persons ²
1	Clear Channel Worldwide	www.clearchannel.com	7,095,923	907,282
2	Warp Radio	www.warpradio.com	3,049,476	273,295
3	Radio Free Virgin	www.radiofreevirgin.com	3,043,893	438,296
4	MUSICMATCH, Inc.	www.musicmatch.com	2,571,912	Not available
5	Internet Radio Inc.	www.internetradioinc.com	2,301,373	535,050
6	Virgin Radio	www.virginradio.co.uk	2,219,409	316,516
7	StreamAudio	www.streamaudio.com	1,595,331	144,557
8	SurferNetwork	www.surfnetwork.com	1,240,746	64,697
9	ABC Radio Network	www.abcradio.com	812,054	169,310
10	Standard Broadcasting	No Web site	759,178	37,760

THE MEASURECAST TOP 10 INTERNET RADIO STATIONS JUNE 2002

Rank	Station	Format	Owner/Network	URL	Total TSL ¹ (in hours)	Cume Persons ²
1	Virgin Radio/1215 AM & 105.8 FM (London, UK)	Hot Adult Contemporary	Virgin Radio New Media	www.virginradio.co.uk	1,630,546	241,237
2	Jazz FM/102.2 FM & 100.4 FM (London)	Jazz	Clear Channel World Wide	www.jazzfm.com	1,197,148	206,401
3	WQXR-FM/96.3 (New York)	Classical	New York Times	www.wqxr.com	704,259	173,275
4	MUSICMATCH Artist Match (Internet-only)	Miscellaneous	MUSICMATCH	www.musicmatch.com	508,139	Not available
5	RADIOIO (Internet-only)	Adult Alternative	RADIOIO/roMediaPartners, Inc. / PowerStream	www.radioio.com	481,027	107,742
6	KING-FM/98.1 (Seattle)	Classical	Classic Radio Inc. Real Broadcast Networks	www.king.org	464,227	67,302
7	ESPN Radio (Internet-only)	Sports Talk	The Walt Disney Internet Group	www.espnradio.com	415,621	95,334
8	MEDIAmazing (Internet-only)	Listener Formatted	MEDIAmazing	www.mediamazing.com	361,028	129,378
9	Radio Margaritaville (Internet-only)	Classic Rock	Radio Margaritaville	www.radiomargaritaville.com	314,120	47,547
10	KNAC.COM (Internet-only)	Pure Rock	KNAC.COM	www.knac.com	310,740	92,416

Notes:

1. Total TSL (Total Time Spent Listening) is the total number of hours streamed by the broadcaster in the reported time period.

2. Cume Persons is an estimate of the total number of unique listeners who had one or more listening sessions lasting five minutes or longer during the reported time period. This estimate is derived using an algorithm that takes into account unique media player GUIDs, unique IP addresses, and other variables during the reported time period.

About MeasureCast, Inc.

MeasureCast, Inc. is the first company to provide Internet broadcasters, advertisers, and media buyers with true third-party audience size and demographic information with the MeasureCast Streaming Audience Measurement Service™. MeasureCast employs patent-pending Active Event Monitoring™, a unique server-side technology, to record the exact number of streams requested from Internet broadcasters' streaming servers. Accurate, secure reports are available to customers within 24 hours of a webcast via a password protected web site. MeasureCast supports Microsoft Windows Media Technologies, RealNetworks RealSystem servers and other proprietary streaming technologies. MeasureCast products and services are available through its direct sales force, and through Nielsen Media Research as part of a strategic partnership with Nielsen Media Research and NetRatings. MeasureCast issues a weekly MeasureCast Top 25™ ranking of Internet radio broadcasters, a weekly MeasureCast Internet Radio Index™, which tracks the growth of on-line radio listening, and a monthly Top 50 ranking of Internet radio broadcasters. For additional information and a demonstration, visit www.measurecast.com. Corporate headquarters is located at 921 SW Washington St., Suite 800, Portland, Oregon 97205.



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Web Watch

► Continued from page 35

part of the antidote to peer-to-peer music piracy.

Among the five majors labels and numerous smaller ones with which Listen has done deals, the Webcaster now offers 185,000 songs online, a number that's still growing. Why was the company able to beat the label owned MusicNet and Pressplay to the punch in licensing all the majors?

"We represent the obvious choice, we're not owned by a rival label group," Ryan said. Though many he spoke with a year ago told him the only successful online music businesses would be label-owned, he said, "Our view was actually we think we'll be more successful if we're not part of one of the label groups because you don't run into those competitive issues."

Feeling the heat

Ryan thinks the labels are feeling the heat from the Department of Justice, and that this may be contributing to their newfound cooperative spirit. No matter the cause, a trend toward more cooperation from labels is a good sign for Webcasters.

Web Watcher wonders if the labels have sent a memo to the RIAA yet about this sea change?

Okay, okay, the news really hasn't been all good for Internet radio. Just ahead of the Librarian of Congress' determination that Internet radio operators will pay seven one-hundredths of a cent per-listener per-recording, Entercom Inc. pulled the last of its station streams off the Web.

Following the Librarian's announcement, a growing list of stations, both terrestrial broadcasters and Internet-only, pulled streams from the Net (see page 54 for a commentary on this issue as it affects college broadcasters).

Web Watcher has seen no definitive list, but it appears at least several hun-

01-3720

IN THE
United States Court of Appeals
FOR THE THIRD CIRCUIT

BONNEVILLE INTERNATIONAL CORPORATION, CLEAR CHANNEL COMMUNICATIONS, INC., COX RADIO, INC., EMMIS COMMUNICATIONS CORPORATION, ENTERCOM COMMUNICATIONS CORP., SUSQUEHANNA RADIO CORP., and NATIONAL ASSOCIATION OF BROADCASTERS,
Appellants.

—against—

MARYBETH PETERS, In Her Official Capacity as Register of Copyrights for the United States Copyright Office at the Library of Congress, and RECORDING INDUSTRY ASSOCIATION OF AMERICA.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

BRIEF FOR APPELLANTS

WEIL, GOTSHAL & MANGES LLP
767 Fifth Avenue
New York, New York 10153
(212) 310-8000
Attorneys for Appellants

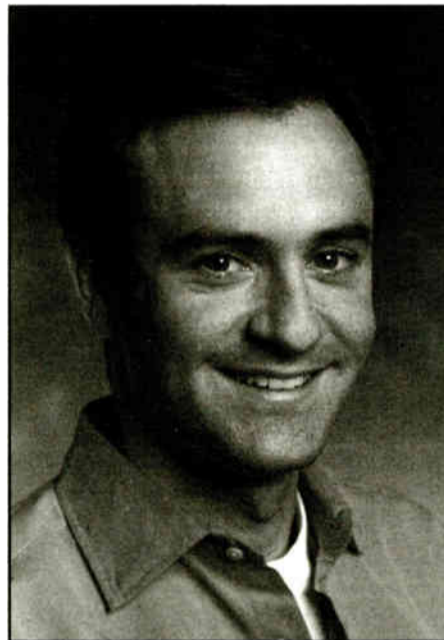
Broadcasters attacked the copyright decision on another front in mid-July, in the U.S. Court of Appeals for the Third Circuit.

dred Webcasters have decided the Librarian's determination has set the price too high.

Some Internet stations wanting to stick it out in spite of the level of copyright fees are finding their enabler leaving the business. Yahoo! Inc., which bought Broadcast.com in 1999, is shutting down the free-stream operation that carries the programming of hundreds of radio stations.

Robert Robach, general manager for Music at Yahoo, told Web Watcher, "We are in the process of phasing out the retransmission of terrestrial radio stations through Yahoo! Radio and focusing

exclusively on LAUNCHcast, our Internet-only radio property. This transition is consistent with our strategic and financial goals to focus the organization on initiatives that are expected to drive long-term profitable growth."



Robert Robach

Radio stations carried on Yahoo got a chill when early press reports of the shutdown said the service would cease in a week. However, Yahoo reassured the stations it would honor its existing contracts.

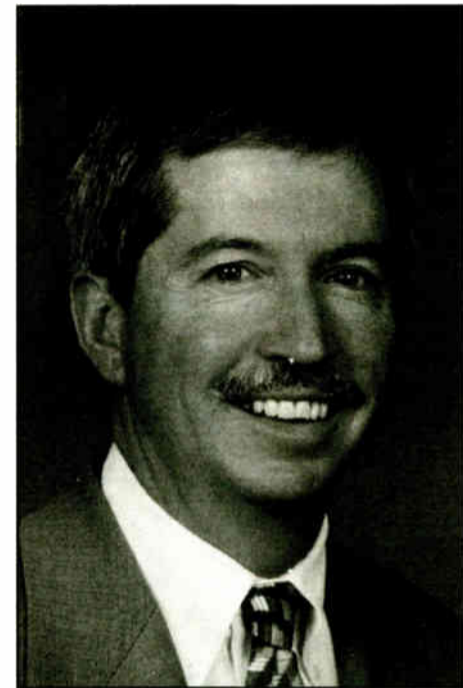
Just days before Yahoo's plans were revealed, the man who sold Broadcast.com to Yahoo, Mark Cuban, made the admission that Broadcast.com's negotiations for licensing sound recordings for Internet streaming from the record labels was aimed at shutting out small Webcasters to reduce competition.

Those negotiations were concluded successfully by Yahoo following the sale, and Yahoo's license agreement became the sole example of a willing buyer and seller for the CARP recom-

mendations and the Librarian of Congress' determination of copyright royalties.

Yahoo reminded Web Watcher that Cuban was involved neither in the final negotiations nor in Yahoo's business planning at that time.

It is worth noting that the CARP and the Librarian were only following the law of the land. The need to establish rates based on a "willing buyer and seller" as well as other elements of their conclusions come straight out of the governing Digital Millennium Copyright Act, passed by Congress in 1998.



Dennis Wharton

Which leads to the concept that if Congress can pass a bad law, Congress can also fix it. A group of congressmen promises to do just that.

Disappointing decision

U.S. Rep. Jay Inslee, D-Wash., told Web Watcher, "While I was disappointed with the Librarian's decision, the flaw in this process is the DMCA. Rick Boucher and I will be introducing legislation that creates a 'fair but not free' rate for Internet radio." Boucher is a Democratic representative from Virginia.

"We will change the 'willing-buyer/willing-seller' standard, and make it financially possible for small businesses to participate in future CARPs. We will also eliminate royalties for ephemeral recordings," Inslee said.

Broadcasters attacked the copyright decision on another front in mid-July, in the U.S. Court of Appeals for the Third Circuit.

Bonneville, Clear Channel, Cox, Emmis, Entercom, Susquehanna and the NAB appealed last year's U.S. District Court decision.

That ruling lumped together broadcasters who simulcast their terrestrially broadcast programming on the Internet, with Internet-only Webcasters, for sound recording copyright payments. Broadcasters contend they should be exempt from paying copyright fees on their simulcasted Internet streams, as they are on their terrestrial broadcasts.

NAB's Dennis Wharton, senior vice president for Communications, told Web Watcher, "We're hopeful that the appellate court will overturn the lower court opinion. It's our belief that the Copyright Office seriously erred in finding that streaming an over-the-air

See WEB WATCH, page 39 ►

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Web Watch

► Continued from page 38

radio station over the Internet subjected stations to a new performance fee.”

It shouldn't be surprising that the recording companies take an opposite view of the situation.

The Recording Industry of America Association's Senior Vice President of Business and Legal Affairs Steven Marks told us, "We are hopeful that the court will reject the broadcasters' appeal for the same reasons that the Copyright Office and the district court did. Rather than seek special treatment from the courts, we encourage the broadcasters to work with the labels and artists as our industries transition into new businesses."

In spite of the copyright rates and the sour economy, Web Watcher has heard at least one voice from the Internet radio side of the equation who believes this business model is livable. And he's got some numbers to prove it.

Profit potential

HiWire Inc., through its HiWire Ad Network, now represents about 41 percent of the available online audio inventory. HiWire CEO Steve Goldberg told Web Watcher that the CPMs his company is getting for that inventory more than cover the copyright fees.

Speaking specifically of HiWire's client Clear Channel Communications, he said, "With CARP, with streaming costs, with everything else, with our fees, still, they can go into the marketplace, and to answer your question specifically, with the rates they're getting on June 21st ... have an enormous potential for profits."

In addition to ClearChannel, HiWire reps Internet advertising and inserts those ads for hundreds of radio stations nationwide as well as Internet-only streamers such as Live365, SurferNetwork, StreamAudio and Beethoven.com.

Why does Goldberg think Internet radio is such a good buy?

"They are frequency products that tend to do well during the workday, and that's always been a frustration of a radio buyer. As a guy who bought radio in the Carter and Reagan administration, I can tell you that you look for places to achieve frequency during the hours of 10 to 5. What a very good deal for advertisers."

Goldberg is not shy about his advice to Internet radio streamers.

"Some companies will be bold, and some companies won't, and you know, there are radio stations we deal with, and they're not closing up shop in general. It's a small investment they have to make, and it's a relatively small investment that needs to be extended for 180 days in order to let things get back in sync from the predicted patterns. From my perspective that's an easy question, that's not a lot of money."

Web Watcher had been eagerly awaiting Internet listening ratings for the post-Library of Congress copyright determination period. It seemed that with the exodus of stations from the Web, there might be a corresponding listening fall-off. Unfortunately, the results aren't conclusive.

MeasureCast Inc.'s June 24-30 and July 1-7 Internet listening numbers were indeed down from prior weeks,

but the Internet ratings company noted that it came as no surprise "because summer, particularly the Fourth of July holiday week, finds many people outdoors and on the road rather than perched in front of their computers."

Clear Channel Worldwide and Radio Free Virgin took first and second place respectively in the MeasureCast Top 10 Internet Radio Networks chart for the period. Britain's Virgin Radio and JazzFM finished the week of July 1 as the two most-listened-to radio stations streaming their programs over the Internet and measured by MeasureCast.

Truly small Webcasters may have trouble selling ads for enough to cover copyright fees, but Iain McLeod, a computer game developer in London,

suggests Webcasters follow the example of Great Britain's famous pirate radio operators.

Toward that end, he's developed Streamer software that makes the PC originating the Webcast "fairly" untraceable. The version of Streamer available on McLeod's Web site at press time was still in the beta stage.

"I'm publishing it in response to the closing of Audiogalaxy and the imminent closure of many U.S. Net radio stations," McLeod states on his Web site. "I never did like bullies, and it's just plain silly behaviour anyway. Vote with your feet U.S. citizens! Show your 'leaders' how stupid you think the CARP royalty rate nonsense is by using Streamer."

Streamer is not, however, a way for

large Webcasters to hide their identity. He told Web Watcher, "For them its use is as a low-cost reliable broadcasting system; low-cost because it needs far less server power."

"The stealth aspects of Streamer are intended for the small, low-budget broadcasters of eclectic music, the competition the RIAA are trying to eliminate with the CARP rates. When money buys bad legislation, then us clever coders have a duty to run rings around it."

How has the CARP decision affected you? Tell us. Send e-mail to radioworld@imaspub.com.

Craig Johnston is a Seattle-based Internet and multimedia developer. Reach him via e-mail to craig@craigjohnston.com.



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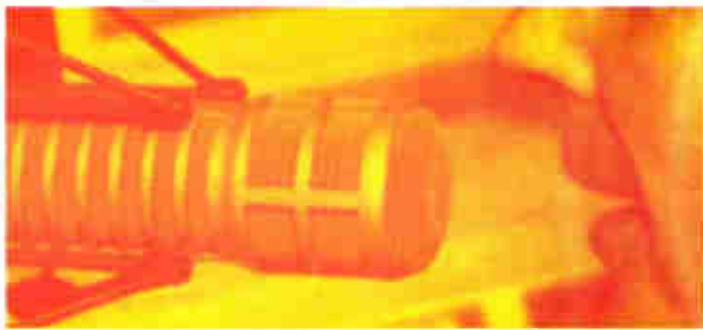
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Studio Sessions

Fostex Ribbon
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See Page 45

Radio World

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August 14, 2002

There Has to Be a Word for It

by Alan R. Peterson

I've always been a big fan of Sniglets, even after they stopped being cool.

Remember Sniglets? These were words created for those moments where no other word will do. Words that were not in the dictionary but should have been; when there should be a word to explain or define something, but there is not.

Words such as "Milkdudes," which are two Milk Duds fused together in the box, or "Bathquake," when a bathtub spigot is turned off quickly and the resulting water hammer rattles the house.

Sniglets were the invention of TV performer and author Rich Hall around 1984, when he too noticed a scarcity of words to define or explain something adequately. The Collier Books division of

Macmillan Publishing did a nice turn of business by publishing Sniglet books in the mid-1980s. Everybody, it seemed, had a favorite Sniglet.

In a way, it's too bad that radio has never had a collection of Sniglets to call its own. This way, jocks could fill out engineering discrepancy sheets with more accuracy and creativity. Account executives could use new buzzwords during the Monday morning meeting when "ramp-up cycle" and "customer-focused strategies" got overused. And new words could be used over the phone to bamboozle and confuse annoying callers with their speed dialers.

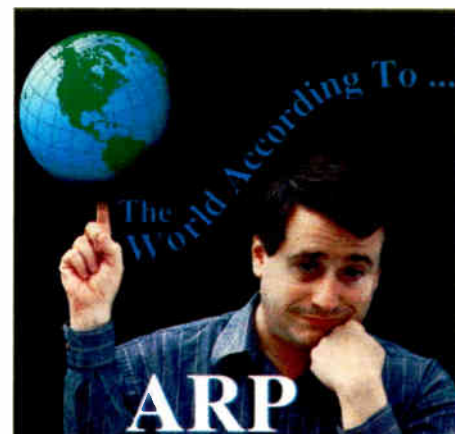
Sniglet revival

Well, fret not. Once again, it is Radio World to the rescue, reviving the art form known as Sniglets with some brand-new, radio-specific ones you are welcome to use, abuse and generally have fun with.

While I can claim originality to pretty much all of these, it is possible some may have been independently created and used elsewhere. If this is the case, drop me an e-mail at alanpeterson@earthlink.net and you will receive credit where credit is due.

Let us start with recent history, before the digital revolution did its thing on us.

How about *Cartastrophe*, which would be any error or disaster befalling a cart machine in the studio? This would include jammed tapes, phasing issues, or total loss of a motor.



Getting specific, there can be *Unbearable*, which describes the grating, metallic, repetitive sound of a drive shaft bearing slowly dying. Or perhaps a case of the *Lupdups*: When a worn pinch roller has a flat side causing the audio to sound as if it is driving over railroad ties.

My old college radio station used to suffer from the *Jigglemurps* — when you would fire a cart, which would immediately stick, then jiggle it to loosen the tape. The on-air result would have a "murrp-murrp-murrrrrp ..." quality.

You would show *Fortytude* when you could not find the proper length cart to put a 30-second spot on, and had to resort to dubbing the same spot four times on a 2:30. Or you would suffer from the *Thumpwallabangs*, which meant you recorded something over the cart splice (the thump part), and then hurled the cart against the wall (the wall and bang parts).

Then there is *Darkarts*, which literally means "dark carts." Not one illuminated

See SNIGLETS, page 42 ▶

PRODUCT EVALUATION

Tools & Toons: Sound Effects From the Edge

by Michael Parks

TGIF? Yeah, right. If you work in radio production, I don't think so.

Who hasn't got the call at 4:30 or 5 p.m. on a Friday afternoon from your favorite salesperson or ad agency, saying they need to change a spot or need a new one for Monday morning?

The latest for me was from the local ad agency who needed audio cut for a new TV spot for a local car dealership. As is always the case with a car dealership, they were doing some wacky theme — this time featuring a "spitting-sputtering" old car. And despite almost a hundred sound effect CDs in our library, I just couldn't find the one I wanted.

A broad selection

Then I remembered I had in my office two sound-effect libraries for review. One just happened to contain "cartoon" tracks. Aha! The perfect opportunity to see if this was a library I would actually use.

I grabbed the catalog and began the search for the sputtering sound effect. Auto — no; car — no; uhhh — jalopy — yes! There were several cuts, and after combining two of them, I had a pretty cool effect.

See HOLLYWOOD, page 43 ▶



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Sniglets

► Continued from page 41

button works on any on-air cart deck, so you do not know which tape is the one that is running on air at that moment.

Don't think the rest of the studio is immune to Sniglets. Believe me when I say there is a word for everything.

Lupdups?!

Turntables also suffered from *Lupdups*. If you failed to disengage the idler puck on the old QRK platters when they went idle, the jock after you had to let them warm up for about 15 minutes to work out that flat spot the drive shaft dug into it.

A *LincolnLog* is one of the old laminated wood Micro-Trak tonearms that

has a Lincoln head penny taped to the cartridge for extra tracking weight. A *CherryTree* is the same, but with a Washington quarter taped down for additional weight. Both work fine until they

es out loud and slams the speed lever to shift to the proper speed. A *Curshift Call* is when the jock is fired for cursing with the mic open.

Of course, the day had to come when a

RemoteAroma: the sweaty, greasy smell inside the station remote van or giant boombox weeks after the live appearance at a McDonalds.

cause *SpiroVinyl*, a long, curly thread of material gouged out of the record by the unnaturally heavy stylus.

A *Curshift* happens when a record is started on the wrong speed, the jock curs-

tape-based automation rig was hauled in. That was the day that gave birth to these Sniglets.

A *Midnightmare* is when the log rolls over at midnight of the next day and the

system does not follow along. The silence sensor goes off to nobody in particular and there is dead air until 5:30 a.m.

The dreaded *Muffletwist* happens when a staffer loads a music reel onto the automation system, not noticing the tape is twisted by 180 degrees and the wrong tape surface contacts the heads. Not only is all of the music muffled, but the 25 Hz trip tone is now on the wrong channel so the reel plays out to the end in about an hour.

The same staffer is considered *Musiclueless* if he or she loads all decks with the wrong music genres. Where Deck No. 1 should have the Hot Currents and Deck No. 2 is loaded with the Power Red-Dot Retro Recurrents, both decks are loaded with Downtempo Lunar Oldies. Not exactly proper programming strategy for a Hot AC, huh?

Fingerfood is a rather entertaining Sniglet. Remember the old Audifile automated cart machines that had three columns for cart placement, and a trio of mechanical actuator arms resembling fingers that would shove the carts into play on command from the computer? This is the term that defines a cart that gets "eaten" by the machinery.

Each one of these rigs also came with a *Tacnic*, a cheap printer that would be used to reconcile the log; so named for the sound it would make when printing characters ("tack-tack-tack") or advancing by spaces ("nic-nic-nic").

This is a variation of the Sniglet assigned to the big old AP and UPI wire machines — the *ClackTick* — for the same reason. Not to be confused with a *Zickzick*, the dot matrix printers from the early 1990s.

Repetitive sounds also play well into Sniglets of the digital age. A *NepNep* is a defective CD that gets stuck on one frame of playback ("nep-nep-nep ...").

And let's not forget *Reelicule*, a molecule-sized, three-inch reel containing a 60-second spot or an aircheck, totally unplayable on any tape machine in the house.

People who need people ...

As for the employees, there is always one *YeahButter* working at every station. This is the person who can deflect any crisis or explain away any incident with a simple, "Yeah, but ..."

The *Medusalamander* is the person who changes hair color on their snake-like locks every couple of weeks to match their environment. Sometimes an assistant to the sales department, but more often a 40-something middle management dude going for "the blond look" a week before his 25th high-school reunion.

A *Phibb* is a phonetic pronunciation of PHB, or Pointy Haired Boss from Scott Adams' marvelous "Dilbert" comic strip. Face it, we have all worked for one (or more) in our careers.

Lastly, there is *RemoteAroma*, which is the sweaty, greasy smell inside the station's remote van or giant boombox weeks after the live appearance at a McDonalds; the *Swag-gerer* who won't leave you alone until he or she gets a station T-shirt; and *Firerrhea*, which is an indescribably horrible collection of crud left behind by a former employee, discovered long after the dismissal took place.

These should be enough to inspire you. Remember that there really is a word for everything, even if you have to make it up yourself.

Sniglets of your own? Send 'em to radioworld@imaspub.com.

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Hollywood

► Continued from page 41

Now one would think after this quick and successful experience, this review is through. I would write and wholeheartedly recommend that no radio station should be without these incredible sound effects libraries, right?

Well, before going that far, let us take a closer look.

I must admit I was impressed with the fact that they came from a company called The Hollywood Edge. I got my first taste of "The Edge" way back in the old millennium when they sent me a demo disc. It blew me away.

Granted, it was a demo, but the actual sound effects really jumped out at you. The effects were the kind of stuff you would only hear in a blockbuster film. Little did I know then, but that is exactly how The Hollywood Edge got its start.

That 'Hollywood' sound

I recently spoke with John Moran, managing director of the company, who explained that its sound effects primarily were used in major films. In fact, I also learned that their parent company recently won an Academy Award for effects they created for the film "Black Hawk Down." What the company basically does is gather up sounds from its vaults, create some new ones, put them on CD and offer them for sale.

The two libraries I had the chance to review were The Cartoon Trax and Sound Designer Tool Kit. Each only had five CDs, but they were crammed with cuts. In fact, the catalog that came with Cartoon Trax has hundreds of pages.

I initially thought that I was missing a bunch of CDs, but not so. All the cuts in the catalog are on these five CDs, meaning that most of the cuts are just a few seconds long. No big deal. If you need longer lengths, thanks to digital editing, extending or looping is not really a problem.

You will have access to an assortment of those kooky comical sounds you hear in most any cartoon. According to the Web site, a lot of these effects came from cartoons we old geezers grew up watching when we were kids; but because of contractual obligations, they can't reveal exactly which studios and cartoons they came from.

There are all the "boinks, bonks and zaps," along with a huge assortment of other sounds and musical cuts. You can check out the catalog of cuts and download the cut list from the company's



comprehensive Web site (see product capsule).

I really liked this library because it provided what was missing in the other sound-effect libraries we have. While we produce a variety of spots each day, there always seems to be a few of those funny, kooky-type ads.

The cuts on these CDs can add that little zip and zing that transform a typical somewhat funny script into a really nice piece of production. I also liked the way the catalog makes an attempt to describe the cuts and what they sound like. That was helpful — any production person knows that not all "raspberries" or "spins" sound alike.

The tool kit

The other Hollywood Edge package I tested was the Sound Designer Tool Kit. Initially this one did not excite me as much as the Cartoon Trax. Perhaps this was because I already have access to a number of CDs with similar-sounding production elements.

After going through the catalog and the discs — again there were five — I did find some really cool sounds. This library also features quite a number of musical effects.

I put it to the test while I was producing a spot for yet another car dealer. This spot was to promote the appearance of "Bigfoot" the monster truck. I found an effect that would fit quite nicely. So in

rapid succession I had two instances where I could not find anything in my other libraries but was able to find a cut quite quickly on these two from The Hollywood Edge.

One thing you will discover when you visit the Web site is that The Hollywood Edge creates specific libraries for almost every production theme.

They also point out that they don't rush to put out a new set every month. Much like those "picky" Hollywood producers and directors — the folks who create and produce these libraries — put a lot of time and effort into their stuff to make sure it comes out just right.

What I really like about the libraries from this company is that most, if not all, the cuts have that Hollywood movie sound.

Product Capsule:
Hollywood Edge
'Cartoon Trax' and
'Sound Designer Tool Kit'
Production Sound Effects Sets

Thumbs Up

- ✓ Motion-picture audio quality
- ✓ Large selection of cuts on five CDs
- ✓ Catalog of cuts easy to use and details each sound effect

Thumbs Down

- ✓ Most cuts are quite short
- ✓ Not the library one would use every day
- ✓ Tool Kit contains many cuts found on most any similar library

Price: Tool Kit: \$495; Cartoon Trax: \$395

For information contact the company in California at (323) 603-3259 or (800) 292-3755 or visit www.hollywoodedge.com.

Those of us who write and produce for radio know the importance of creating that "theatre of the mind" effect. How many times do you search out a gunshot, explosion or punch, only to be disappointed because the actual sound of something does not come across or sound as good as one you hear in a movie? That's why this stuff has that box-office quality, that "Hollywood" edge. According to Moran, the company has the largest private collection of sound effects.

While the two libraries featured here are not the major blockbusters of their library, there is some good stuff on these discs. If you can find room in your budget and would like a whole bunch of great-sounding effects featuring cartoon sounds and production elements, these would enhance any sound effects library you already have.

Michael Parks is creative director for the Clear Channel Harrisburg Radio Group, and can be reached at (717) 540-8800 or e-mail him at michaelparks@clearchannel.com.

PRODUCT GUIDE

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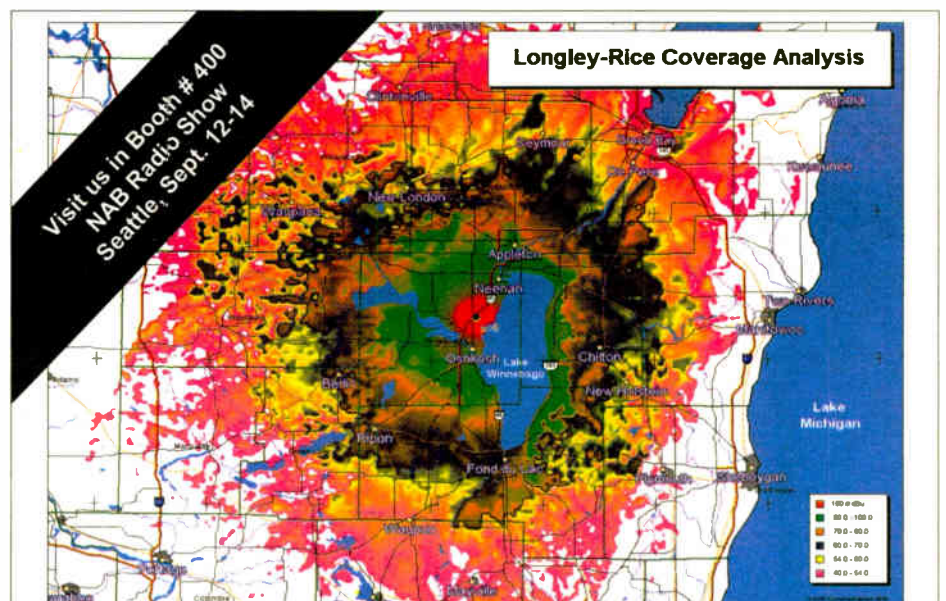
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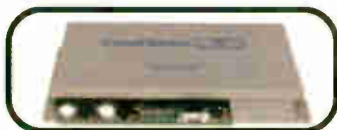
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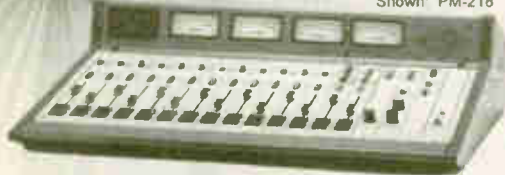
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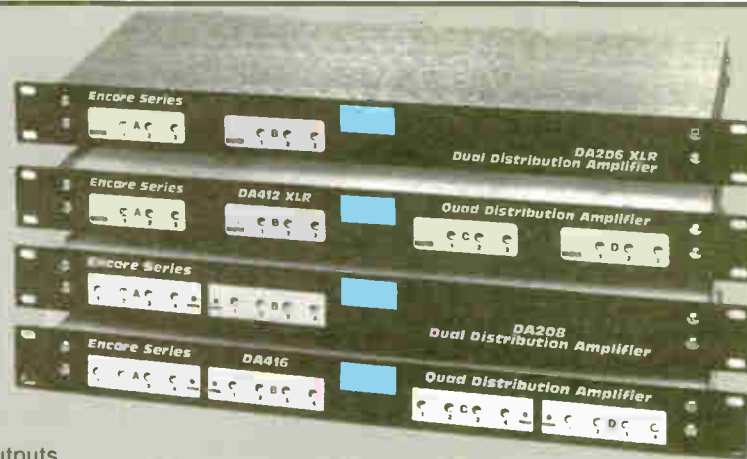
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The Time Sync II provides four separate GPS time referenced outputs. The first is a SPDT relay which pulses once every 15 minutes. These times are programmed for 13:00, 28:00, 43:00 and 58:00 after each hour. The second SPDT relay pulses at the "Top of the Hour" (00:00). This time may be user programmed. The third output is an open collector with a 100 ms pulse every second while the fourth output is an

4800-baud, RS-232 serial port providing UTC time in HH:MM:SS format. The final feature is the "SIG" led and SPDT relay, furnished as fail-safe for either loss of satellite or power and invalid time. The Time Sync II is supplied in a small profile chassis, along with a Garmin 12 - Channel GPS receiver with embedded antenna.



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ICM-16/Controller



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PRODUCT EVALUATION

Fostex Mic Departs From Tradition

by Ty Ford

The first professional microphone into which I spoke at the first radio station for which I worked was an RCA 77DX. It was big. It was heavy. This was the late 1960s at an AM station, so high-frequency response was not an issue.

By the early 1970s, I was working at FM stations using a pair of Electro-Voice 1751 electret condenser microphones on the air. A few years later, at Hearst-owned WBAL(AM) and WIYY(FM) in Baltimore, we used Shure SM7s and RE15s, with the RCA ribbon mics stored safely away by Chief Engineer Rowland Kraft.

I graduated from Hearst radio in 1986. That same year, Fostex brought to market its line of five Regulated Phase (RP) printed ribbon microphones, including the figure-eight M88RP. At that time they cost \$650, they now run for \$1,399. That may seem like a big price jump, but when you consider what a Honda Accord sold for 16 years ago vs. what it sells for today, the increase is not far off.

The term 'printed ribbon' refers to the Fostex-patented process of etching a fine aluminum coil directly onto a 4-6 micron polyester diaphragm.

The term "printed ribbon" refers to the Fostex-patented process of etching a fine aluminum coil directly onto a 4-6 micron polyester diaphragm. The diaphragm then is suspended amid Samarium Cobalt magnets.

Departure from tradition

The addition of a diaphragm is quite a departure from the traditional ribbon concept. RCA and beyerdynamic microphones use crimped or folded strips of thin metallic ribbon with no diaphragm.

Using a diaphragm presents some interesting challenges. Resonant frequency, damping and transient response are related to the mass of the diaphragm and how it is suspended. As a result, the diaphragm may not be as compliant as with traditional ribbon designs. It is, however, more durable.

Fostex posits that its magnet array keeps tiny ferrous particles that float in the air from coming in contact with the ribbon. I removed the head grille to get a better look at the capsule. A chrome mesh screen covers the diaphragm on each side of the capsule. Metal disks, each about one-half inch in diameter, presumably acting as mechanical filters, sit centered on top of the mesh.

The top-end frequency response opens up a bit without the single-ply metallic head grille, but the capsule becomes more vulnerable and easier to pop. The diaphragm assembly is mounted on a sturdy metal base plate that is suspended within a rubber web.

That assembly is held in place by a

larger metal plate that clamps the web to the microphone body. The web also guides the capsule leads below the base plate to the cylindrical 600-ohm output transformer.

That transformer gives the M88RP an output level of -58 dBm. The published frequency response specs of 40 Hz to 18 kHz do not quite tell the same story as those printed in the brochure. According to one of the published graphs, there is a slight peak around 3 kHz and another less-prominent one about 6 kHz. At 8 kHz, however, the response is -2 dB, at 18 kHz response is -6 dB.

Sturdy mount

The microphone comes with a sturdy mount and 5/8-inch threaded metal pipe connector. The connector resembles one of those handy knurled pieces that do not require the microphone itself to be rotated as it is attached. Unfortunately, this threaded part still requires that you twist the microphone or boom shaft to attach the mic to a boom.

Hearing some strange muffled sound is

there to hear the original sound, and therefore lack that crucial emotional connection, you might just dismiss it as "old-timey."

If you have found ribbon microphones too soft or too boomy, remember that a good EQ can tailor that response.

Product Capsule:
Fostex M88RP
Ribbon Microphone

Thumbs Up

- ✓Thick sound
- ✓Tight nulls

Thumbs Down

- ✓Boomy on some voices
- ✓Lower output than most condensers

Price: \$1,399

For more information contact the company in California at (562) 921-1112, fax (562) 802-1964, e-mail budd@fostex.com or visit www.fostex.com.

Usually, the best way to proceed is to roll off a bit of the bottom and find good spots around 3 kHz, 6 kHz and 12 kHz to add a dB or two. Because most ribbon microphones have outputs that are lower than most dynamics, marginal preamps probably will be too noisy when adjusted for proper gain.

Good mic preamps with step-up input transformers can bring a ribbon to life. Some of the best results I have obtained with ribbon microphones have been with Jensen Dual 990 and Amek/Neve 9098 preamps.

An Aphex 1100 and Millennia Media STT-1 also do a nice job. You can hear some 44.1 kHz MP3 samples of the M88RP at 128 kbps through the Aphex 1100 preamp on my Web site at the address shown at the end of this review.

Comparisons

Comparisons with my RCA 77DX ribbon were interesting. Retired RCA microphone engineer Clarence Kane restored my 77DX about 10 years ago.

I currently have it strapped for 250-ohm output. I adjusted it for a figure-eight pattern and used no LF rolloff. The 77DX had a bit more output, but was boomy to the point of being unusable at four to six inches.

A close inspection of the two waveforms with Pro Tools LE indicated that the Fostex ribbon was either tracking transients more successfully than the 77DX or not being damped as much as the 77DX.

Adjusting the pattern control of the 77DX also alters its frequency response, as does the two-step LF rolloff. Regardless of my attempts, I was never able to get my voice to sound better than through the M88RP and, in every case, the M88RP waveform showed greater detail.

If you have been using dynamic mics and have tried condensers only to find them too bright or too sensitive for studios with a lot of hard reflective surfaces, a ribbon microphone may work better. The M88RP microphone has a figure-eight pattern with deep nulls on each side, much more so than some cardioid patterns.

As such, you will get the best sound separation by placing these microphones



at right angles to each other, or side by side, providing the mics are more than a few feet apart. Having these microphones directly across from each is not good positioning because they hear almost as well from the back as they do from the front.

You would be bucking the trend to try a Fostex M88RP in the studio instead of an EV RE20, but it can do nice things for the voice.

The M88RP always gave an extra thickness to the voice and tended to ignore sibilance. Try one on your thinnest voices or if you want an exceptionally fat sound. Do not forget to tweak the LF rolloff for best results.

For Ty Ford voiceover demos, audio services and equipment reviews, visit www.jagunet.com/~tford.

PRODUCT GUIDE

ESE Introduces NTP Time Servers Line

California-based ESE is shipping its line of network time protocol (NTP) time servers.

NTP is a method of sharing time information on a network. According to the company, the ES-104, ES-289, ES-299 and ES-911/NTP provide accurate and synchronized time throughout a network.

The ES-104 uses an internal GPS receiver as its time reference providing the user with a source of Stratum 1 accuracy.

ES-289, ES-299 and ES-911/NTP receive their time reference from external sources of time code. The ES-289 accepts SMPTE/EBU time code or ESE time code while the ES-299 references IRIG (A, B or E), NASA 36, XR3 or 2137 time code (AM or TTL).

ES-911/NTP is designed to accept ASCII time code in many formats including NENA (format "0", "1" or "2"), ESE (format "A") or NMEA 0183.

List price ranges between \$895 and \$1,995.

For more information contact the company in California at (310) 322-2136 or visit www.es-web.com.

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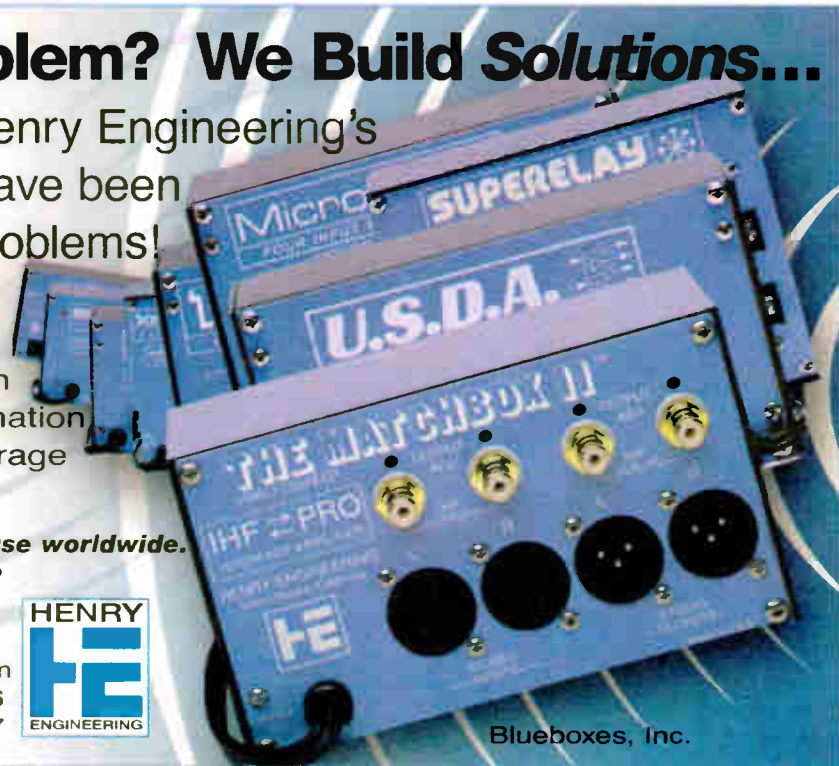
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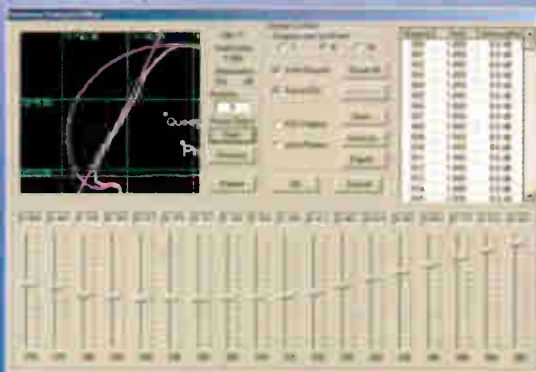
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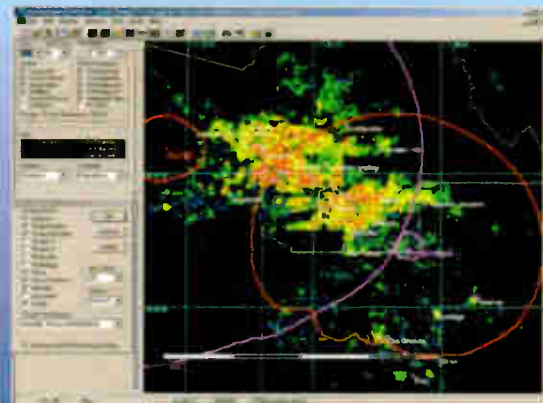
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BOOK REVIEW

FezGuys Provide Streaming Info

by Carl Lindemann

Although the legal issues of online audio are still up in the air, the technology is well past the "bleeding edge" stage. Although Webcasters lately have been turning their signals off, thanks to rights and fees issues, online audio eventually will become a part of every station's operation. That means those standing on the sidelines are well-advised to get up to speed.

"The FezGuys' Guide to Streaming Audio" provides an overview as well as hands-on advice. The FezGuys, Jon Luini and Allen Whitman, have worked in and around online audio since the early days of the Web. Luini is known in Internet circles as a co-founder of pioneering music Web sites the Internet Underground Music Archive and Addicted to Noise. Whitman's music background got him into the game.

Although neither had radio experience, their Internet, musical and journalistic endeavors have exposed them to the issues important to stations.

This "guide" is something of a hash. I got the distinct impression that the text had been cobbled together from many shorter pieces written over a long stretch of time.

Four sections

It seems to switch between addressing completely unsophisticated readers and those with a fair level of technical sophistication. The result is a bumpy read that manages to deliver some valuable information for station management and technical staff.

The book is divided up into four sections. Part I covers the basics, including some rudimentary ground like the difference between audio downloads and streams, live vs. on-demand.

Some of these basics are oversimpli-

fied. Given the few references to broadband connections, much material here seems to come from the dial-up modem era. This slightly dated feel continues into a discussion of required equipment. For example, talk of needing a system with 2 GB hard-drive space seems rather quaint now that 60 GB drives can be had for less than \$100.

It may be that the intended audience is the interested amateur with limited hardware.

based systems as well as Mac.

An issue is how much longer such version-specific instructions will be useful. Those who already own these packages are likely to do as well by consulting the manuals.

The chapter "Serving Your Audio" is worthwhile for those wondering whether to go the do-it-yourself route by hosting their own streaming server or to opt for remote hosting.

Throughout, the material seems more

I got the distinct impression that the text had been cobbled together from many shorter pieces written over a long stretch of time.

The suggestion that SoundBlaster audiocards are adequate will strike sophisticated readers as dubious. While an aside mentions that professional cards use "pricy" XLR cabling, there is no discussion as to why balanced connectors are important when dealing with a noisy PC environment. Those wondering about high-pitched howls and the like contaminating their audio will not find a clear answer here.

The second section, "How To Do It (Processes)," gets into the nuts and bolts of encoding and uploading the most popular formats including RealMedia, Windows Media, QuickTime and MP3.

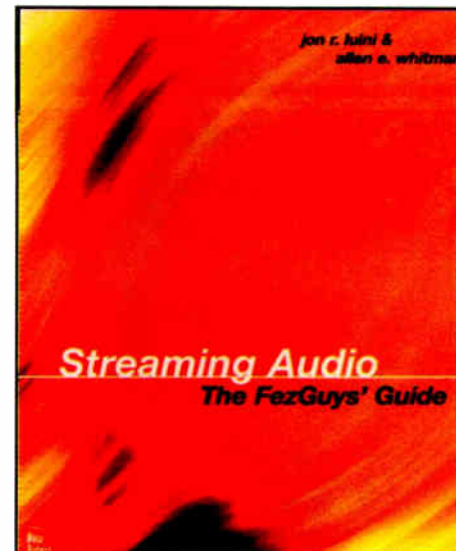
The detailed step-by-step information illustrated by ample screen shots could be useful for those sitting down to encode files for the first time. Here, the material seems fresher, with pointers on working with Sound Forge, RealProducer, Audiograbber and various other audio processing packages for both Windows-

geared to those interested in setting up an audio-enabled Web site rather than broadcasters looking to extend into Webcasting. The section containing case histories bears this out.

Behind-the-scenes looks at guitarist Joe Satriani's Web site and Webcaster SomaFM are of peripheral interest. But the story of KPIG(FM)'s pioneering work is required reading.

The technical details remain pertinent despite KPIG.com's recent decision to suspend streaming due to the unsettled issues surrounding Webcasting royalties. The authors provide a detailed description of the KPIG story as well as the financial/legal issues afoot with the CARP proceedings. The possibility of creating a viable business model through ad insertion gets a nod. Most of this will be familiar to dedicated Radio World readers.

The closing section "Extra Credit" is a fair overview of audio optimization in



general and for streaming in particular. Much of what is presented here will seem commonplace to anyone who has spent much time with Sound Forge or other audio processing packages.

Of greater potential interest are the "Advanced Authoring Techniques" covering various hardware encoders and batch processing packages. Like the "how-to" guide to using popular authoring software, this focuses on Telos System's Zephyr Xstream and Discreet's Cleaner 5.

Again, users who own one of these would do just as well to read the manual that it came with. For those who do not, this information probably is not as helpful as going to the company's Web site to understand why you might need such a tool.

After wading through, I felt that this first book-length project from the FezGuys was fuzzy. Think of them as sort of the audio equivalent of the Motley Fools. Those looking to invest in streaming audio may start here. But the serious will quickly move on to more comprehensive solutions.

This 336-page paperback from New Riders Publishing retails for \$34.99; it was available in June on Amazon.com for \$24.50. Its ISBN number is 0-7357-1280-8.

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• PRODUCT GUIDE •

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Telos Makes Talkshow Enhancements

Telos Systems has launched Version 2.0 software for its Series 2101 and TWOx12 Talkshow Systems. Several of the upgrade's enhancements are the result of client feedback, the company said.

Version 2.0 for Series 2101 offers better integration with Telos Assistant Producer call-screening software, including the ability to change shows remotely. Enhancements include the ability to generate DTMF tones using Studio I/O keypads and remote system monitoring via added Telnet capability.

Version 2 of TWOx12, pictured, allows eight Assistant Producer connections and supports the use of eight Desktop Directors. A new Auto record mode allows automatic start of a dedicated recording device.

The updates are available for free.



For more information contact the company in Ohio at (216) 241-7225, e-mail info@telos-systems.com or visit www.telos-systems.com.

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The Wallmate from Fabric Wallmount Systems allows studios to control errant sound in an attractive and customizable manner.

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For more information contact the company in California at (818) 772-7770, e-mail milt@wallmate.net or visit www.wallmate.net.



Arista Compact Servers for Broadcast

The Power Racer 201 Series from Arista is a cost-effective, compact series of servers that occupy two rack spaces.

The RS-201 has a depth of 18.5 inches. Configurations can be equipped with dual high-performance processors including Intel P4 and P4 Xeon, up to two integrated 10/100 Ethernet and up to three 32- or 64-bit PCI slots. Three flavors of power supplies are available.

The servers are compatible with Microsoft Windows NT and Windows 2000, Solaris versions 7 and 8, BSD and Linux. Optional Ultra-160 SCSI or RAID controller provides a large storage capacity and data protection.

Price: from \$999.

For more information contact the company in California at (510) 226-1800 or visit www.aristaipc.com.



Talk to All the PCs In Your Operation

The CyberKVM is a rackmountable keyboard/video/mouse system from CyberResearch. It fits in 1 RU and includes up to eight internal KVM switches and ports, as well as display and daisychain ports. The unit can control four or eight PCs directly; teamed with seven slave 16-port KVM switches, the CyberKVM can control 120 PCs from a single spot.

It offers password-protection to permit system administrators to control access. An autoscan function displays only PCs that are on, allowing active systems to be monitored visually; when any key is pressed, autoscan stops on the current channel.

For more information contact the company in Connecticut at (203) 483-8815 or (800) 341-2525 or visit www.cyberresearch.com.



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Rohn 65, 440' tower with lighting, on ground, \$18,000. Ken Diebel, KHME, 1707 Louisa St, Rayville LA 71769. 318-728-3578.



For more information, call Simone Fewell @ 703-998-7600, ext. 154 or e-mail: sfewell@imaspub.com.

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Motorola TA-42 input & output terminals, T&R 2-25 amp fuses, 1-15 amp fuse, \$20. Will Dougherty, WLD, Music Valley, Rt 1, Box 1548, Mill Spring MO 63952. 573-998-2681.

SAMS Project Studio Blueprint by Greg Galluccio, 236 pages; The Studio Business Book by Jim Mandrell, 335 pages, \$25/both. Will Dougherty, WLD, Music Valley, Rt 1, Box 1548, Mill Spring MO 63952. 573-998-2681.

Switchcraft A3F XLR 3 pin female plugs (28 new), \$30/all. Will Dougherty, WLD, Music Valley, Rt 1, Box 1548, Mill Spring MO 63952. 573-998-2681.

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5 KW	FM	1992	Continental 815A
10KW	FM	1974	Harris FM10HK
15KW	FM	1980	McMartin BF15,000
20KW	FM	1974	Harris FM20K
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25KW	FM	1980	CSI T-25-F
25KW	FM	1978	Collins 831G-2C
25KW	FM	1987	Harris FM 25K-1
30KW	FM	1983	BE FM 30
50KW	FM	1982	Harris Combiner w/auto exciter-transmitter switcher

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Gates 10G service manual, new, \$50. Herman Gibbs, WCWS, Box C-3177, College of Wooster, Wooster OH 44691. 330-263-2212.

Harris 10-H 10 kW, no exciter, \$10,000; CSI 5 kW AM, call for price; Energy-Onix 15 kW FM xmtr, \$12,000 +shpg; Continental 316-F 10 kW AM xmtr, call for price. Joseph Bahr, POB 6556, San Juan PR 00914. 787-725-4164.

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◆ READER'S FORUM ◆

Radio World, August 14, 2002

Copyright

► Continued from page 54
find itself with a bill that it can't afford to pay 10 months from now.

At KTRU we will have to consider the implications of this decision carefully and make a decision. It would seem not to make sense to encourage students to succeed if the outcome of their success, reaching a larger audience, causes them to be penalized with higher fees.

The problem does not stop with fees going forward. Stations that have already been streaming audio on the Internet owe fees retroactive to 1998, when the DMCA was passed, with the bill coming due on Oct. 20.

I have been following this issue for some time; as a result, KTRU has set aside money in order to pay the retroactive fees. But this is troubling. Even though we have set aside enough money to cover the retroactive fees, we did so because we were aware of the issue. Stations had no effective formal notice of the fact that they might be liable for new fees.

Even if the government or the copyright holders had informed stations, no one could tell us what the final cost would be. Stations that knew about the fee assumed it would be equal to what we must pay to composers for broadcasting.

Now it turns out the recording rights fee is much more, and the composer fees for Webcasting also exceed those for broadcasting! The audiences are smaller, the audio quality is poorer — and they want more money?

Sandra Wasson of KALX(FM) at the University of California-Berkeley adds, "KALX might be able to handle the retroactive fees and pay the current fees due; but what about those smaller stations that can't handle the retroactive fees? Are they to be required to shut down because the process did not provide them notification that they would be liable for fees at an undetermined rate?"

Concerning the future, Wasson said, "While we are struggling with how to pay the retroactive fees, we are also threatened by the cost of reporting what we play."

Wasson refers to yet-to-be-defined requirements for stations to report data concerning the songs they play and how many people listen on the Web.

"If the expense of record-keeping exceeds the costs of the royalty, we will need to examine our ability to provide this service to the public."

So what is it that college broadcasters are seeking? According to Joel Willer, a professor of mass communications at the University of Louisiana at Monroe, "All we are seeking is a means to continue to provide an education to our students in this emerging technology." He is the faculty supervisor for KXUL(FM). That station's Web site has been honored with a first-place award and other commendations from the Broadcast Education Association.

"In short," Willer said, "what we need is a parallel to the copyright legislation covering our broadcast operations. This includes a flat fee, reasonable reporting requirements and freedom to develop programming that is not restricted by content restrictions. With such a solution, we could compensate the copyright holders and proceed with our mission, which is to educate students and deliver diverse programming."

Speaking for CBI member radio stations, Kozireski said, "We need emergency legislation from Congress to stop this process until legislators have a chance to fully examine the issue and enact an appropriate solution. We need to encourage the continuing development of the Internet at the very institutions where it began, at colleges and universities. We need to protect the education of our students."

For more information, please contact me at (713) 348-2935 or willr@ktru.org.

Engineers' staying power

I just finished reading Aaron Brodbar's thought-provoking editorial letter in the July 3 edition of Radio World ("Self-respecting engineers").

While it's no secret that nearly all engineers in radio are incredibly underpaid, I for one continue my 35-year love affair with radio, despite the low pay, for at least one very good reason: I love what I am doing, and I am doing it for the most terrific group of folks for whom I've ever worked.

Aaron refers to "better positions," citing the cable TV industry as one. Apparently, Aaron, you've never worked in cable! Most cable TV MSOs start their technical staff at around \$6 to \$7 an hour, insist upon unlimited, on-demand overtime and think that the "perk" of getting free cable TV makes up for it.

Time-Warner proudly puffs out its corporate chest and announces, "We pay competitive wages," which translates into "We look at what everyone else is paying, and pay our employees according to that instead of (God forbid) experience, training or ability."

Like Aaron, I too have often put in 20-hour days rewiring a control room that had to be back online by 6 a.m. However, my reward — not counting what I am paid — comes from my general manager, my sales manager and my programming staff, all of whom usually go out of their way to thank me for my hard work.

Would I like to be earning more from this profession? You bet. But sometimes rewards are not monetary.

What bothers me most about the low pay radio engineers receive is that many, if not all, medium- to large-market stations think nothing of paying \$50,000 to \$100,000 a year for a programming "consultant" (known in the trade as an "insultant"). This is someone with a briefcase, more than 75 miles away from home, who somehow has convinced the management that he or she somehow knows more about your ADI than you do, despite the fact you've worked there 25 years.

Our own insultant got so totally immersed in his own sense of self-importance that he felt it was his place to adjust our Optimod until we were running 155-percent modulation, because we were "not sounding loud enough!" (The

problem was fixed quickly by the replacement of the all-too-commonly-available Chicago lock on the Optimod's door.)

As for "self-respecting" — well, Aaron, I respect myself plenty. I have two college degrees, and I am damned good at what I do, as I am sure you are at what you do.

When I started in radio in 1967, the engineering staff usually was the largest department in the building. Today, one is lucky if he or she even has a desk, let alone an office or a shop.

Will this issue ever be resolved? Probably not, or at least not until management realizes why a full-time — or even more than one full-time — engineer is to their benefit, as opposed to a very overpaid programming insultant.

I am sorry you were treated like an errand boy or janitor, Aaron. But that appears to be something that you experienced, where I did not. As for "skilled engineers working in radio" — please color me in that column now.

Jerry Arnold

Director of Engineering
Bright Tower Broadcasting
WWSY(FM), WMGI(FM)
Terre Haute, Ind.

Recycling radio

I figured you guys would be the right people to ask about this.

Most all of my radio/production clients have converted to digital media and authorized the disposal of their analog media — tape, reels and boxes. So my question is, do you know of a recycling program to take this stuff?

It seems a shame to literally throw it all away, but I haven't found any other alternative.

Alfred B. Grunwell

Audio Engineer
Organic Digital
Greene, N.Y.

RW responds:

In the April 24 issue, the editorial on page 54 covered ways in which to recycle old computer gear.

Opportunities for recycling vary by location. While researching computer gear recycling

programs, we found The National Directory of Computer Recycling Programs at www.microweb.com/pepsite/Recycle/recycle_in dex.html. Check there; if recommended recycle sites in your locale do not also accept media, your next step would be to run a Google or other search to narrow it down to media recycling.

Readers are invited to send other ideas to radioworld@imaspub.com.

Ad has the wrong values

This letter was addressed to Eventide and copied to Reader's Forum.

As a broadcaster for over 35 years and a public-school broadcast educator for over 25 years, I am offended by your use of the woman flipping the bird in your magazine ad (July 3).

I understand your point, but your method is offensive. I use trade magazines in my high-school and college classes, and attempt to teach industry standards. I find this one more example of the lack of common sense and good taste in the commercial broadcast industry.

You are contributing to the crude behavior and indifference toward any standards by our youth. I don't want to hear any more complaints about the job public schools are doing in trying to instill "values" in our youth. With communication industry examples as counter-productive as yours, teachers and parents face an impossible job.

Keep your role-modeling in mind next time you are confronted by some obnoxious, misbehaving teens at the mall. By the way, we won't be recommending or purchasing your products.

Jim Grimes

Comm. & Media Instructor/
General Manager

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Heritage machines

In response to my recent article "That Old Program I Never Wrote" (June 19), engineer Tim Starliper sent in these impressive photos of classic ITC and Tapecaster cart machines still in service out in Three Mile Island country, at high-school radio station WMSS(FM) in Middletown, Pa.

The ITC triple-decker shows lots of wear, with almost no lettering left on slot No. 1's Play button, while the model 700 Tapecasters sit smugly in their wooden shelves, waiting for the next weather jingle or student-produced PSA.

I mentioned in the article how hard it was to find pictures of heritage machines. Not only did Tim find them, he took them himself, and has a career just keeping these old babies running.

Thanks, Tim!

Al Peterson
Radio World
Falls Church, Va.



GUEST COMMENTARY

Webcasting Fees Hurt College Radio

by Will Robedee

The author is vice chair of College Broadcasters Inc. and general manager of Rice University's KTRU(FM) in Houston.

The copyright royalty rate determination released on June 20 by the Librarian of Congress provides virtually no relief for threatened college radio Webcasters.

The ruling leaves unchanged the principle fees previously recommended by a Copyright Arbitration Royalty Panel, or CARP, to be paid by noncommercial educational broadcasters. These new fees, which will go to owners of sound recordings, were created as required by the Digital Millennium Copyright Act of 1998.

This most recent outcome is disappointing, but not surprising to the CBI board.

"While we realize that students and educational opportunities are not exempt from the copyright laws, the U.S. Congress has traditionally worked to craft legislation that allowed students a chance to learn new skills. The result of the DMCA does not meet with the historical legislative precedent," said Warren Kozireski of the State University of New York-Brockport.

Kozireski is chairman of Collegiate Broadcasters Inc., a national organization representing college radio and television stations that has been representing its members in the controversy over the new Webcasting fees.

Some college radio stations use Internet Webcasts to extend their reach to new audiences. Other educational institutions have used Webcast-only stations as the solution to scarce broadcast frequencies or extremely limited budgets. All college stations will suffer immensely under this ruling.

Radio stations receiving federal taxpayer funding funneled through the Corporation for Public Broadcasting, many of them affiliated with National Public Radio, will have this new fee paid for them by that agency. CBI member college radio stations, unlike CPB-funded stations, will have to find a way to pay the fees from their students' pockets or from traditionally under-funded academic budgets, or shut off the streaming audio, thus causing the college students to lose a valuable learning tool in the process.

The real irony here is that these students are trying to reach an educational goal; yet the better they attain that goal of reaching an audience

with diverse and educational programming, the more it will cost them in real dollars. There is no motive to succeed in an educational setting; what could be more counterproductive?

I created the "Save Our Streams" Web site to track the issue of these new regulations and fees and the resulting impact on college radio stations. You can see it at www.rice.edu/ch/sos.

A quick look at the SOS Web site reveals that the "death toll" already is alarmingly high. The site as of late July listed more than 30 stations that had ceased Webcasting due to the new regulations. Among the casualties are Internet-only stations. This means that entire stations and educational programs will be lost. Educational opportunities for future broadcasters will be lost in the process.

Still other stations that decided from the start to not stream their over-the-air signals are not pleased with the outcome thus far. This conservative stance taken early on does not mean their stations, student staffs or listening audience haven't suffered a loss.

The faculty manager at Marshall University's WMUL(FM) in Huntington, W.Va., decided not to stream his student station's highly acclaimed programming due to the uncertainty of royalty rates and accompanying regulatory requirements.

Said Dr. Charles Bailey of WMUL(FM) at Marshall University, "There is no telling how many stations such as WMUL have opted to not stream their audio on the Internet due to the uncertainty of rates, retroactive fees, reporting requirements and content restrictions. It is a shame that the students were not allowed to reach a larger audience with their award-winning programming." WMUL has won 473 awards since 1985.

John R. Bennett, director of student media at the Savannah College of Art and Design, works with the students at SCAD radio, an Internet-only station.

"If the fees remain outrageously expensive and the reporting requirements impossibly complex, we'll be forced to shut down the station. Unlike other college stations that will simply pull their streams and go on broadcasting as usual, this will mean the complete elimination of our station.

"Web streaming is not an enhancement to our station. It is our station."

Ironically, stations like this will pay a rate three times higher than other college stations, because they don't have an FCC license. According to Bennett, obtaining a broadcast license is out of the question due to a lack of available frequencies. He adds, "We have no central campus. Our 40 or so college buildings are arrayed throughout downtown Savannah. Therefore, carrier current or Part 15 broadcasting is an expensive and difficult proposition."

Crisis Planning Essential

Does your station have a plan in place if another Sept. 11 were to happen? As radio stations, serving the public interest should be the No. 1 priority. We are, after all, service providers. A crisis protocol is essential.

Holland Cooke, news/talk specialist for Cleveland-based McVay Media, is quoted in Ken R.'s Sept. 11 commemoration story on page 27. Cooke said some stations were caught

short-handed by this big news story.

"I'm afraid that, in radio as in life, too many people have gone back to business as usual, and barely managed clusters will miss the boat," said Cooke.

How can your station prepare?

Jim Farley, vice president of news and programming for WTOP(AM-FM) in Washington, said his station has a strategy in place for the next horrible news day.

"We have several plans plus an alternate facility to broadcast from in case we cannot get access to our main studios," said Farley.

He also has instructed staff to be prepared in matters more practical. "We've asked our folks to keep things like a change of clothes, blanket, teddy bear and a spare toothbrush in their car."

As we are all aware since September 11th, Washington is a potential terrorist target. Although police say no specific threats have been received regarding July 4th or beyond, we have to accept the possibility that a terrorist attack could occur, and that the nature of such an attack could render our facilities useless, or at best, inaccessible. In such an event, we intend to use our facilities as a backup.

Although the facilities are small and our capabilities and news resources would be severely limited, at least we could get on the air. I am working to upgrade the facilities all the time. At present we could get CBS on the air, phone calls and carts. There is one computer with a printer, a makeshift production room, fax machine, copy machine and dial-up Internet access. There are no showers and the water in the building is not drinkable, but there is an ample supply of bottled water.

In the unlikely event you are instructed to report to [redacted] for work, complete directions are attached. As [redacted] has previously instructed, you should bring a change of clothes, pillow, toothbrush and any other necessities for spending the night away from home. Reporters should also bring all their equipment, including laptop computers for those who have them.

A WTOP Radio memo prepares staffers in the event of an emergency.

WTOP even lined up its food reporter, Chef John, to come and prepare food in the event of another emergency situation. That's thinking ahead.

The station has prepped staffers for an emergency in other ways, with memos and discussions.

"We debriefed everybody after Sept. 11 and asked them, 'If something like this happens again, what else do you need?' They came up with great ideas," said Farley.

"We have a bunch of really terrific part-time and free-lance news people we can bring in in the event something like this happens again," said Farley. "Plus we have sales and marketing people who could and would pitch in."

Radio could learn a lot from TV News Director Angie Kucharski of KCNC(TV) in Denver. Kucharski sat on a panel at an RTNDA@NAB session inspired by the events of Sept. 11. In the KCNC newsroom, a map on the wall indicates, by way of colored pushpins, where staffers live. If there's a breaking story, it's clear who can reach the scene the quickest.

Dave Isaacs, news director at KLBK(AM), also sat on the panel. His station prepares non-news staffers, such as salespeople and receptionists, to handle phone duty in a crisis, freeing news staffers to do their jobs.

At the Associated Press in Washington, crisis planning is in place on several levels. AP maintains dial-up ISDN connections in several locations in greater Washington in the event downtown HQ has to be evacuated. Reporters keep "grab-and-go" kits at their desks filled with items including a facemask, water bottle and gloves.

Many stations have not taken such cautions. They should. A disaster can't be planned, but planning for a disaster is essential.

—RW

Most ironic is that recording artists also will be injured. College radio has long been the venue where new artists have found their first broadcast audiences. Artists flocked to the friendly programmers of college radio in order to receive airplay, while commercial radio outlets always have been apprehensive to chance playing new music.

Many of the same artists that owe their

success to college radio now are effectively pushing those stations off the Internet with these new fees and oppressive regulations. As a result, the next generation of artists will have fewer opportunities to be discovered.

Even more troublesome is the future.

Internet use doubles every 10 months. A station that can afford to Webcast today might See COPYRIGHT, page 53 ▶

More Letters On Page 53

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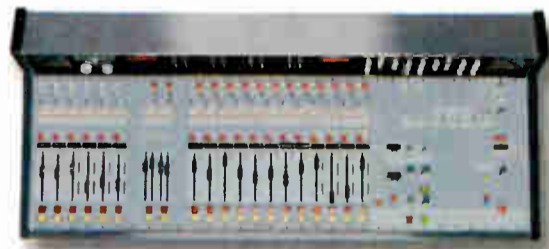
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