HD Radio Drive Time
Glen Clark takes a spin with his new digital receiver.

Page 10

Digital Restoration
We try out Ray Gun 2.0 from Arboretum Systems.

Page 29

Radio World

$2.50   **The Newspaper for Radio Managers and Engineers**   **February 1, 2004**

Debate Erupts Anew Over XM Localism

by Leslie Stimson

LAS VEGAS XM Satellite Radio and Sirius plan to introduce traffic and weather reports, and the NAB is not happy about it.

The association's president/CEO, Eddie Fritts, called it "an appalling back-door attempt to bypass the FCC's intent to limit satellite radio to a national service only."

Fritts said XM's plans in particular "violate the spirit" of a recent agreement between the two companies for suggested language regarding the FCC's terrestrial repeater rules for XM. That language bars XM from using the repeaters to insert local programming.

Commenting after making its announcement in January during the CES convention here, XM told Radio World it is not violating its agreement with NAB, because it will send its traffic and weather data as part of its satellite signal nationwide. President/CEO Hugh Panero characterized the dedicated traffic/weather channels as effective programming. "This will be a national service," he said.

EBS to EAS to What?

by Randy J. Stine

WASHINGTON As the U.S. Department of Homeland Security positions itself to take the lead on public warning in this country, sources at the FCC say the commission will soon begin considering recommendations for a new public warning system to enhance or possibly replace the Emergency Alert System.

But experts contacted for this article do not expect EAS to transform quickly, which means no immediate changes are likely at the station level.
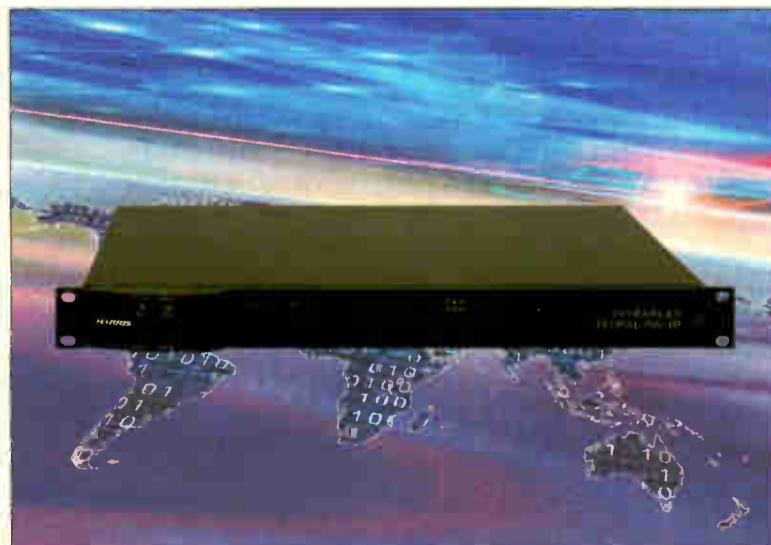
Jim Dailey, director of the Office of Homeland Security for the FCC's Enforcement Bureau, says future policy on public warning is expected to come from the DHS, led by Secretary Tom Ridge. It's the department that issues the color-coded terrorism threat level warnings.

A working group of the FCC's Media Security and Reliability

Page 29
Behind the Mics at 'Riverwalk'

HD Radios Are For Sale

An Iowa buyer was the first in the nation to purchase an HD Radio tuner.

Nathan Franzen bought a Kenwood KTC-HR100 HD Radio at the Ultimate Electronics store in Cedar Rapids, Iowa, in January. He installed it in his 2001 Pontiac Grand Prix. Franzen then tuned to KZIA(FM).

Meanwhile, in Las Vegas at the CES show, the question of bringing HD Radios to the public was discussed at launch ceremonies. Present were officials from Ibiquity Digital Corp.; the Consumer Electronics Association; electronics manufacturers JVC,

Kenwood, Onkyo, Panasonic and Visteon; broadcasters Beasley Broadcast Group, Greater Media and NPR; and retailer Ultimate Electronics.

"CES brought you a first look at this promising technology in 2001. Today marks a historic moment for the radio broadcast and consumer electronics industries," stated CEA President/CEO Gary Shapiro in a press conference. "The transition of the world's last major medium, AM and FM radio, from analog to digital is now fulfilled with the availability of HD Radio receivers for consumers."

Robert Struble, president and chief executive officer of Ibiquity, said, "HD Radio receivers are for sale. We look forward to continuing to work with our industry partners on a seam-

less transition to HD Radio, much in the same way the television industry moved from black-and-white to color in the 1960s and '70s."

Struble continued, "At the same time, this announcement does not represent a conclusion of our efforts; it's simply the beginning of a new phase. We will continue to execute with the same focus and determination in licensing additional AM and FM radio stations across the country and further developing the HD Radio system to include capabilities like store-and-replay, on-demand services, a 'buy' button, surround sound and a host of services that cannot even be imagined today."

The company said approximately 300 radio stations in 100 U.S. markets have licensed the technology.

XM Cuts Back Commercials

LAS VEGAS XM Satellite Radio is taking a cue from rival Sirius and making all of its 68 music channels commercial-free.

That approach has been a strong point-of-sale feature for rival Sirius. XM executives made the announcement during the CES convention, hoping the move will eliminate a big difference between the digital satellite radio services when consumers learn about them from electronics retailers.

This leaves programming and price as differentiators, with XM at $9.99 per month, $2 less than Sirius.

XM Subscribers: 1.36 Million

LAS VEGAS XM says it signed up more than 1.36 million subscribers in 2003, for a net of 1 million additional subscribers for the year. Total listenership is now 1.36 million.

Much of the increase for the year came in the fourth quarter; and more than 20,000 subscribed on Christmas day, the best single day of XM sales to date.

XM added more than 430,000 customers in the fourth quarter and expects to have 2.8 million subscribers by the end of this year, close to the company's cited break-even point of 3 million.

Sirius ended 2003 with 261,061 subscribers, up from approximately 30,000 at the end of 2002. Sirius added more than 100,000 in the fourth quarter of 2003, due to increased sales at retail during the holiday season.

Australia Launches DAB

LONDON Australians will have the opportunity to experience digital radio;

John Fernandez Called 'Fatherly'

SACRAMENTO, Calif. Friends and co-workers of John Fernandez say his reputation for building quality products and providing excellent customer service far outlived the 12-year span of Broadcast Audio Corp.'s existence.

Fernandez, a co-founder of that company, died in November in Sacramento. He was 71.

"I think he would consider his biggest accomplishment to be the manner in which he conducted business," said Jack Ducart, a longtime friend. "He was honest, he stood behind his product and he served with integrity."

Fernandez started Broadcast Audio in 1978 with David Evans and sold the company in 1990 to Fidelipac (which was later acquired by Amplifonix).

Broadcast Audio specialized in building audio consoles known for their modular design. Gary Maggiore, former production and purchasing manager for Broadcast Audio, said employees for the small company made the consoles from scratch.

"We made the front panels; the chassis; the wood trim, in walnut and oak. We made the PC boards. I did the silk screening. We did the entire fabrication."

It began at Sparta

Fernandez began his career in broadcasting in the early 1970s at Sparta Electronics, where he was a mechanical engineer and head of the fabrication department. According to Maggiore, Fernandez was instrumental in some of the designs of the company's consoles, turntables and tape cartridge equipment.

Fernandez met Evans while both worked at Sparta, and the two decided to start their own company. The business prospered for several years, carving out a niche in the console business.

Fernandez became well known representing Broadcast Audio at the NAB and other conventions, said Maggiore. "He made a lot of friends."

But the company faced new challenges in the mid-1980s. Broadcast Audio's high-end consoles became less attractive to buyers as competition increased and prices fell. Evans' death in 1989 contributed to the company's demise.

> # J
> ohn tried to keep the lights on, using his own resources to keep payroll going.
>
> — Broadcast Audio's Jim Latendorf

"John tried to keep the lights on, using his own resources to keep payroll going," according to former employee Jim Latendorf. But Fernandez had to sell the company in 1990.

Although Broadcast Audio has been defunct for more than a decade, some of its consoles are still operational, said Latendorf, who is now network engineer for Family Stations. "Even after he sold the company, he tried to support the customers."

John Fernandez

Latendorf recalls that Fernandez treated his employees with the same attitude. He says Fernandez had a "fatherly instinct" when it came to managing the company.

"You felt like you worked *with* John not *for* John. We collaborated. He treated his people like he was one of the troops. It was a team effort. He would always come and ask, 'What do you think?'"

Fernandez retired after selling Broadcast Audio in 1990. He devoted much of his time to the Romulus Cub, a Sacramento organization that raises funds for children. Three weeks before he died, the club voted to rename its annual golf tournament the John Fernandez Memorial tournament to recognize his contributions.

Fernandez is survived by his wife of 43 years, Adelaide, and two daughters. He died of cancer.

— Kathy Merritt

Digital News

major Sydney commercial and public stations began simulcasting in the Eureka-147 digital format in December. This is an 18-month industry-wide pilot project, according to the Digital Radio Development Bureau.

Listener panels will be established and a number of consumer display centers will be launched. Initially 100 listeners will be selected to participate in the trials, with plans to extend to 500 listeners as a greater range of receivers becomes available. The panels will include taxi drivers, young people, opinion makers, computer users and a racing panel.

Using the Eureka-147 technology, stations can transmit digital audio, plus a high-speed stream of information that allows the transmission of text and images with the receivers.

The Sydney trials are the first on VHF Band 3 involving all commercial broadcasters and the ABC and SBS. Sydney commercial stations 2KY, 2DayFM, 2WS and ABC have been simulcasting on L-Band for four years.

Russia Chooses DRM for Digital Pilot

GENEVA Russia's federal and state-run Russian TV and Radio Network and state radio company Voice of Russia have chosen the on-air system Digital Radio Mondiale for that country's short-wave transmission pilot project.

The project, authorized by Russia's State Commission on Radio Frequencies on Dec. 1, extends through the end of 2005. The test results will be presented to the commission in early 2006, with authorization for the implementation of Russia's DRM network expected.

"This is a welcome development in DRM's global expansion," stated DRM Chairman Peter Senger of Deutsche Welle. "It illustrates Russia's conviction that DRM provides the right solutions for digital broadcasting in the years to come."

Voice of Russia has been a DRM member since 1998.

The Conference of International Broadcasters' Audience Research Services recently rated Voice of Russia's international audience at 100 million listeners in 160 countries and regions.

Since DRM's debut in June, the consortium says more than 50 broadcasters have started transmitting their daily, weekly or periodic DRM programs.

Sirius Now Official NFL Satcaster

NEW YORK You may be watching the Super Bowl on TV or hearing it on network radio as you read this. Next year, you'll have the opportunity to hear the game on Sirius.

It has become the official satellite radio broadcaster for the National Football League. In a seven-year deal, Sirius agreed to broadcast all NFL games live nationwide, with exclusive rights to use the NFL "shield" logo and collective NFL team trademarks.

Beginning with the NFL's 2004 season, Sirius will carry the entire regular season as well as select pre-season contests and playoff games.

As part of the agreement, the satcaster will create the NFL Radio Network, an around-the-clock stream of NFL content for Sirius subscribers. The radio channel will provide news, features and other programming highlighting the NFL and its teams. The NFL Radio Network will include programs from the NFL Network television channel, launched in November.

Sirius will not charge subscribers extra for the NFL programming.

"For the first time ever, football fans will have the opportunity to hear radio play-by-play of their favorite NFL team — called by their favorite local announcers — no matter where they are in North America," said Sirius President/CEO Joe Clayton.

— Leslie Stimson

WorldSpace: 'Voice From Home'

Few people are watching XM Satellite Radio and Sirius as closely as Noah A. Samara.

"We literally founded this industry," the chairman and CEO of WorldSpace said during a recent visit I made to the company's headquarters on N Street in northwest Washington.

Right now, virtually all U.S. media stories about satellite radio focus on XM and Sirius. But WorldSpace, which the Ethiopian-born Samara founded in 1990 at age 34 and which began satellite audio services in 1999, seems to be at a critical point in its own growth.

Samara is majority owner of WorldSpace, which is backed by private venture capital. His initial money came from Saudi investors. Forbes reported in 2002 that those backers had grown restless, with one trying to oust Samara; instead, it stated, he wound up taking over most of the company and continued to seek the path to profitability. Those efforts apparently continue.

The company has approximately 300 employees, 80 or so in Washington. It broadcasts an MP3-encoded signal on the L Band in approximately 100 dialects and languages via its AfriStar and AsiaStar satellites.

Here's what's happening at WorldSpace, based on what Samara and two other company officials told me during interviews last year and in January:

Subscriptions: The company is moving its business model to subs and would like to be 75 to 80 percent paid. At one time, the service was free to most buyers of receivers; the firm sought revenue by leasing its capacity and selling a combination of ads, receivers and some subs. "But by 2000, clearly the model was suffering," Samara said. "The fastest route to profitability was subscriptions."

Starting down that road, it plans paid services in four targeted areas: India, China, southern Africa and the Middle East. Eventually it hopes to add Europe.

In India, WorldSpace sees a population with a critical mass of consumers

with middle- to upper-middle class incomes, an appetite for music and information but few terrestrial channels. The company has 20,000 subscribers to a new paid service there; it has conducted a "soft launch" in Bangalore and Bombay, and is eyeing New Delhi next.

According to Ted Kelly, vice president of international marketing and communications, the content includes four India-specific channels;

A WorldSpace
Regional Operating Center

WorldSpace's own programming as well as material from content providers such as NPR; and programming for English-speaking "ex-pats" from the United States and United Kingdom.

The service is being offered for an introductory $3 per month; it will increase eventually to about $5. A small part of the service will remain free as what Samara called a barker channel.

After India comes China, where WorldSpace is starting with a subscription stock quote service.

Samara said consumer statistics show a potentially massive market with disposable income: 14 million cable users in India, 80 million in China. "Morocco … has 5 million cell phones. I can literally break even in Morocco alone," he said.

Thus WorldSpace, conceived as a business built on serving information have-nots, now is banking on what one

official called the "relatively economically advantaged" classes.

Ex-Pats: Within two to three years, WorldSpace hopes to have 2 to 3 million subscribers; and it thinks perhaps 15 percent of those will be to Home Team Radio.

A new and vital part of its strategy is to attract expatriates and military personnel, English speakers from the United States and the United Kingdom posted abroad. The company thinks there might be 6 million of them within its footprint. Home Team Radio is a premium service for these listeners. Its slogan: "Imagine your favorite stations, wherever you're stationed."

Listeners will be able to hear NPR, Virgin Radio UK, Bloomberg, Radio Caroline and a package of music channels that includes American and U.K. hits. Kelly said WorldSpace will add more American news and sports services shortly.

"The more remote people are from their national/cultural background, the more they need to stay connected," said Chief Operating Officer Andy Ras-Work. "People are saying to us and NPR how great it is to hear NPR in different parts of the world." Kelly said WorldSpace also received a strong emotional response from listeners abroad after the terror attacks in 2001.

Mobile: WorldSpace will ramp up efforts to penetrate the mobile market.

"The XM experience is telling us quite a lot about the number of repeaters (required)," Samara said. He said both XM and WorldSpace had "grossly overestimated" the number of terrestrial repeaters each service would need to reach moving listeners in urban areas. The satellites, he said, are powerful; reaching listeners won't cost as much as expected.

"Once we go mobile, the market is huge," Samara said. "The number of cars far outstrips the ability of governments to accommodate them. That's a lot of downtowns — not just Cairo or Mexico City, but (cities like)

Addis Ababa."

The company has conducted tests of its European Mobile service in Paris, planned for 2006. It plans alliances with receiver manufacturers to allow telematics and other services such as GPS, weather and traffic.

Meanwhile, it will begin promoting car radios with small antennas in India later this year.

The Lessons of XM: The experience of the U.S. satellite companies, particularly XM, has been useful. "Having helped birth XM, you'd think we'd be the big brother," Samara said. "But XM is teaching us so much."

WorldSpace and XM had been partners until the 1998 U.S. bombing of a pharmaceutical factory in Sudan, carried out in retaliation for terrorist attacks on U.S. embassies in Kenya and Tanzania.

According to news reports at the time, the owner of the factory was an investor in WorldSpace. He denied any connection to the assaults and won the release of U.S.-based assets that had been frozen by the U.S. government; but some XM principals, Newsbytes News Network reported, "feared the controversy about the attack could delay or endanger regulatory approvals for their project. … To head off such complications, WorldSpace sold its interest in XM Satellite Radio" to XM's parent company.
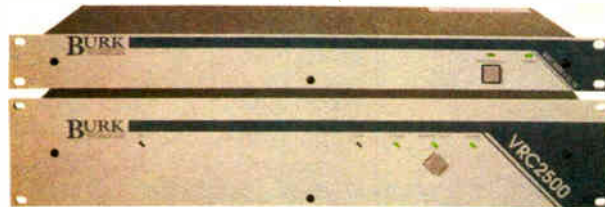
The companies retain ties. WorldSpace has licensed technology to XM, they share programming resources and WorldSpace is an XM strategic partner.

To Reach Listeners for Christ

At NRB Show, Radio Ministries Debate
Access and Information Overload

by Sharon Rae Pettigrew

Dr. Frank Wright says information overload is one of the biggest challenges facing religious broadcasters.

In fact, the president of the NRB points to snarls in audience reach as the biggest challenge that broadcasters of all stripes confront.

Regulatory requirements, cluster concerns, political programming and countering clutter are among the issues to be covered at the 61st National Religious Broadcasters Convention and Exposition. The annual get-together runs Feb. 13-18 at the Charlotte Convention Center in North Carolina.

Information overload

"With the explosion of media in general, and the digital spectrum in particular, our society is on information overload," Wright said. "It will take extraordinary creative energy to filter the flood of information that overwhelms."

Wright said program content decisions made in the near term will determine the future viability of any broadcasters.

One session, "Programming Strategies for the 21st Century," promises an overview of content, delivery methods, format and program structure.

Michael Shelley, media director for In Touch Ministries in Atlanta, moderates a panel of representatives from national radio ministries.

Many of his In-Touch affiliates are asking for FTP delivery.

"This makes it extremely convenient for them," he said. "They can go at any time and 'grab' the program." But there are limitations.

"There are many stations that cannot afford to go to high-speed Internet access," he said. "Plus, they have invested quite a bit of money into the satellite system they are currently using. We as programmers need to be very sensitive to all involved and make decisions that will benefit everyone."

Shelley said the topic of access remains a critical issue in religious broadcasting.

"It means more than just access to the airwaves in general," he said. "It means finding access on religious stations. Many stations that have been open to teaching and talk programs are moving to a 'more music' format and canceling their program lineup."
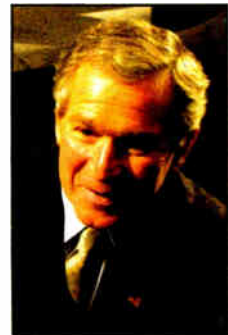
Saturation

Penetrating the consciousness of listeners in a society over-saturated with multiple messages is a serious challenge.

Chuck Finney is director of programming for KLTY(FM) in Dallas/Ft. Worth, and the national program director/brand manager of the Salem Fish music stations. His Radio Boot Camp session is called "Can You Hear Me Now? Communicating the Truth Through the Noise."

He says stations must focus on what he calls "the realities of our time," or

risk reaching fewer people.

"Your listener is being hit with hundreds of radio, television and Internet choices," he said. "But they have neither the time nor the interest to consume it all, so more and more gets tuned out. If you want the truth to be heard, you'll need to be focused on this reality."

President Bush | Frank Wright | Chuck Finney | Sue Bahner

The Boot Camp session "Whose Ministry Is It Anyway?" focuses on change as well.

Featured speaker Rev. Tom Atema is general manger of Blue Ridge Broadcasting in Black Mountain, N.C.

"Stations may want to change (to address audience needs), but feel that if they do, they will lose income, listeners, etc.," he said. "But change is positive for both the listener and the station."

Atema says he'll focus on what it takes to make a vision reality.

"In the process of change, you have to be sure you keep selling the vision of what you see the end result to be, as well as the mission of what to do to make the vision a reality," he said. "Combine these two and you will gain listeners and hold on to most of your current listeners."

Atema says he'll also discuss strategies to address financial worries and the promotion of a station during transition.

He also moderates "Finding Funding for True Ministry."

Role of research

Audience research can be "an extremely dangerous tool." That's the word from Jim Marshall, general manger of WMHK(FM) in Columbia, S.C.

Marshall joins Larry Rosin of Edison Media Research on the Boot Camp panel "Effective Audience Research: The Power of Knowing."

"There are many myths about the role of research at a Christian station," said Marshall. "Research is an extremely valuable tool for measurement or goal achievement and alignment of a station's core objectives ... but if misapplied or gathered in a statistically unreliable way, it can lead to trouble."

Other sessions, such as the FCC Update Parts 1 and 2, will focus on current and anticipated FCC rulings and how they will affect station operation.

Sue Bahner, president of CrossWay Consulting, moderates the back-to-back sessions. She said the workshops will prove the government agency is "not an ogre waiting to pounce."

Veteran news director Gordon Govier moderates "Watchman on the Walls: News as Part of Your Ministry."

"Done poorly news can be a tune-out,"

said Govier. "But done well, it's a major tune-in."

Govier says news is not just another programming element.

"Effective news broadcasts offer station operators a unique way to connect with their listeners who have an appetite for information and may be used to tuning outside of Christian radio to feed it," said Govier.

Other radio educational sessions include "Good to Great — 25 Things You Can Start Doing Tomorrow to Reach More Listeners for Christ."

Moderator Jon Hull, program director for KSBJ(FM) in Houston, promises to "provide attendees with at least 25 proven, actionable ideas that they can take back to their station and implement."

Hull says session topics will including improving a station's fundraising, super-serving the target listener, eliminating

clutter, building a team, improving communication inside and outside the station and what to do with research.

Election concerns

The session "Political Programming in an Election Year" will focus on how FCC rules apply to commercial and non-commercial stations alike.

Dave Eshleman, president of Massanutten Broadcasting Co. in Harrisonburg, Va., moderates.

"As we enter a year of intense political activity, requests for political advertising are bound to increase," Eshleman wrote in an article for the January issue of the NRB magazine. "The FCC has set strict guidelines dealing with this topic that must be taken seriously."

Industry viability, operating in a weakened national economy and issues surrounding national advertising will be addressed during "Think Locally, Act Globally: Selling to the National Market."

Joe Davis, executive vice president of Salem Communications in Hasbrouck Heights, N.J., moderates.

General convention sessions include the women's luncheon, called "Connecting Hearts, Engaging Lives;" the NRB Media Awards; and the super-sessions "Public Policy — the State of Religious Broadcasting: Access Denied" and "Defending the Faith in the Public Arena."

Convention organizers are crossing their fingers for the Presidential Session. President George W. Bush has been invited to speak. 🌏

EAS

Council, a federal advisory group, suggested last year there should be a single federal agency overseeing EAS public warnings. Members also recommended that "research into development of alternative and/or supplemental means of communicating emergency information to the public be accelerated."

Homeland security

"We will be working with the Department of Homeland Security examining ways to improve EAS and possibly long-term to develop a new public warning system," Dailey said. "Public warning technology is moving very quickly, and we need to find ways to incorporate that into what we have."

Dailey declined to identify specific warning technologies or strategies that could be used.

"Any discussion I've had with Department of Homeland Security people leads to a system of systems — multiple systems using multiple technologies," he said.

Dailey said the commission is close to issuing a Notice of Inquiry, which is expected to happen this spring, possibly after the March 2 MSRC meeting.

"We are in the process of gathering as much information as possible and going through the review process before we issue any notice," Dailey said.

Sources said the commission's next step would be to issue a Notice of Proposed Rulemaking and seek additional comments. That could lead to eventual changes to Part 11 of the commission's EAS rules.

"We do not know what the scope of the notice will even be yet," Dailey said.

FCC Media Bureau Video Division Chief Barbara Kreisman said, "This is really about starting with a clean slate and designing a warning system for today, something that is not wedded to what has happened in the past. We need a digital system that utilizes the many different communication devices available today."

Kreisman, who also is the FCC's designated federal official to the MSRC, added that the FCC and

Department of Homeland Security will speak to many people familiar with public warning.

The Partnership for Public Warning, a nonprofit organization looking at ways to improve the collection and delivery of emergency warning information, believes EAS capability needs to evolve eventually.

when an emergency message is sent.

Reverse 911, a computer-driven telephone system that makes selective emergency notifications in predefined geographic areas, also is viewed by some as a way to supplement the current efforts of radio, television and cable broadcasters when it comes to public warning.

Public warning technology is moving very quickly, and we need to find ways to incorporate that into what we have.

— Jim Dailey

"There are steps that can be taken to improve EAS. Even with those improvements, EAS will still not provide the type of national warning capability the public needs," said Ken Allen, PPW's executive director. "We need to create a national capability that provides timely, consistent information to those who are actually at risk using multiple distribution channels."

Half-finished?

The Emergency Alert System was developed in 1994, its primary goal to serve the president of the United States as a means to address the nation in times of national emergency. While participation in national EAS alerts is mandatory for broadcasters, state and local EAS participation is voluntary.

EAS came under scrutiny from public warning experts following the terrorist attacks in New York and Washington in 2001. EAS was not activated by local officials in either city on Sept. 11. Most EAS experts agree that little has been done to improve the infrastructure of the current public warning system.

Critics of EAS say the system is half-finished and needs to embrace new technology to alert more people in times of emergency. They point to technology like personal digital assistants, satellite radio, cellular telephones, the Internet, and smart TVs and radios that turn themselves on

The ultimate goal of the EAS, according to the FCC, is "to disseminate emergency information as quickly as possible to the people who need it."

The FCC, the National Weather Service and the Federal Emergency Management Agency fill key leadership roles within EAS.

Some observers told Radio World there have been indications the FCC has been backing away from EAS, noting that the agency let the federal charter of the EAS National Advisory Committee expire in 2002.

Many broadcast engineers thought the NAC played a critical role as a conduit between the broadcast engineering community and FCC regulators with regards to EAS.

Richard Rudman, vice chair of the California state emergency communications committee and former EAS NAC chairman, said a system under which EAS is supervised by the Department of Homeland Security could work.

"The thrust should be that the feds must take responsibility for the overall national and local warning mission," he said.

Rudman said if DHS takes responsibility for EAS, the first step should be a properly supported and funded national warning needs assessment, done state by state.

"Each state's emergency management office should be used as the vehicle to reach down to the local emergency communications committees," he said. 🌐

Satellite

XM plans to introduce the service in 15 cities for no extra cost to subscribers in March. The satcaster is dedicating channels for extended traffic and weather reports 24/7. XM announcers hired for the new channels will read the copy with information provided by traffic data company Mobility Technologies and The Weather Channel. XM will sell spots for the dedicated channels.

The first 15 XM Instant Traffic & Weather channels will debut March 1 for the following metro areas: New York City, Los Angeles, Washington, D.C., Dallas-Ft. Worth, Chicago, Houston, Detroit, Philadelphia, Phoenix, San Francisco, Tampa-St. Petersburg, Orlando, Baltimore, Pittsburgh and St. Louis.

Dedicated channels for Boston, Atlanta, Miami-Ft. Lauderdale, Minneapolis-St. Paul, Seattle and San Diego will be introduced by the end of

the year.

"NAB will explore the legality of XM offering this program service," Fritts said.

Sirius is approaching the traffic and weather reports differently, sending all data for all receivers over its satellite signals. Certain "flags" in the data enable a subscriber's receiver to determine which traffic and weather locations would be preferred, and that receiver only allows that information to be broadcast to that particular subscriber.

In 2005, Sirius plans to offer simple traffic with information for a general area with a line of text that would scroll continuously across the faceplate of the radio and later introduce advanced traffic with the addition of real-time weather reports. This service would tie in with any navigation system, Larry Pesce, executive vice president of product development, told Radio World.

Sirius also plans to add sports and financial data ticker data as a part of its service for no extra charge to subscribers. 🌐

◆ N E W S W A T C H ◆

Harris Wins Iraq Media Contract

MELBOURNE, Fla. Harris Corp. is among the winners in bidding for business in Iraq.

The company said it has been awarded a $96 million contract by the Defense Contracting Command in Washington on behalf of the Coalition Provisional Authority governing Iraq, "for developing an existing but antiquated media network into a modern media organization for the Iraqi people."

The Iraqi Media Network program includes equipment, operation, training and provisioning of programming for national radio and TV networks and a national newspaper with operating locations in Baghdad and approximately 30 other locations.

The contract is for one year. Two additional six-month contract options could increase the total value of the program to nearly $165 million, Harris stated.

The work will involve the company's Broadcast Communications Division as well as its Government Communications Systems Division. The goal of the contract is to create from the existing organization a media network that will include two national radio channels, two national television channels and a national newspaper, "Al Sabah."

"Harris will lead this project and provide all of the necessary transmitters, integration and automation broadcast equipment," it stated, with support from the Lebanese Broadcasting Corp. International, a Middle Eastern media network, and Al Fawares, a Kuwaiti company with Iraqi ownership. The former will train staff and provide content for the radio and TV channels.

Harris created an Iraq Initiatives Office in July 2003. Company Chairman Howard Lance said, "We created a focused organization to support reconstruction efforts in Iraq and to apply the unique capabilities that Harris has to offer in both commercial and government communications systems."

Monorail Will Open in Time For NAB

LAS VEGAS The new monorail in Las Vegas will be open in time for the NAB2004 convention, based on comments by its developers. They expect the $650 million transit system along the Las Vegas Strip to begin service by March 1 and be completed $23 million under budget.

Official said the four-mile monorail would be both an effective transit system and a unique attraction. It will link eight resorts and nine convention facilities, including the Las Vegas Convention Center. It will connect the MGM Grand and Sahara hotel-casinos on a route running east of and parallel to the Las Vegas strip. Eventually it may connect downtown Las Vegas and McCarran International Airport.

A one-way trip will be $3, and round-trip fare will cost $5.50. The system will run from 6 a.m. to 2 a.m.

PPM Competitor In the Works?

ATLANTA If all goes as planned, some 500 cars will be equipped in the first quarter of the year with a device by IQStat that measures radio listening and travel habits. By the end of December, about 100 cars in Atlanta were carrying the device, according to the Atlanta Business Chronicle.

Patents are still pending on the device, about the size of a VHS tape, which is placed under the dash or in the car trunk. Part of the device uses a global positioning system.

According to the Chronicle, the IQStat device is similar to Arbitron's portable people meter in that it can measure radio listening quickly and verify travel habits and the effectiveness of outdoor ads. The company has raised roughly $3.2 million and hopes to increase that in the New Year.

Tower Violations Bring Fine

WASHINGTON The Federal Communications Comission fined Hoffman Communications $19,600 for several tower violations at a facility in Virginia.

Hoffman, licensee of WGGM(AM) in Alexandria, failed to keep a fence around its three-tower array, did not install correct tower lighting and exceeded authorized nighttime power limits, the commission stated.

The original fine was $21,000. Hoffman asked for it to be reduced or cancelled.

It acknowledged gaps in the tower fencing but said prompt attempts to repair the fence demonstrated good faith. The agency reduced that portion of the fine.

Hoffman disputed other portions of the FCC's argument, saying it did not agree that the towers were tall enough to require lighting and challenging the FCC's records.

Disaster Group Finalizes Plan

*Should Radio Count on Stations Cooperating
With Competitors in Emergencies?*

by Randy J. Stine

WASHINGTON Many broadcasters have reviewed the FCC Media Security and Reliability Council's recommendations to ensure that stations can remain on the air or return to air quickly in times of national emergency.

Will facility managers spend the time and money required to adopt the practices? A MSRC survey shows that only a small percentage of radio stations have disaster recovery plans in place and even fewer stations have rehearsed for a disaster.

The federal advisory committee, a group consisting of senior broadcast executives established by FCC Chairman Michael Powell following the events of Sept. 11, 2001, has adopted approximately 50 station recommendations.

The group suggests that media companies have appropriate physical security at key facilities; take steps to provide backup power capabilities for those facilities; implement written disaster recovery plans and conduct emergency drills annually; and collaborate to establish redundant interconnections capable of supporting emergency operations.

MSRC is patterned after an advisory group for wired and wireless phone companies. Powell credited this group with enabling telephone communications in New York and Washington to recover quickly after 9/11.

When MSRC members give their final report to the commission in March, sources said, it is likely to include more recommendations.

MSRC's public communications and safety working group last year asked for a Media Common Alert Protocol to deliver emergency messages via digital networks and development of alternative and/or supplemental means of communicating emergency information to the public (see EAS story, page 1).

The FCC also must decide whether to re-charter MSRC after its two-year timeline expires in late March.

Broadcasters who have disaster recovery plans must rehearse them; those who don't should draft them, said Barbara Kreisman, the FCC's designated federal official to the MSRC.

"Every broadcaster needs to look at every option available to them to return to the air and serve the public during times of emergency. Their incentive must be remaining on the air and serving their communities," she said, adding that broadcasters should view MSRC's recommendations as a matter of operation efficiency.

Broadcasters need to do "an assessment of vulnerabilities and then look at redundant towers and transmission gear, backup facilities and shared facilities," she said.

Sterling Davis, vice president of engineering for Cox Radio Inc., said his group would implement some of the MSRC recommendations in markets where it is economically feasible. Cox Radio owns and operates 78 radio stations in 18 markets.

"We have taken some steps already since 9/11 to guarantee the infrastructure of our facilities, but it will come down to a market-by-market review to see if it makes sense. We will implement the plan in a businesslike manner in markets where we think it is most important," said Davis, who serves on MSRC's restoration subcommittee.

Davis said stations within his group are always looking at ways to ensure stability of signal during emergencies.

"There isn't much in the MSRC report that most broadcasters didn't already know. However, I think it serves as a reminder for them to be on top of it."

An executive with the NAB pointed out that MSRC's best-practices recommendations should not be viewed as minimums or requirements for broadcasters to meet.

"These practices may not be appropriate for all broadcasters. The major point of MSRC's work has been to get people to plan and prepare and test those emergency plans regularly," said Jack Goodman, NAB senior vice president and general counsel.

"What MSRC has created is a template of a disaster recovery plan, one that broadcasters can measure their own plans against or develop a plan if they do not have one. What we have is a study in methodology at this point," Goodman said. He served on the MSRC prevention task force.

One broadcast engineer interviewed for this story said, "Absent incentives and support, the MSRC recommendations will never be more than words on paper for most stations."

'It can't happen to me'

The need to address some of the infrastructure shortcomings of the nation's media was reinforced as the result of findings from a MSRC survey sent to 2,000 radio stations. Of the 400 respondents covering nearly 80 percent of the country, only 15 percent had disaster recovery plans in place.

Of those, only 7 percent of the stations had tested their plans to ascertain whether they worked and to identify and fix problems, said Bruce Allan, president of Harris Broadcast and chairman of the MSRC communications infrastructure security, access and restoration working group.

"Clearly, those numbers need improving. Some stations think they'll never be impacted, and there is less of a need in some geographic areas than others, but you still must be prepared whether it's terrorism or natural disaster," Allan said.

The survey also showed that only 7 percent of radio stations had reciprocity agreements in place with other local media to make sure they have access to crucial information during an emergency.

"Reciprocity agreements will be very important and can help build a very strong relationship between different media. Broadcasters have historically responded very well to disasters and done a good job in getting the information out," Allan said.

He believes some of MSRC's recommendations for studio and transmission redundancy plans can be enacted affordably in local markets if broadcasters cooperate with planning.

"Yes, individually some of the best practices recommendations are daunting. But if media within a particular market cooperates, you could have the fabric to build a very reliable communication system," he said.

Allan added that collocation of transmitter sites, once encouraged by local governments, is not necessarily a good idea under the threat of terrorism.

"Mt. Wilson in Los Angeles and Denver come to mind. For obvious security reasons it is not necessarily the best plan to ensure at least some transmission facilities remain functional during emergencies," Allan said. 🌑

Best Practices for Radio

The following is a sampling of recommendations adopted by MSRC. The full list for radio and other media is at www.fcc.org/msrc, under the "Headlines" link.

• Radio broadcasters should have appropriate physical security, augmented by security personnel and/or video surveillance at their key facilities, including studios/newsrooms, satellite transmit and receive sites and antenna/transmitter sites.

• Radio broadcasters should employ diverse power grid sources wherever feasible.

• Radio broadcasters should take appropriate measures to provide backup power capabilities for their key facilities, including studios/newsrooms, satellite communications and transmitters.

• Radio broadcasters with local news origination should ensure that they have robust and redundant ways to communicate with external news services and remote news teams, such as the use of mobile radio and Internet to augment cell phones.

• Radio broadcasters should have backup signal feeds to their primary satellite transmit and receive sites.

• Radio broadcasters should have redundant signal paths to their primary and backup transmission facilities.

• Radio broadcasters with local news origination should plan to have emergency origination capability at a separate location from their primary studio.

• Radio broadcasters with local news origination should have a remote vehicle, or some means of delivering live news and information from a remote site.

• Radio broadcasters should have the capability of receiving a remote feed at an additional site from their primary studio.

• Radio broadcasters should have a backup satellite transmitter and receiver, or an alternate means (e.g., a satellite radio receiver, a dedicated phone line or a streaming audio Internet connection) to send and receive signals from and to national news services in emergency situations.

• Radio broadcasters should have a backup transmitter, and should attempt to make practical arrangements for geographic diversity where possible (e.g., provisions for emergency use of other backup transmitter/antenna facilities in the community or other means).

• With the cooperation of federal and local policy makers, all radio broadcasters in a market should collaborate to increase their collective site diversity and redundancy, including their collective news studios, operations, satellite transmit and receive facilities and transmitter and antenna sites.

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More than 50% of the US' Top 100 FM stations have already upgraded to Omnia. Maybe you're next?

The new Omnia-6EX has enhanced processing for analog FM, and is ready for HD Radio with a second limiter section and digital output. Both FM and HD limiters and outputs are included as standard.

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HD Radio Ready for Prime Time

A Tour of Three Markets in Four Days
With the New Kenwood HD Radio

by Glen Clark

NEW CASTLE, Pa. I snagged one of the first Kenwood HD Radio receivers and took it on a four-day tour of Detroit, Cleveland and Washington. The results were nothing short of amazing.

Many manufacturers have HD Radio receivers in advanced stages of development, but Kenwood is the first to deliver hardware. Its digital radio system consists of three parts: the in-dash receiver, the HD Radio expansion chassis and a pair of umbilical cables. The expansion chassis is about the size of a thick paperback book and can be mounted anywhere space allows.

The umbilical cables provided are long enough to reach to the back of an SUV, although I mounted the expansion chassis underneath the dashboard of the Dodge Durango test vehicle. There is no requirement for a separate DC power feed to the expansion chassis. Audio, data and power run through the first umbilical, which has a molded 13-pin DIN connector on each end. This makes installation simple.

The second umbilical is an RF extender of the same length. The coaxial plug from the vehicle's whip antenna is removed from the dash receiver and is inserted into the extender. The far end of the RF extender plugs into the expansion chassis.

What you need

Several other connectors are available on the expansion chassis, such as RCA jacks with left and right audio, but the additional connectors are unused in a normal installation.

The expansion chassis is a complete receiver, except for control functions and an audio amplifier. The expansion chassis includes an RF amp, a synthesized local oscillator, a mixer, an IF and two detector circuits. The original receiver in the in-dash unit is dormant when the HD Radio chassis is connected.

That's why the cable from the whip antenna can be moved to the expansion

This Kenwood receiver has three FM bands and one AM band with six presets each. 'HF1' shown on the display stands for High Definition FM, Band 1. This same radio without the optional HD Radio function would display 'FM1' when set to FM Band 1.

chassis with no ill effects. Once the installation is complete, there is no need to access the expansion chassis and you quickly forget that it is there. Functions are controlled through the in-dash receiver.

The expansion chassis includes different detectors for analog and HD Radio

modes. The user can select either one using the menus. Setting the receiver mode to "AUTO" allows the receiver to choose which detector to use depending on signal conditions.

I used the Kenwood model KDC-V7022 for the tests, but there are several models that support the HD Radio chassis. Not all receivers that have the 13-pin DIN connector are HD Radio-compatible.

Originally, I installed a KDC-422 in the Durango. I quickly found it had not yet been software-upgraded to work with the

HD Radio chassis. I could control the receiver functions perfectly. But the LCD display quickly became unsynchronized from what the receiver was doing. To determine if a particular receiver is compatible with the HD Radio expansion chassis contact Ibiquity Digital at

info@ibiquity.com.

Most of the Kenwood receivers include three FM bands and one AM band. Each band supports six presets, making a total of 18 pre-settable FM frequencies. This flexibility should be helpful for engineers responsible for multiple markets.

Stations for one market can be loaded into FM Band 1. Stations in the second market can be loaded into FM Band 2 and so on. This allows a one-button personality change of the receiver depending on the market you are in.

Display

With no expansion chassis connected, the receiver's LCD display will show the carrier frequency and "FM1," "FM2" or "FM3," depending on which FM band is selected. In AM mode, the receiver will show "AM" plus the carrier frequency. When the expansion chassis is connected "FM1," "FM2" or "FM3" are replaced by "HF1," "HF2" or "HF3."

HF1 means HD Radio, FM, Band 1. In AM mode, the display will show "HA," for HD Radio, AM, when the expansion chassis is connected. This allows you to tell whether an expansion chassis is connected without looking behind the dash for hardware.

It is helpful to understand that the DIN connector also can be used to connect the Kenwood dashboard receiver to a Sirius satellite expansion chassis. The HD Radio expansion chassis actually had a second DIN connector on the far side that was not used for my install in the Durango. Nothing in the manual specifically said so, but it seems reasonable to wonder if the second connector is there so that so that a user can "daisy-chain" two expansion chassis together.

Not everyone has the skills and the tools to install a new radio. And many who do simply do not have the time. The national retail chains like Best Buy and Circuit City are equipped to install a number of "aftermarket" automotive electronic

WorldSpace

"It's wonderful to see that the satellite radio model WorldSpace created has proven successful," Kelly said.

Ras-Work said XM is validating the WorldSpace concept, overcoming skepticism that people will pay for radio.

"Being able to see XM overcome that, including the fact that 10 percent of XM's original content music programming comes from WorldSpace ... That same sort of enthusiasm is something we're leveraging in different parts of the world."

The American experience also supports the affluent early-adopter model, said Kelly. Planners had expected early adopters to trend young and tech-savvy, but in reality the adopters are those who

can afford the receiver, and thus are "a little older."

So how will this all play out?

The numbers seem to be on Samara's side. WorldSpace has assets: a substantial infrastructure, a large international footprint, what it calls "fantastic" propagation characteristics and an almost priceless piece of spectrum. Its potential market is huge.

"To be highly profitable, I need 20 million (subscribers) at $5 a month," Samara said. "I could do that in just one country."

Still, as the past has shown, WorldSpace faces many challenges: a slow uptake, changing revenue models, substantial capital costs, limited lifespans of the satellites themselves and unpredictable political considerations.

The company has spent $1.4 billion.

Samara has said he needs 2 million to 2.5 million subscribers in 2005 to break even and won't say how many he has now. The company estimates the number of receivers sold at 300,000, so it seems to safe to say the current subscriber list is less than that. (At one time he had hoped for 1 million receivers sold by 2001, according to Forbes.)

The company has been seeking more backing. "We have funded about 90 percent of what we need to get to profitability," Samara said in 2003, "and will be raising additional money to find and fund content and subscribers." The company also has developed a sales unit aimed at pitching itself as a solution to communication needs for governments.

The launch of a third satellite to cover Latin America has been delayed indefinitely — for "macroeconomic reasons,"

according to Ras-Work, although some reports have blamed a battle with the U.S. military and Boeing over use of the L Band. Ras-Work said that the satellite could be used instead for service in Europe. A fourth, spare bird is in construction.

Samara is nothing if not an upbeat salesman for his conception.

"We cover around 5 billion people, the largest footprint of any satellite company in the world. It's almost a perfect fit for the post-9/11 business plan. We cover all of the hot spots."

Whether it all works will depend on content. And where have we heard that before?

As Ras-Work told me, "If you have great content that people will want to listen to and be entertained by, you have a chance to make a significant business out of it."

Deep pockets also help. 🌎

Kenwood

devices, including the HD Radio expansion chassis.

I had my receiver and expansion chassis installed at Best Buy. As the HD Radio expansion chassis is just now becoming available, the only experience that the retail chains have so far is installing the satellite radio chassis, which looks similar.

In fact, when I first handed the HD Radio chassis to the installer, he initially thought that it was a satellite receiver and observed that I didn't have the required satellite antenna. However, once I pointed out that this was the HD Radio chassis and not a satellite chassis, he immediately understood. The installer had already been to school on the HD Radio chassis.

The installation for painless. Best Buy had a large install bay attached to the store. The install bay was clean, warm, well-lit and -equipped. I simply walked around the store for an hour while the equipment was installed.

Because I purchased the receiver from Best Buy, the install was free. The charge for installing the expansion chassis was $45, which seemed reasonable.

Performance

A chain can only be as strong as its weakest link. Even if HD Radio technology works well, if the audio amplifier is lacking, the quality of the digital system would never make it to the speakers or the listeners ears.

Fortunately, the audio amp in the Kenwood receivers is one of the best amps I have heard. Listening just to the integrated CD player, I observed nuances that I had never heard before on other quality monitoring systems.

The Kenwood replaced a high-end Dodge radio that, until the Kenwood was installed, I had held in high regard. The improvement was obvious immediately.

I listened to the amplifiers in the KDC-

422 and the KDC-V7022. Both were rated at 50 watts per channel into four channels. This was more than enough power to make you want to exit the vehicle.

Even at the threshold of pain, the amp delivered undistorted audio. A reliable source told us that the same amplifier is used throughout the Kenwood line.

The RF section of the HD Radio receiver merits praise. It received weak signals well, and was resistant to overload by strong signals.

Learning to use the controls

One would hope that the ergonomics of the controls would be as good as the design of the audio circuits. Regrettably, the front-panel controls are not intuitive. A determined person often can fake his or her way past the menu-control system of many electronics devices.

I found that the pull-down menus in the KDC-V7022 confusing and it was not easy to get to even simple functions like "treble" and "balance." Once all of the presets are set and the preferences are locked in, day-to-day operation is straightforward.

But changing system settings is not something that comes intuitively or can be done safely while driving. Be prepared to spend an hour in the driveway with the users' manual in one hand before expecting to be able to go station hopping.

This is puzzling because the receiver already has a "joywheel" that does nothing at present but set the volume. It would be a simple matter of a software upgrade to integrate the joywheel into other functions and to make an intuitive user interface. No mechanical or tooling changes to the receiver would be required.

Here are two quick tips about the front panel. First, there is no "Power" button. Use the "Source" button. Push it once and it will set the receiver in radio mode. Push it again and it will set it to CD mode. Push it a third time and it will turn everything "off."

If you want to close the motorized, flip-out keyboard (sometimes the motors in the 7022 can remind you of AIMEE in the Val Kilmer movie "Red Planet"), push the "Source" button and hold it for

three seconds.

Second tip: When the receiver is closed and you want to flip out the keyboard, press firmly with your thumb on the lower left corner of the black cover.

One bright spot in the user interface is the infrared remote control. I know that remote controls make intuitive sense for a television on the other side of the living room. And it may seem a little corny to have a remote control for a receiver that is less than 9 inches away.

But the remote really does add function. About the size of a roll of quarters, it fits comfortably in your hand. And it does have a reasonably complete set of buttons that duplicate the basic front panel controls.

Once the station presets are programmed, you can run the radio without ever having to touch the in-dash portion. The layout of the remote is easy to memorize and, after a few minutes of use, your thumb just seems to know where to go to do what you want done, even in the dark. No matter how long you use the in-dash panel, you never develop this level of proficiency.

What to look for

I made no efforts during my trip to develop a report with numbers. The history of terrestrial digital audio broadcasting development has produced reams of numbers over many years. I set out to perform subjective tests and to answer only one question: When, if ever, would the HD Radio technology be mature enough to justify wide adoption by broadcasters?

That question actually has two parts: Does HD Radio really sound noticeably better than analog broadcasting? And, will HD Radio hold up in a hostile mobile environment? The first question addresses

the codec portion of the system. Codec, short for coder/decoder, is the software that converts music and voice into a digital bit stream and back again.

The second question addresses the modem portion of the system. Modem is short for modulator/demodulator and is

The expansion chassis with DIN connector. The RCAs are not normally used. Audio, power and data are routed through the DIN cable. The only other connection is the antenna cable.

Photo by Glen Clark

the software that converts the digital bit stream into RF carriers and back again.

Any scientist tries to go into an experiment with no expectations of what (s)he will find, lest those expectations turn into a self-fulfilling prophecy. I tried to begin the trip with an open mind.

But, to be honest, my expectation was that, while the sonic performance of the codec would be excellent, I expected the modem to flutter in and out as the car passed buildings and went under overpasses. When I got into the field, the performance far exceeded my expectations.

How does FM sound?

I found the sonic performance of FM HD Radio to be indistinguishable from a CD. In fact, I did not realize how much we have accustomed ourselves to the FM processing artifacts that are unavoidable when achieving high modulation levels on a pre-emphasized medium.

For any FM format other than classical, clipping is unavoidable to maintain modulation and clipping creates new frequencies. These clipping products are "masked" by the intended signal and the brain quickly becomes unaccustomed to their presence. It isn't until you listen to a transmission medium without these clipping products, such as HD Radio, that you realize just how much of a compromise analog FM has become.

The sonic performance of digital FM is nothing short of amazing. However, I was equally surprised by how infrequently the FM system fluttered while the vehicle was in motion.

The first market was Washington, where I listened to WETA(FM). In the metro area, there was simply no place where the digital signal "unlocked," even near buildings. With the intended purpose of making the FM system unlock by presenting it with an unreasonable challenge, I drove across the Point of Rocks Bridge on Route 15.

This is a four-span bridge across the Potomac River with overhead girders. The FM system did not even flutter.

A day later, I again tried to unlock the system in downtown Detroit. This time I drove through a 300-foot tunnel through the Millender Center. Again, the FM system refused to unlock.

Determined to find something that would make the FM system flutter, two days later I found a narrow alleyway between two tall buildings in Cleveland. The alleyway was

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When we first married MP3 with ISDN in 1993, we had no idea that their offspring would grow up to be the most-loved audio codec ever. But it has, and its popularity keeps growing – there are now more than 10,000 Zephyr codecs in radio stations and production studios around the globe.

A birthday this significant deserves a special present, so here it is: the Zephyr 10th Birthday Bundle, a complete codec package at a once-in-a-decade price.

You'll get the best-selling Zephyr Xstream for your studio, and the satisfaction of knowing you can make CD-quality ISDN connections to virtually anywhere using industry-standard MPEG Layer 3 or MPEG AAC coding. And for your remote kit, the award-winning Zephyr Xport with built-in two channel mixer — perfect for sponsored remotes, sporting events, interviews and live appearances. Just plug in to any POTS phone line for an *aacPlus*™ link to your Zephyr Xstream; you'll get stunning audio and rock-solid connections.

Best of all, you'll receive your Zephyr 10th Birthday Bundle for the special price of just $4,995 US MSRP. (There are more special Zephyr bundles to fit specific needs; just ask your Telos dealer.) But don't delay — this special offer is only good through February, 2004.

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Irish DAB Struggles to Progress

by Kevin Branigan

This is one in a series of occasional articles on the digital radio rollout in other countries.

DUBLIN, Ireland As development of analog radio services continues unabated in Ireland, movement toward establishing digital radio has all but stopped.

With industry stakeholders adopting a "wait-and-see" policy, the state of affairs contrasts starkly with that of three years ago when, amid great optimism and excitement, public broadcaster Radio Teleffs Éireann hosted a conference about digital broadcasting in Ireland, and began testing digital radio and television broadcasts in the Dublin area.

These days, RTÉ is in financial difficulties and has postponed its digital plans indefinitely, while a consultant report has recommended no further development of digital radio pending examination of the situation in other countries.

Key recommendation

As part of its effort to establish digital broadcasting here in the late 1990s, RTÉ established the DAB Forum — a discussion group of key players, including RTÉ, the Broadcasting Commission of Ireland, the Office of the Director of Telecommunications Regulation, the government and independent radio representatives.

This body met several times during 2001 and provided the impetus for a comprehensive report into the benefits and pitfalls of advancing digital broadcasting in Ireland.

While believing that the future of Irish radio would certainly be in the digital domain, the forum agreed that programming and transmission would remain in analog form until at least 2006, due the time involved in introducing digital receivers to the market and in building a nationwide transmission network for the Eureka-147 DAB technology.

A key recommendation was for the Irish government to take a managing role in the development of an overall DAB framework, and for all players — public and private — to be included in the framework development process.

The timetable to achieve 100-percent national digital coverage was set at 3 to 4 years after commencement of digital broadcasting.

Not long after the optimism of 2001, the economic downturn and a funding crisis at RTÉ led to the decision to monitor the situation in other countries before making any further decisions.

This waiting period was intended to give the authorities time to make informed decisions about how to proceed, to redesign broadcasting policy to cater to the increased complexities of licensing national, local and community digital services and to investigate issues such as spectrum availability, contracting for multiplexers, funding and generating public interest.

Because the BCI is not empowered to regulate digital broadcasting, no development has taken place in the independent sector. Policies pursued by regulators in other countries to encourage DAB investment have not been replicated in Ireland.

While RTÉ is known to be enthusiastic about DAB, commercial broadcasters remain skeptical. They point to the massive amounts of investment required to construct multiplexes and to the minimal benefits for operators in the initial years of DAB.

In many cases, the commercial franchisee is the sole operator in his or her county, something bound to change with the introduction of DAB. Indeed, local and community broadcasters arguably have the most to fear, with the prospect of increased competition under Eureka-147, an all-digital system in which every station has the same digital power level and coverage area.

Private broadcasters point to the notion that some counties may not have the capacity to sustain an increased level of local services and that this may reduce the funds available for local services to invest in DAB.

They further point to the absence of a level playing field between public and private broadcasting, pointing out that RTÉ, on receipt of the TV license fee, should make more funds available for DAB.

Digital receivers

Meanwhile, in the north of Ireland, residents in the border counties who possess digital radios can tune to several digital stations from the United Kingdom, including the new BBC digital services that have recently prompted large numbers of people in the U.K. to purchase digital receivers.

While the major players are looking to government to lead the way in DAB, they may ultimately be disappointed. Radio experts here say the Irish government is not known to be revolutionary in its treatment of broadcasting policies and legislation, and it is not expected to handle the DAB issue with any great urgency.

Ultimately, the impetus may come from the television sector, where indigenous cable television companies are coming under commercial pressure from Sky TV.

Concern that delivery of television broadcasting may eventually be controlled by interests other than the Irish government could cause enough concern to move forward with digital TV and eventually, digital radio.

Meanwhile, without a government framework and policies for digital radio, and the absence of any regulatory structure, there will be no further development in the short term.

A key issue for government is the difficulties it would face in directing resources toward DAB in times of economic downturn.

Profound impact

Launching too early when there are too few DAB receivers would result in large capital costs and on-going costs for transmission companies and program providers.

On the other hand, there is a view that launching DAB too late would only serve to maintain the status quo at the expense of increased services and choice. The main result of the "wait-and-see" policy is that Ireland has fallen behind other European countries, particularly the United Kingdom.

Considering the profound impact on listening choices and market forces that the introduction of DAB is bound to have, the government should develop a clear national policy, one that will set out a course for future growth, experts believe.

The only way to interest broadcasters in supporting the new technology is to define a timeline for DAB implementation, with clear goals, incentives and support structures in place.

The new technology of DAB will not just increase the choice, quality and control of content for consumers, it will also open up a whole range of new business opportunities within the radio industry in Ireland, digital radio supporters believe. 🌐

> **R**esidents in the border counties who possess digital radios can tune to several digital stations from the United Kingdom.

Kenwood

so narrow that two Volkswagen Beetles could not pass each other.

The only purpose of the alley was so that waste retrieval trucks could drive to a number of dumpsters, empty them, turn around in a cul du sac-like parking lot and return to Euclid Ave. I was certain that this narrow slot between two tall flat surfaces would produce enough multipath to cause the digital FM to unlock. It didn't even flutter.

Many new technologies appear on the market in other than final form. Stereo FM appeared in the early 1960s and gave the listener a mild sense of spatial awareness. But it was not until the arrival of solid-state stereo generators in the early 1970s when distinct stereo separation became possible and listeners could enjoy an accurate stereo effect. Similarly, many people can remember the early "round tube" color televisions. Faces would show up as a pastel pink and grass would show up as a pastel green.

But it was not until years later that realistic-looking color television became common in the marketplace. So it was not unreasonable to expect the HD Radio would be rolled out with a good first effort but that perfection might be some distance in the future.

I will not rave. There are few experiences more unsatisfying than to hear someone rave about an intense personal experience that you have not shared, whether it the experience of a runner's high or having just found religion.

So I will not try to convey the minutiae of what I heard during the trip. I will simply say I believe FM HD Radio is ready to be a powerful force in the market right now and will suggest that readers quickly find a friend with an HD Radio receiver to listen to. Ten minutes in a car are worth 10 column inches of a newspaper article.

It is worth mentioning that some sources sound better than other sources on the same station. Many commercials, which I presume are coming from less than ideal sources, sound no better than FM analog.

Many music selections that do not have unusual detail to replicate also do not sound noticeably improved. I would not expect the song "China Grove" by the Doobie Brothers to be transformed for the better by HD Radio. However, "White Wedding" by Billy Idol and many cuts by Mannheim Steamroller will allow FM HD Radio quickly to show its worth.

AM performance

While the absolute performance of FM HD Radio is better than that of AM HD Radio because of RF spectrum limitations on AM, the award for percentage improvement has to go to the AM system. AM HD Radio sounds better than present-day analog FM. AM HD is stereo (in "enhanced" mode).

Impulse and atmospheric noise are nonexistent in AM HD Radio. Most important, the intermodulation products that we take for granted with analog AM are gone. Digital AM sounded crisp, authentic and open when in enhanced mode.

In the vocabulary of the HD Radio project, the mode where analog and digital are both transmitted is called "hybrid" or "MA1." There is also a full digital mode, called "MA3," that will be used in the future when digital receivers achieve greater market penetration.

While approaching Washington, quite by accident, I observed a test station performing measurements that required it to be in the MA3 mode. While the present thrust is for MA1 mode, the Kenwood receiver immediately recognized the waveform and switched to MA3 mode. MA3 mode delivered clarity and stability that were stunning and not what you would expect from an AM system.

I found that the AM system usually stayed in stereo mode when the daytime signal strength was more than 5 mV/m, even with many nearby reradiators. I tracked WCHB(AM) along I-75 starting in downtown Detroit and going to Flint, Mich.

I was surprised to find that the many overpasses along I-75 seldom disturbed the stereo mode. In a rural highway environment without overpasses, stereo mode was often useful out to the predicted 2 mV/m contour.

Coming next issue: Using the Kenwood receiver. How to tell when the system has done from digital to analog and how to make a quick A/B comparison between analog quality and digital quality.

Clark is a consulting engineer based in New Castle, Pa., who specializes in AM projects. In a previous life, Glen designed the Texar Audio Prism. Reach him at glen@clarkcom.com. 🌐

The Zahl Tube

This is part of a series of photographs of radio broadcast facilities and radio history from the collection of Jim Hawkins.

As a vacuum-tube collector, I see a tube as a work of modern art inside a glass-enclosed vacuum that can perform remarkable functions. About two years ago I won an auction for a uniquely shaped tube nicknamed a "Zahl" tube.

The prototype tube was invented and built circa 1939 by Dr. Harold A. Zahl to operate at 250,000 watts of 600 MHz pulsed power. During World War II, it was mass-produced by Machlett and designated the VT-158. It was used to modify the SCR-548 radar under the direction of Dr. John Marchetti at Camp Evens, N.J., and given the name AN/TPS-3 (nicknamed the Tipsy Three), the first radar set to operate on 600 MHz at high power. The mortar-detecting, portable unit had a 70-mile range.

Crisis-inspired

It was feared that the Japanese or Germans could attack the Panama Canal with low-flying aircraft. Interruption of the ocean-to-ocean shipping connection could compromise Navy strategy. The 110 MHz radar, already in use, could not follow the contour of the earth close enough to detect such an attack early enough. It was decided that higher frequency radar was necessary. It was this crisis that inspired Zahl to come up with the new tube.

> # A
> s a vacuum-tube collector, I see a tube as a work of modern art inside a glass-enclosed vacuum.

The VT-158 has four triodes grouped in two pairs, each pair in a push-pull arrangement with the other. The anodes and grids of the pairs are tied together by inductor loops. The inductors are in close proximity to each other causing a regenerative feedback link, making the tube an oscillator. The cylindrical portions of the anodes have horizontal fins to help radiate the tremendous power dissipated as heat.

Glass stems around the connections brought out of the tube are doped with uranium to increase the ability of the glass seals to withstand heat by reducing the expansion difference between the metal pins and glass. The grids are biased via one connection center tapped to one of the internal inductors. Each of the anode and cathode pairs are brought out to connections so that an additional, external loop can be used for tuning, using a shorting bar. The photo shows a slider-tuned loop connected to the cathode pairs.

The prototype Zahl tube consisted of two anode "barrels," each in push-pull with the other. In the final design, the number of anode "barrels" was doubled on each side of the push-pull arrangement, to obtain adequate cathode emission area. This prevented a sharp break in radio frequency energy at 600 MHz as discussed in the patent document.

The circuit within the envelope, therefore, consisted of four tubes and the entire input and output tuned circuit, coupled to each other to form a power oscillator.

For a list of useful resources and additional material, e-mail the author at *jim@jphawkins.com.*

Visit the author's Radio and Broadcast Technology Page online at www.jphawkins.com/radio.html. 🌐

10 Tips for Studio Consolidation

by Tom Vernon

As media groups continued to merge in recent years, common studio facilities have become the norm in most markets. Managers contemplating such a project need to understand key factors in what can be a complicated process.

While the frantic pace of studio consolidation may have tapered off a bit recently, it shows no sign of ending. Rich Redmond, director of Broadcast Systems at Harris Corp.'s Broadcast Communications Division, said, "The buying phase may be slowing down, but we're seeing stations that were bought at the beginning of that buying curve just coming online for consolidation now."

Expertise & budget

As managers and engineers contemplate a studio consolidation, it is important to have access to the right expertise.

Rob Chickering, engineering manager for Susquehanna Broadcasting in Dallas, said, "Large groups usually have on staff the type of legal, architectural, real estate and engineering expertise to handle these types of projects. If you haven't done a studio recently and aren't familiar with consolidation, it would be good to enlist the services of an integrator early in the game."

Also, a realistic budget must be developed early. In large corporate environments, this is usually done in concert with the director of finance.

Other industries may have something to teach us. For example, Al Kenyon, former

senior vice president for projects and technology at Clear Channel Radio, said a manager might visit www.rsmeans.com/calcula-

Studio projects like this one at Universal Studios, used by visiting stations, take planning — lots of planning.

tor/index.asp, enter the square footage of the project, enter the Zip code, and select "medical clinic" to get a good estimate of construction costs.

Clinics, he said, use a mix of open and office space and specialized construction sufficiently similar to radio stations to allow you to approximate broadcast facil-

ity costs this way.

Redmond said an integrator can be used to develop a detailed budget. This can be done on a fee basis, just like working with an architect.

Even the best financial plans can run amok, and Redmond urges that planners set aside contingency money to cover things that weren't anticipated in the initial planning.

Planning the move

Selecting a new site for the studios involves many considerations and tradeoffs.

Kenyon said, for example, that lease costs for a downtown studio might be higher than for a location in the suburbs, but if a suburban studio site requires a 30-minute commute for account executives, the lost productivity needs to be factored into the decision.

And don't forget to check for ample parking for employees and guests. Chickering urges managers to drive to a

TECHNOLOGY FOR MANAGERS

potential site during rush hour. In one instance, a location was rejected because drive time traffic made access dangerous.

Roof access, line of sight to transmitter locations and a southern exposure for satellite dishes may need to be considered. Also check for availability of phone service early. Kenyon recalls one site where the phone company could not deliver T1 service for six months. If the

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Consolidation's Top Ten

Here is a list of 10 key issues managers should consider when drawing up consolidation plans, based on comments from sources for the accompanying article.

• *Set a Realistic Timeframe* — Don't wait until the lease is up; remember that the planning phase can take longer than construction.

• *Designate a Team Leader* — Attention to detail, high energy level, problem-solving and negotiating skills are key.

• *Hire Knowledge* — If you lack expertise with consolidation projects, involve a systems integrator at the outset. Use their budgeting, legal and construction expertise to back you up.

• *Create a Project Team* — Select systems integrators, architects, HVAC contractors and equipment vendors early in the game.

• *Use the Right Tools* — Project management software such as MS Project or AEC's Fast Track Schedule, along with documentation programs like MS Visio, netViz and AutoCAD, are essential to keep things orderly.

• *Develop a Budget* — Work with financial managers and integrators to develop an affordable plan. Don't wait till the final stages to try to cut costs.

Susquehanna's KPLX(FM)

• *Select a Site* — Downtown vs. suburbs, roof access, line of sight to transmitter locations and access for guests and account executives are among the many considerations.

• *Motivate the Team* — Keep in touch, share meals, use good interpersonal skills. You will keep your people together through the difficult periods.

• *Don't Forget Training* — A new phone system, console, router, traffic or automation system may require employee training to ensure a smooth transition to the new facilities.

• *It's Not Over Till It's Over* — Most technical bugs show up in the first week of operations. Stick around to make sure they get ironed out.

Consolidation

roof is already congested with antennas, an RF study may be necessary to determine a location's suitability.

Another tradeoff may involve the selection of HVAC equipment.

"It may be tempting," Kenyon said, "to go with a low-cost bid for HVAC, rather than spending the additional money for an energy efficient installation. But over the long haul, repair costs and the electric bill may make the low-bid installation more expensive."

Adds Redmond, "It is important to involve the integrator and architect early in the project. The architect can help you select the best location, taking into consideration things like ceiling heights, weight limits, problems with adjacent structures, etc. It is much easier to move a wall at the beginning of a project rather than later."

Designing the studios

A good studio layout is not designed in a vacuum — or in the engineering shop. Experts stress the need for feedback from station personnel. A jumping-off point that Chickering uses is to make the new studios like the old, but with needed improvements. In one sports-talk facility, improved sight lines in the new studios made the bullpen announcer more visible, enabling him to make more contributions to the on-air product.

Once construction has started, keep a watchful eye on progress. Kenyon suggests attending the weekly construction meetings. Problems and issues will be raised here, and decisions made, and you need to have input. Make daily inspections, particularly when studios are being framed. Subcontractors may not understand the need for acoustical isolation and may do you a "favor" by connecting adjacent walls to make them more stable.

Gary Kline, corporate director of Engineering for Cumulus Media, cited the need to be proactive and check in with key people every day.

"They won't always call you if there are problems. You can't just ask how things are going, you need to ask specific questions."

Tools of the trade

In all but the smallest one-person projects, use of the right software is essential to keep things organized, on time and within the budget. All team members should have the same software and be comfortable sending and receiving files over the Internet. For project management, Microsoft Project is widely used, although others prefer AEC's Fast Track Schedule.

It is essential to document cable runlists, signal flows, studio furniture layouts and rack configurations from the beginning, even though these things will change as the project evolves. AutoCAD is popular for describing furniture, studio and rack layouts, while MS Visio and netVIZ remain popular for keeping track of signal flows, particularly in an IT-intensive environment. Excel and Access are used to track cable runs.

Chickering notes that being able to share system documentation online is becoming as important as making project management information available on the Internet.

Whatever software is employed, be proficient in its use. Experts noted that waiting until a week before the project to run a tutorial and begin learning about the program may be a prelude to disaster.

People skills

With the massive infusion of cabling, HVAC and studio gear that goes into a consolidation effort, it may be easy to lose sight of the human element.

It's important to pick the right person to lead the project, and also to nurture the team members. Kline listed vital characteristics of the person who is selected to lead such a project: "A high energy level, attention to detail, ability to work well with different types of people, and good negotiating skills are all important." The ability to take setbacks in stride and a commitment to continuous improvement

are vital, as well, he said.

A good leader also must cultivate the team and apply a bit of psychology.

"Whether they are employees or contractors, they are all part of the same team, and it's important to let them know they are appreciated," Kline said. "Take them out to lunch, urge integrators to visit the site, remember people's names and invite them all to the celebration party when work is complete."

Training

If the new facility contains equipment such as routers, consoles, automation systems or phone systems with which employees are unfamiliar, allocate time and money for training, and conduct the training before the facilities go online, if possible. Kline said that for major items such as automation systems, 10 to 15

days of instruction is the norm.

Members of the construction team itself may need to be trained if, for example, they are installing fiber optic cable for the first time. Some equipment manufacturers will provide training on their gear, other instructional programs will need to be developed in-house or designed by outside contractors.

When studio construction finally is done, cutover to the new facility complete and the celebration party winding down, it may seem like a good time to pack up and get ready for the next project, but that might be a mistake, according to Kline.

"Most glitches occur within the first week of operation, so it's important to stick around and make sure they get straightened out before you leave the site." 🌐

At Spring NAB, It's an IT World

by Fred Baumgartner

One morning, Mike DeClue, vice president of engineering for Clear Channel Television, described to me how he was in the process of "lifting up" his broadcast operations, building an information technology base and setting those operations down again on top of it.

He mused further that broadcast operations, which once comprised hardware and operators, were fast becoming an *application*. For a significant number of us — soon, almost all who call ourselves broadcast engineers — digital technology will stop being islands and function-bound hardware, and cross the line to being IT-based.

Every year, on the Saturday before the opening of the convention floor at the spring NAB show, the Ennes Educational Foundation Trust, the educational organization associated with the Society of Broadcast Engineers, strives to assemble the program that best serves what working and managing broadcast engineers need to know to be successful.

Last year the Ennes program covered centralization and digital radio. Having the chief technical officers of Ibiquity, Sirius, XM and Neural on the same dais was special, and, to the best of our knowledge, a unique event. Likewise, hearing VPs of engineering for groups that centralized their operations talk about how they did it and what they learned was an excellent program.

The previous two years were dedicated to the SBE Certified Broadcast Networking Technologist tutorial and certification exam — again, what engineers needed most.

Basics, plus

On Saturday, April 17, 2004, the Ennes program includes a unique group of engineers, both manufacturers and broadcasters, bringing their experience to "Converting Broadcast Operations to an Information Technology Platform."

Broadcast engineers have a good story to tell the industry, and the Ennes program is where it happens.

Al Kovalick, Pinnacle's chief technology officer, starts the day with a broad tutorial on storage architectures and connectivity, covering the often-distinctive decision points that each broadcast operation must make. Kovalick worked for 25 years at Hewlett-Packard as a designer, system architect and technical strategist before joining Pinnacle, and he holds 18 patents.

Ted Mina will follow with a tutorial on the IT aspects of managing content from a service level perspective. Mina is a principal of the Technology Solutions Group within EMC's Telco, Media and Entertainment division. Mina's career focuses on delivering strategy and solutions development services to clients in those niches. He will focus on case studies and the best IT practices from his own experience.

Isilon co-founder Sujal Patel describes the limitations and pitfalls of

Andrea Cummis   Mike DeClue   Ted Mina   Sujal Patel

approaching the broadcast project with standard IT tools. Prior to founding Isilon, Patel spent nearly five years at RealNetworks, in part as chief architect behind the company's second-generation core media delivery system.

the IT conversion process.

As morning moderator Andrea Cummis, CBT, CTO, senior vice president of engineering for Oxygen Network and an SBE board member, finishes her sessions, William Hayes, director of engineering and technology for Iowa Public Television and author of the *Digital Journal* column in TV Technology magazine, takes over.

Case studies

The afternoon sessions turn to case histories and what several working broadcast engineers have experienced. But first we cover V-ISAN and the

challenge of maintaining the "card catalog" in a purely digital world.

Craig Finseth, Firwood Consulting, will speak of Universal Media Identification, and the next world where central registries catalog and

Then there is Kevin Ivey, who is serving as BBC Technology's project director for ESPN's Digital Conversion Project. BBCT's project team at ESPN is building the pilot and implementation of Media Asset Management and Command & Control systems to support ESPN's new digital production center and the network's high-definition television offerings. Ivey previously held the post of vice president of research and development at CNN, the Atlanta-based 24-hour cable news pioneer.

Turner Entertainment, under Vice President of Engineering Clyde Smith, has made the IT move into a new 198,000-square-foot facility with an extensive IT infrastructure, and Smith has a lot to talk about with the many channels and media outlets supported.

Christopher Golson, SGI's senior director of marketing strategy for the media industries, has a front-row seat to the IT conversion and makes the perfect close to an IT-centric day.

SBE and the Ennes Trust provide several educational opportunities throughout the year, but NAB is an annual opportunity to gather a number of top-quality presenters together for a day of education. We promise that you will have your share of "take away" points, making the trip and the program well worth the time and effort.

SBE members receive a $200 discount off the NAB non-member, full-conference registration cost. It is fair to say that while the floor is important, the Ennes training Saturday and the NAB Broadcast Engineering Conference sessions that start Sunday are the center of the Las Vegas experience, and while tougher on the mind, a lot easier on the feet.

The author is president of Broadcast Technology Services Inc. in Denver and educational director of the Ennes Educational Foundation Trust.

> # The Ennes program in April takes on the conversion of the broadcast operation to an information technology platform.

Considering the "what to do, and what not to do" of IT conversion, Lynn Rowe, the chief executive officer for One World Technologies, rolls up his sleeves and covers the point where traditional IT infrastructure breaks down in the broadcast world. Rowe is known in the broadcast industry for being on the leading edge of technology, which is where his company thrives.

Just before the lunch break, John Hoehn from IBM's Business Consulting Services takes up the topic of middleware, the secret sauce that allows the islands to be combined in

define content.

Clear Channel Vice President of TV Engineering Mike DeClue will cover the new, more flexible and reliable modes of operation Clear Channel derives from its new IT paradigm. DeClue is a long-time broadcast engineer, rooted in the business of operating broadcast facilities.

The Low-Down

The Ennes Education Foundation Trust is the educational arm of the Society of Broadcast Engineers. SBE has partnered once again with NAB to present the NAB Broadcast Engineering Conference at the NAB Spring Convention, April 17-22, 2004, in Las Vegas.

SBE members receive a $200 discount off the NAB non-member registration rate. Visit the SBE Web site, *www.sbe.org,* to download the special NAB registration form.

SBE members and non-members are invited to help celebrate SBE's 40th anniversary by attending the SBE Membership Meeting on Tuesday, April 20, at 5 p.m. at the Las Vegas Convention Center.

World Radio History

e us a call and cheer us up.

Reinventing U.S. Patent Policy

*Government, Industry Agree: Something
Must Be Done to Improve Software IP Rules*

by Skip Pizzi

We conclude our examination of intellectual property with a brief history of software patents and a look at what the future may hold for this space. Because the pace and product of innovation are so heavily influenced by IP regulation, this area has important resonance on all technology development, with digital media high on the list of affected sectors.

Software patent history

Prior to 1980, the U.S. Patent and Trademark Office did not issue patents for software, or any computer-related process, under the rationale that computer operations were simply mathematical expressions of scientific truths, and thus could not be claimed as original or inventive. The PTO only issued patents to devices, processes or tangible manufactured items, and the purely algorithmic operation of computer programs specifically were not included.

In 1980, however, the U.S. Supreme Court forced the PTO to change its tune, by ordering the grant of a patent to a process for curing rubber that used computer control of temperature. The only unique element of the patent was use of a computer and its heating-control programming, but the court felt that the computer program was only a part of an otherwise patentable process.

Thereafter, the PTO and the courts attempted to set guidelines on determining whether a filing included computer software used as a component of a patent-worthy process, or if it attempted to claim originality for software per se (which continued to be considered generally non-patentable).

This process was confused and misleading, and often acted to extend the already lengthy period of patent review. (It is not uncommon for five years to elapse between filing and final patent grant.)

In the rapidly paced software world, this meant that patents often were granted so long after application that they often seemed inappropriate when finally granted, because the environment had changed so much in the interim. To counteract this problem, in the 1990s the PTO attempted to accelerate its processing work, and also began to include patents on software-related business methods.

These techniques occasionally resulted in inadequate diligence of review, again resulting in problematic patent grants. So in attempting to correct the problem of software patents being too difficult to procure, the PTO may have overcompensated and made such patents too easy to obtain in some cases.

This conundrum gave fuel to the Open Source software movement, elevating it from the province of marginal "true believers," and giving it some traction in the corporate mainstream. Supporters felt that the Open Source precept of essentially eschewing the pursuit of IP royalties in the software space was the only solution to this complex problem. Meanwhile, others continued to believe that the Open Source process did not provide sufficient incentive for innovation, which was the fundamental purpose of patent protection in the first place.

Of course, the abuse of the current patent system by IP terrorists, discussed in a previous column, has a detrimental influence on innovation, as well.

The risk of huge expense to implementers in defending themselves against patent infringement suits brought by non-implementers seems to be a serious misappropriation of the process intended by the founding fathers, when they authorized Congress to "promote the progress of science and useful arts, by securing for limited times to… inventors the exclusive right to their respective… discoveries" (U.S. Constitution, Article 1, Section 8).

Today, government and industry agree that the patent process inadequately addresses the current environment, although there is not yet consensus on how things should change. Providing some thought leadership on such amendment is the Federal Trade Commission, which recently issued the first of two reports on the subject.

FTC recommends PTO changes

In 2002, the U.S. Federal Trade Commission and the Department of Justice held nearly a month's worth of hearings on intellectual property law, delving into antitrust, standards and patent issues. In late 2003, the FTC published a 300+ page report on the commercial aspects of its findings, including recommendations for reform. (The FTC and DOJ soon will publish a companion report focusing on antitrust matters.)

Reforms proposed by the FTC center almost exclusively on improving and updating the U.S. patent system, and making it more in balance with competition law and policy, which the FTC administers. The report cites improvements required in the quality of patents, and it recommends changes to the patent process.

In terms of improving patent quality, the FTC proposes institution of new patent-examination criteria (which the PTO is already developing, and which will extend the breadth and depth of patent examiners' work), and recommends a substantial increase in funding for the PTO.

Regarding process changes, the FTC proposes a new administrative procedure that would allow post-grant review of (and opposition to) problematic patents, if the patent can be shown to be questionable under certain specific thresholds. Currently, any review of a granted patent requires a special petition to the PTO (as in the Eolas case, discussed in a previous column), and such review is rarely granted.

Other fundamental changes in points of patent law also are proposed, in which the burden of proof on any patent challenges is reduced, and the criteria for declaring a patent claim as "obvious" (and therefore invalid) are more tightly specified.

The FTC's recommendations also call for the publishing of all patent *applications* 18 months after filing (which has become standard practice for patents filed

The Big Picture

Photo: Gary Hayes, BBC

by Skip Pizzi

outside this country).

This would alleviate a fairly common and potentially expensive problem in today's business world, as follows: Company A spends several years investing in development and planning for a product. After the product comes to market, Company B is issued a patent that reads on the product, and Company A must now pay Company B substantial, unanticipated royalties. Company B had indeed filed for the patent before Company A's development, so it is legitimately owed these royalties, yet Company A's equally legitimate due diligence on prior art did not discover Company B's intellectual property claim, because it spent those years in the nether world between patent filing and issuance. The new statute for publishing patent applications would not allow this period to extend longer than 18 months.

Do the numbers

Although this all may seem an arcane undertaking, the patent process has real impact to the everyday lives of consumers and technology companies.

Consider that a typical digital consumer device produced today may read on hundreds if not thousands of patents, and simply the *process* of securing all necessary rights for the device's production (let alone paying the royalties) can add to its cost. As more patents are filed and devices become more complex, this problem will only increase.

This is further complicated by the continuing trend toward software-based invention, which generally shortens product development cycles at the same time that patent processing is taking longer than ever. The FTC's research indicates that the PTO now receives more than 1,000 new patent applications each day, and that patent examiners average only 8 to 25 hours on each before making their judgments. Clearly something must change.

Most of the recommendations made by the FTC so far require some kind of congressional action, and given the surfeit of other issues on the national agenda (and the lack of any champions rising to sponsor IP reform to date), it is unlikely that these changes will take any sort of fast track toward enactment. Nevertheless, the issues have been raised, and will likely occupy a growing measure of debate on the national stage over the next several years.

Thanks to numerous contributors for help with this series of articles, particularly Jim Burger of Dow, Lohnes & Albertson, PLLC, and Andy Updegrove of Lucash, Gesmer and Updegrove, LLP.

Skip Pizzi is contributing editor of Radio World. 🌐

Back Up Your Backup Systems

by John Bisset

Given the catastrophic calamities experienced by engineers over the past couple of years, reliable backup systems have become "top of mind" matters.

Backups don't have to be fancy, just indicators can give you an early "heads up" to developing problems. especially if you can't get to the site regularly.

Filtering the diesel fuel is another small step that will pay back tremendous dividends. Fig. 2 shows an external fuel filter that was added to this generator.

component to the breaking point. Your job is to find that weakest link.

Walt Billings, president of Total Engine Service and Supply in Baltimore (*www.comm-struction.net*), a generator, power distribution and control systems contractor, says broadcast engineers can

sure the connections are tight. If the batteries are not sealed, check and replace the level of distilled water.

Where you see wire connections, test them for tightness, frayed or broken wires or insulation and corroded terminals.

According to Billings, coolant level and brittle hoses are two areas that are often overlooked. Although the problem has been corrected on most state-of-the-

Fig. 1: Keep a log of the meters on your generator.

Fig. 2: This external fuel filter is in addition to the fuel filter installed on the generator engine.

reliable. Only through routine maintenance can you be assured of a trustworthy system. Nowhere is this truer than with a backup power system. Generators are engines that must be tested, preferably under load.

Just as it's easier to troubleshoot a transmitter with routine logged parameters, the same is true with the generator. Keep a log of the front-panel meters, as seen in Fig. 1. Many of the newer gensets have remote annunciators that can be tied to your remote control. These warning

This filter is in addition to the fuel filter already installed on the generator engine.

You routinely replace transmitter air filters, such as those shown in Fig. 3 on page 24. Regular replacement of fuel, oil and air filters is just as important on a generator.

As you inspect the generator body, search for leaks, especially around filters and engine seals such as those seen in Fig. 4. Remember, leaks won't correct themselves, and usually just get worse. The stresses a generator operates under when fully loaded will push a marginal

conduct several tests themselves. Over the years, his firm has supported SBE chapters with auxiliary power maintenance programs.

Fluid levels are important, just as in your car. Walt receives no end of service calls when the weather gets cold and utility power fails. Many are due to corroded battery terminals.

Pretend you are checking your car: i.e., inspect the battery cables, remove corrosion from the terminals and make

art generators, older units may not have auto.shutdown systems that are triggered on low coolant or high temperature. These conditions can occur when a coolant hose bursts. If you're not there to catch the problem, you've just cooked an engine and your supply of backup electricity.

Inspect hoses for cracks and stiffness. If, when squeezing the hose, you see small cracks in the surface, it's time for

Workbench

replacement. Coolant hoses should have some "give" when squeezed. Remember some hoses are reinforced with an inner spring to prevent collapsing and may not "give" as easily. If the hose looks suspicious, replace it. Periodically check the coolant level as well.

Most manufacturers recommend a complete generator shutdown once every 24 to 48 hours of continuous service. During this brief shutdown, check all fluids and replenish them as needed. This is a good time to check for leaks. In fact, after a test cycle, as the generator cools down, use a flashlight to inspect the generator. Vibration may have loosened hardware, broken wires or chafed hoses.

★ ★ ★

While we're on the generator theme, here's some neat training news.

Generac, a generator manufacturer in Eagle, Wis., has completed construction on a 6,000-square-foot Technical Training Center. In addition to providing training and troubleshooting on a variety of products, the company has developed a "Second Chance" youth apprenticeship program.

This vocational opportunity combines training at the Generac facility with an on-site classroom experience. The program offers credit-deficient high school students who have difficulty thriving in a normal classroom environment the ability to earn a diploma after completing the two-year program. The program has received recognition by the state of Wisconsin and is in its third year.

In an industry where we wonder where the next generation of engineers will come from, wouldn't it be great if this type of program were adopted by the major transmitter manufacturers that already offer college level or certification classes?

Not only would we have another source of revenue for the companies, but it would ensure a trained pool of entry-level engineers.

John Bisset has worked as a chief and contract engineer for more than 30 years. He is the Northeast regional sales manager for Dielectric Communications. Reach him at (571) 217-9386, or john.bisset@dielectric.spx.com.

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

Fig. 3: You routinely replace transmitter air filters; do the same with generator filters.

Fig. 4: As you inspect the generator body, search for leaks, especially around filters and engine seals.

Fig. 5: Pretend it's a car: inspect battery cables, remove corrosion from the terminals, tighten connections.

Fig. 6: A bad connection can mean an engine that will not start.

Brian DeNicola: A Broadcaster Is Born

by James P. Hawkins

It was in the spring of 1998 that I met Tony "Dee" DeNicola, a 27-year veteran of the broadcast business, for a tour of the WMCA transmitter site. Tony has starred on radio and worked as an engineer in the studio and at the transmitter facilities in Kearny, N.J. He also co-owns WODI(AM) in Brookneal, Va., with Dave Marthouse, as D&M Communications Inc.

I also met Tony's 13-year-old son Brian, who co-hosted the tour. As Tony showed me around, I became aware that Brian knew the ropes and seemed to have a tremendous understanding of the business. I was impressed, if not envious. I hadn't even seen a broadcast facility until I was about 16.

Brian seemed to work with his dad as a peer. I decided to visit Brian at his home to learn more about how this young man had become interested in the medium.

I decided it would be easiest to interview Brian on tape. I planned to bring my portable cassette recorder, but it occurred to me that Brian probably could supply the necessary environment.

He told me he had everything we would need.

Real-world experience

When I arrived at the DeNicola residence in Edison, N.J., earlier this year, Brian had just come home from his day at Edison High School. His mother welcomed me and Brian led me up the stairs into an eye-popping array of equipment on the second floor.

Teenager Brian 'Dee,' shown here in his home studio, already has five years of radio experience.

attending college. He runs the Lowell Ponte and Geoff Metcalf shows there. He also has worked as a board op, running analog reel-to-reel tape carts, turntables and modern computer-automated systems.

Brian, 18, has been doing his own show at WODI called "Today's Best Music With Brian Dee" for three years. The format consists of alternative rock music. He visits WODI every other month to do the show, but otherwise creates it from his home studio onto reel-to-reel tape, which is then burned on CD. He now also does a weekly Internet show, "Today's Best Music," on *www.darkstarradio.com*.

Brian graduated from Edison High School, class of 2003. This is a young man who, for a science fair project, set up an FM transmitter in the gymnasium, broadcasting throughout the school.

Atypical job

I asked Brian "Dee" where he learned his broadcast skills.

"My dad (taught me) basically everything. Then I branched off, watching other people and learning from other people." He is attending Mercer County Community College in West Windsor, N.J., studying television and radio. Like many young people, he's still formulating his goals. Among them: To work at Z-100 or WKTU as a jock or production engineer.

Among the celebrities that Brian has met in his work are Joe Franklin, Janet Leigh, June Lockhart, Al Lewis and Mike Myers. Brian also is excited by the fact that he has had the opportunity to do

> ## With practice, you get used to it, learn to forget about what might go wrong and just deal with problems when they come.
>
> — Brian DeNicola

Was I in the Twilight Zone? No, I was at D&M Communications headquarters, with two rooms on the second floor dedicated to broadcasting. The one we used was Brian's own fully operational studio, used for creating radio programs for WODI.

It's interesting to talk to this young man and hear his perspectives on our business.

Brian DeNicola was born in 1985. His first experience with broadcast equipment was at the age of 4. His father would bring him to WEVD(AM) in New York, where Tony worked, and have Brian press the buttons on the cart machines. Little did listeners know that it was a 4-year-old starting the next cut.

Brian did not develop a real interest in the broadcast field until a bit later. He spent his time collecting coins, enjoying cartoons and model trains, reading and collecting Dr. Seuss books. But at 13, Brian trained at WEVD as a board operator.

He now works for Salem AM stations WMCA and WWDJ as a control operator and announcer, and weekends at Liberty Broadcasting — the former Talk America Radio Network — in Newark, N.J. while

much repetition.

"There's nothing local anymore and DJs are restricted. They can't say what they want to say," he continued. "They can't do their show the way they want to do it. They have to listen to what corporate says they have to do, everything is controlled by computer, and you have to say what the computer has to play. There's no freedom in the business anymore and creativity is lost and will continue to get worse.

"If you just look at radio, how it was 10 years ago or back when it was really good in the 1960s and '70s, if you listen to the air checks, the creativity was great. The disc jockeys were allowed to say what they wanted to say, and now everything is just so tightly formatted.

"Radio has to be interesting to get people to listen to it. It's a theater of mind. I think playing five songs in a row without having somebody talking — if you want to hear that, you put your CD player on or satellite radio."

Asked about HD Radio, Brian said that if it is marketed right, it could bring music back to AM and in fact eliminate the perceived differential between AM and FM. The variety and choices of talk and music would be spread among AM and FM stations, and the listener would be more oblivious to what mode they are listening to.

Some of Brian's biggest challenges so

Brian and father Tony visit the WMCA transmitter site in 1998.

much more interesting work than a typical job of his peers during that period.

"It's different from everybody else in high school."

Asked how he feels about working a highly automated station, Brian feels radio was much more exciting when things were done manually, allowing for more creativity and spontaneity.

"I think the business needs to get away from the automated systems and the formats need to be more expanded and less tight like they are doing with a lot of the music stations," he said. "There's too

far have been learning to sequence carts, tapes, records and show material in a precise manner.

"With practice," he said, "you get used to it, learn to forget about what might go wrong and just deal with problems when they come." Readers can hear an aircheck of Brian DeNicola on WODI at *www.wodiradio.com/brian*, or catch him in the New York metropolitan area doing weather and spots on AM stations WMCA and WWDJ.

Visit Jim Hawkins' Radio and Broadcast Technology Page online at www.jphawkins.com/radio.html.

Burk Offers Trade-In Deal

Remote control users, this one's for you: Burk Technology is offering a $400 trade-in on orders of GSC3000 and VRC2500 transmitter remote control systems.

Under the program, available through Burk dealers, customers who purchase one of those new models can send their old Gentner VRC1000 or VRC2000 to the factory to receive $400 back on their upgrade. The offer lasts until Feb. 27.

"When we acquired the VRC2500 and GSC3000 (from Gentner), we made it clear that we would fully support them and continue development," said Peter Burk, president of Burk Technology. "We hope broadcasters using the older products will take advantage of the trade-in offer and see how far the product lines have progressed."

Burk has released new firmware, software and hardware for the GSC3000 and VRC2500, and is introducing a Web Interface to add IP-based site control.

For information contact the company in Massachusetts at (800) 255-8090 or in Missouri at (800) 736-9165 or visit www.burk.com/trade-in.

Fluke Updates MegOhmMeter

If your job involves testing tower base and guy wire insulators or capacitors and other high-voltage components, here's a product of interest.

Fluke Corp. said its 5 kV MegOhmMeter features an incremental ramp function, automatic key parameter calculations and a PC interface.

The 1550B insulation resistance tester replaces model 1550. It provides insulation resistance testing up to 5,000 V and is suitable for installation testing, preventive maintenance and commissioning. It is targeted at industrial electricians, plant maintenance personnel, utility technicians and anyone who installs, repairs or maintains switchgear, motors, generators or cables.

Test voltages start at 250 V. New programmable test voltages are available in 50-volt steps from 250 to 1,000 volts and 100-volt steps from 1,000 to 5,000 volts.

Features include auto calculation of dielectric absorption and polarization index with no setup; better ramp function from 0 to 5,000 V DC for breakdown testing; measurement storage in 99 memory locations; and improved results download to a Windows-based computer using the included Quicklink 1550B software and interface cable.

Retail price is $3,095.

For information contact the company in Washington state at (888) 492-7542 or e-mail fluke-info@fluke.com.

How to Submit Letters

Radio World welcomes your point of view on any topic related to the U.S. radio broadcast industry.

Letters should be 100 to 300 words long; the shorter the letter, the better chance it will be published in full. We reserve the right to edit material for space. Longer commentaries are welcome but may not reach print as quickly.

Include your name, address and contact information, as well as your job title and company if appropriate.

Send letters via e-mail to *radioworld@imaspub.com,* with "Letter to the Editor" in the subject field; fax to (703) 820-3245; or mail to Reader's Forum, Radio World, P.O. Box 1214, Falls Church, VA 22041.

RAB Examines Sales Strategies

by Sharon Rae Pettigrew

"We are missing the boat."

That's the word from Sheila Kirby, senior vice president of Interep Innovations. She co-moderates a session at the RAB2004 convention called "How to Work the Factory, Not the Dealer."

This year's show runs Feb. 5-8 in Dallas.

Kirby promises to introduce attendees to a different level of automotive money.

"Radio stations are very good at working with local car dealers directly, or maybe dealer groups," she said. "They do a good job of getting a share of that ad dollar."

But there's a middle level of money that's controlled by the factory. She says she'll show attendees how to tap into this new wealth from OEMs, or original equipment manufacturers.

"As you landscape and understand how OEMs do businesses — not only how do they make a car, but how do they ultimately sell a car — there are probably, in that equation, 30 different pockets of money a local media salesperson could tap into if they understood how."

Kenneth Tucker, managing consultant with the Gallup Organization, headlines a handful of keynoters at RAB2004.

Performance capacity

"Sales managers, radio executives and any thought leader who hopes to succeed in the 21st century must come to understand the new and changing nature of work," he said.

"Employee engagement, personal stock value and strengths-based management all impact the performance capacity of an organization."

Tucker's keynote "Management Perspective: First, Break All the Rules," is based on the results of a pair of Gallup studies that led to the book "First, Break All the Rules: What the World's Great Managers Do Differently" by Marcus Buckingham and Curt Coffman.

Mary LoVerde, psychologist and

S**ales people convene this month at the RAB show in Dallas.**

---

life-balance specialist, offers insights during the keynote "Keeping Your Life in Balance When Cloning Yourself Won't Work."

"If you have organized, delegated, prioritized and simplified, and you still don't have enough time for your family, spouse, friends, boss — much less yourself — there's a better approach," said LoVerde.

LoVerde promises ideas to get an edge in the time-management wars.

Bridging the gender gap and overcoming communications challenges is the focus of keynote speaker Mimi Donaldson's address, "Men & Women: Can We Talk?"

"I believe that communication differences and requirements for communication based on gender can be enhancing, not inhibiting," she said.

George Hyde, RAB executive vice president, training and conferences, stands by radio in our cluttered lifestyles.

"In a society characterized by hyper-communication and time poverty, radio stands out as the medium with the strongest emotional link to the consumer and the greatest opportunity to influence a potential buyer at critical points in the decision-making process."

How to Go

What: RAB2004

When: Feb. 5-8

Where: Adam's Mark Hotel, Dallas

How Much: $525 for RAB members, $925 for non-members

Info: Call (800) 917-4269 or (800) 722-7355 or visit *www.rab2004.com*

Chapter One

Once upon a time, a radio engineer and talk show host named Steve grew frustrated with the awful sound of his telephone system. So, he read lots of books about Digital Signal Processing and invented the Telos 10. After that, Steve's phones sounded great, and he was happy. Lots of other radio stations that used it were happy, too, and Steve's company grew large and hired more smart engineers. They partnered with the MPEG folks and introduced MP3 to the world with Zephyr. And Zephyr sounded so good, it made *lots* of people *very* happy.

About the same time, another radio engineer named Frank was figuring out how to make audio sound both loud and clean . Frank began building processors for lots of important big-market radio stations. Soon, Frank teamed his audio chops with Telos' DSP gurus , and built the first digital audio processor that gave stations the loud, clean, punchy sound they wanted without the digital "grunge" – which made lots of Program Directors and engineers at even more radio stations happy . And Frank's processors became the choice of top stations like , , , **RTL**, and many more.

Now, Steve and Frank's companies have the biggest R&D team in the industry, with respected broadcast engineers like Jeff Keith , scientists like Greg Shay , and studio-audio experts like Mike "The Catfish" Dosch . These guys think up lots of innovative gear together; cool stuff like the Zephyr Xstream ISDN Transceivers with leading-edge MPEG AAC , and Omnia-6 , the broadcast audio processor preferred by major radio stations around the world, and the world's first broadcast phone system, TWOx12 , that takes advantage of the digital clarity of ISDN, and the truly amazing little Zephyr Xport POTS+ISDN codec which features aacPlus® , and is winning lots of awards.

...and that's just the *beginning* of the story!

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Zap! Pow! Processing With Ray Gun

by Read G. Burgan

Time is money. After all, time is what we sell in radio.

Time is money in other ways: the time it takes to train staff and the time staff takes doing a particular job.

At the same time, the demand for quality has never been greater. With the advent of satellite feeds and digital audio, listeners expect sound that is free of noise, full and bright.

How do you make spots that stand out? How can you clean up a news actuality done on the run?

Aboretum Systems has an inexpensive ($119) Windows/Mac compatible plug-in that provides quality noise reduction and enhancement with a zero learning curve. "Ray Gun" has six digital enhancement filters.

Adjust sliders

The Noise Reduction filter targets broadband noise using downward expansion. This is the only filter that has two sliders: Threshold and Attenuation. While previewing the sound, you adjust the sliders for the maximum noise reduction before the settings begin to affect the actual sound.

In tests I performed, the noise reduction provided good attenuation of moderate amounts of noise. This form of noise reduction can be effective. It probably won't match the results of noise reduction filters that apply a specific noise print to identify and eliminate unwanted noise.

The Pop filter removes impulsive noise like pops and clicks. You move the single slider up while listening to the preview until all the offending pops disappear or the sound begins to distort. In practice the filter did a credible job of removing all but the most offensive pops and clicks.

A separate filter provides attenuation of either 50 or 60 cycle hum and/or rumble. This filter uses a pre-set notch filter. I found that it did a good job of removing hum components with little or no effect on the sound itself.

New tool set

This latest version of Ray Gun has a new set of enhancement tools with one slider each for bass, treble and stereo enhancement. The means of adjusting bass and treble enhancement are more than just a boost of those frequencies.

They replace bass or treble frequencies that may have been lost in the noise reduction process or lacking in the original recording. The enhancement synthesizes

Classic Jazz in Changing Times

'Riverwalk' Enjoys 15th Season of Small-Group Jazz From Before WWII

by Ken R.

Not many radio shows boast a play list that includes "Dippermouth Blues," "Taint Nobody's Bizness" and "Big Noise from

Technical Director Malcolm Harper

Winnetka," but these songs and other pre-World War II standards are heard every week on approximately 150 Public Radio International affiliates.

"Riverwalk, Live from the Landing" features old-time jazz as interpreted by the Jim Cullum Jazz Band and its guests. The program is produced by Pacific Vista Productions in cooperation with Texas Public Radio and usually is recorded live at the Landing Jazz Club on the Paseo Del Rio (River Walk) in San Antonio, although other venues are used as well.

Despite an apparently dwindling appetite for jazz among radio programmers in general, and a decline in the show's affiliate count, listenership was up last year.

Executive Producer Margaret Pick, based in Petaluma, Calif., started the program in 1989 with Jim Cullum and Lynne Cruise.

Down to Texas

"I was the founding producer of 'A Prairie Home Companion' and worked on that for 13 years," she said. "When Garrison Keillor took his first retirement, I came to California and one of the first calls I got was from someone who told me I had to check out Jim Cullum, and I went down to Texas to hear him. I was knocked out by the musicality of his band, so I got involved."

Cullum had spent 40 years studying early jazz, and his band had a body of new arrangements. Pick set up a network of 60 or 70 stations that carried a few specials featuring the band. The broadcasts then expanded from a 13-week experiment to a 52-week staple.

Lois Reitzes, program director of PRI affiliate WABE(FM) in Atlanta, has aired the show for 10 years.

"It is superb," she said. "We even get audience reaction from high school students who find it educational."

Reitzes believes that the vintage jazz tunes fit in well with the classical music played by most public stations.

"This is really America's first classical music," she said. "I also want to say that Margaret Pick's love of this genre comes through in the way the shows are presented."

The show's highest station clearance was 225 stations; it now has 162 broadcasts weekly on 152 stations.

"We believe the loss primarily has to

do with the current trend in public radio toward more news and public affairs programming and less music, especially jazz," Pick said.

"NPR has dropped most of its jazz programming including major series like 'Jazz from Lincoln Center,' which is now distributed by WFMT(FM), Chicago. We're fortunate that PRI continues to make a major commitment to cultural and live performance programming."

In spite of the decline in clearance, Pick said, "Riverwalk" had an 11 percent increase in listeners in 2003 over '02.

The musicians who make it happen each week include leader Jim Cullum on cornet, an early version of the trumpet; Howard Elkins on the unusual four-string tenor guitar and tenor banjo; Don Mopsick on double bass; Kevin Dorn on drums; Jim Turner on piano; Ron Hockett on clarinet; and Kenny Rupp on trombone. The JCJB ensemble has developed a fluid style of its own based on historical tradition.

But it is more than a weekly musical review. Noted actors including Eli Wallach, Jerry Stiller and Earl Hyman drop in, and their comments are combined with interviews and historical audio clips that paint an audio picture of the early 1900s.

"David Holt has been our host from the first series," said Pick. "He is a story teller and plays banjo and guitar, and really has a

Riverwalk Jazz Executive Producer Margaret Pick and Host David Holt

passion for traditional music. His stories put everything in the context that the music came from, whether it's New Orleans, Chicago or Kansas City, for example."

Tech talk

Pick works with researchers to create scripts, which are underscored with archival recordings before the shows transition to live music from the Landing.

"Riverwalk, Live from the Landing" is recorded by Malcolm Harper, who is based at Reelsound Recording in Austin,

Ray Gun

new bass and treble frequencies similar to what the Aphex model 250 Aural Exciter III does through hardware.

I experimented with this enhancement on a variety of music and found it provided a consistently improved quality. The bass enhancement in particular increased the fullness of the sound. A little goes a long way.

If the original source is mono, the stereo enhancement can provide a realistic stereo image. Before using it, convert the mono file to stereo.

Anyone can use it

I found Ray Gun 2.0 does a good job of digitally restoring and enhancing a broad spectrum of sound. Because of the simplicity of its operation and the intuitiveness of its on-screen interface, there is essentially no learning curve.

This is software that a radio station could put on all of its computers and turn

its staff loose to use without any training. A secretary with basic computer literacy might use it. The resulting restoration and enhancement is very good. Ray Gun 2.0 can improve the quality of spots, news

actualities, music and just about any other sound.

Read Burgan is a free-lance writer and a former public radio station manager specializing in digital audio restoration. 🌐

Riverwalk

Texas. Shows are not taped on a regular schedule but usually are done a few at a time. Chris Lindsley manages post-produce from his base in California.

As the show enters its 15th season, Harper noted that the format has not changed much over the years.

"It's very well-rehearsed with the script, and we run a live stereo mix to DAT and CD," he said. "We also run a multitrack as a backup, using the iZ Technology RADAR-24 (hard-disk recorder). The rehearsal and live show are both recorded, so we have multiple takes of the material to edit if we need it. We then convert the files to Pro Tools format

so it can be posted in California using software called Damsel, which was custom-designed in Nashville. This software takes the RADAR files and writes them to a FireWire drive in broadcast WAV or SoundDesigner II format."

The live recordings use as many as 24 mics, eight of which are devoted to the audience. A combination of Sanken Electric, beyerdynamic, Neumann and Shure mics are favored. No automation is needed for these live sessions.

Harper said his setup includes John Hardy and Amek pre-amps on stage.

"And we use a little compression because it's for radio," Harper said. "That's usually on the lead trumpet and clarinet, which are part of the seven-piece band. We also like a little overall stereo compression but we try not to do too much because we know the stations have their own compression."

A small amount of effects processing is used courtesy of a Lexicon PCM70 set on a "plate" program and an AMS RMX16 with an "ambient" setting.

"The room is fairly dead, so we add a touch of reverb to the horns and vocalist," he said.

The engineers listen to the show on headphones and on small Meyer Sound HD-1 powered speakers.

"The band is on a small stage and the entire wall behind them and above them is glass looking into the lobby of the hotel," said Harper. "This means we have the potential for reflections, so we built a little booth around the narrator to cut off some of the sound bounce."

For those in the audience, a small amount of amplification is used on a four-string tenor guitar. Benji Nichols handles the house audio separately from the audio

used for the radio show.

Bassist Don Mopsick stated that the band does more than serve up the usual list of tunes the audience expects.

"The world of classic jazz is vast and full of treasures, and we would rather spend our limited time with you sharing the jewels we have discovered rather than serving up yet another comforting rendition of what you may have heard on Bourbon Street a long time ago."

The program has two sustaining sponsors, See's Candies and Mission Pharmacal, makers of Citracal. Learn more at the show's Web site, *www.riverwalk.org.* From that same site, the most recent show is available for streaming on demand.

Ken R.'s favorite old-time jazz song is, "Mr. Patrolman, Please Move the Wagon Closer to the Curb, My Grandmother Can't Step That High." 🌐

Rethink Those Personal Priorities

by Alan R. Peterson

If you are an on-air host or, like me, a production madman, the New Year certainly presents itself with ample opportunity to patch a few problems and get on with things.

Let's first take a peek at your air name. Some years back, I wrote an article about DJ names, grousing about the overabundance of certain names like Dr. Johnny Michaels or Scott McKay, and the liberal use of modifiers such as "The Real …" and "Cousin" (I am aware of at least three "cousins" above and beyond the great Bruce Morrow).

Back then I suggested tapping the old Rand McNally map book, picking out two street names and placing them side by side as your new air name.

Using this method, I was amused to see that a pair of streets somewhere in New York state gave me *Ross Simpson*, a familiar name to you network news junkies.

You no longer need to make the exhausting effort of picking up a weighty tome such as a map anymore. Thanks to the miracle that is the World Wide Web, dozens of DJ names are landing in your e-mail In box every day in the form of spam.

In an effort to thwart spam filters, many ads are coming in with names that are so filled with fluff they are actually believable.

You may not jump all over a newsman named Mark McDaniels, but you sure might buy Randall Hammond; spam from "him" touted a medicinal patch to increase my virility and stamina.

Is traffic reporter Bo Dacious or Vera Bruptly getting on your nerves? Bring in Angie Bartley or Roxie Hamilton instead. Bag those hourly stock reports from Barbie Blingbling and instead tap the expertise of Kari Roman or Leonard Mann. Dump the morning sports guy with the baloney name and bring in Scotty Tipton.

All names were captured and sequestered by my spam blocker and all are just about legit enough to work as an on-air name.

But wait, there's more …

You want more? Okay, tear out this page and circle the ones you like. The next jock you hire can have the pick of any name you see here.

Some will sound hokey like 1940s movie actors, some won't fly on alternative FMs, but all were found on e-mail spam and are in no particular order of importance:

Marina Lacey. Bernie Holloway. Julie Preston. Joe Reed. Harvey Thompson. Terry Larkin. Benton Barrett. Will Briton. Theresa Berger. Jaclyn Winters. Marvin Howard. Mark Lender. Joyce Jarrett. Kirby Payton. Ashley Hedrick. Ben Welch.

Chris Cortez. Alton Hanson. Douglas Groves. Tricia McKenna. Brock Stone. Vito Sylvester. Doreen Lindsay. Keith Gordon. Preston Johnson. Or even Meredith Lindbergh.

If any of these are actual names of folks working with you now, it is purely coincidental … unless they received the same spam I did.

Of course, not all names hit the mark. As they are pretty much computer-generated, you could end up with a doofus name

like Stringy Olson, Tribulation J. Cheever, Frankie Subsystem or Mock Peoples.

Even worse, you could get stuck with Lockets P. Kleptomania, Toga T. Coyotes or Lance Pituitary. Be somewhat judicious in your choice of a new identity.

Dump the dry marker

Next, may I suggest that as you are cooking up an all-new demo for 2004, make it look as if you put in a little effort *visually* to be sure it gets noticed. Leave the Sharpie in the drawer and do up a really, *really* good label.

Definitely Different...

ALAN R. PETERSON

Creative Radio Production, Sound Design, Comedy Writing, Narration and V/O, MIDI Synthesis, Photography, Videography and Editing

Make CD artwork as interesting as the audio contents within for a demo that jumps out of the pile and gets noticed.

Consultants and talent coaches may differ with me on this one, and that is fine. They know what they like to see, and I know what I like to see. And like a bacon package that shows the cut of meat while cleverly hiding the strips of fat, I like to see something interesting about the person

sending me the package.

I don't think I'm alone on this one. Boston consultant Donna Halper once told me that applicants asked to submit a photograph of one's self as part of an overall package should show them doing something great, like shaking hands with the president. Anyone can be photographed at a console, but a standout picture is a real eye-catcher.

I have seen CD cases that are wonders of graphic inventiveness, with loads of swirls, clip art and high-impact color mixes. They tell me nothing and disappoint

me when the contents don't live up to the flash and dazzle.

Fig. 1 is the artwork to my current agency demo CD. I don't recommend this approach to anyone else, but I wanted the jacket to reflect the wackiness of the audio contents inside and get my picture across

at the same time. More such images are on the CD itself, unifying the whole package and looking a lot better than my name and number in smeared Sharpie lettering.

Tell me that six really weird faces looking at you from your desk are easy to ignore!

By the way, images like this are not hard to do. I did it with simple $49 photo editing software available at almost any electronics superstore, and the label printing diskette that came with my CD label refills. We've all spent more than that shopping for jeans on the weekend.
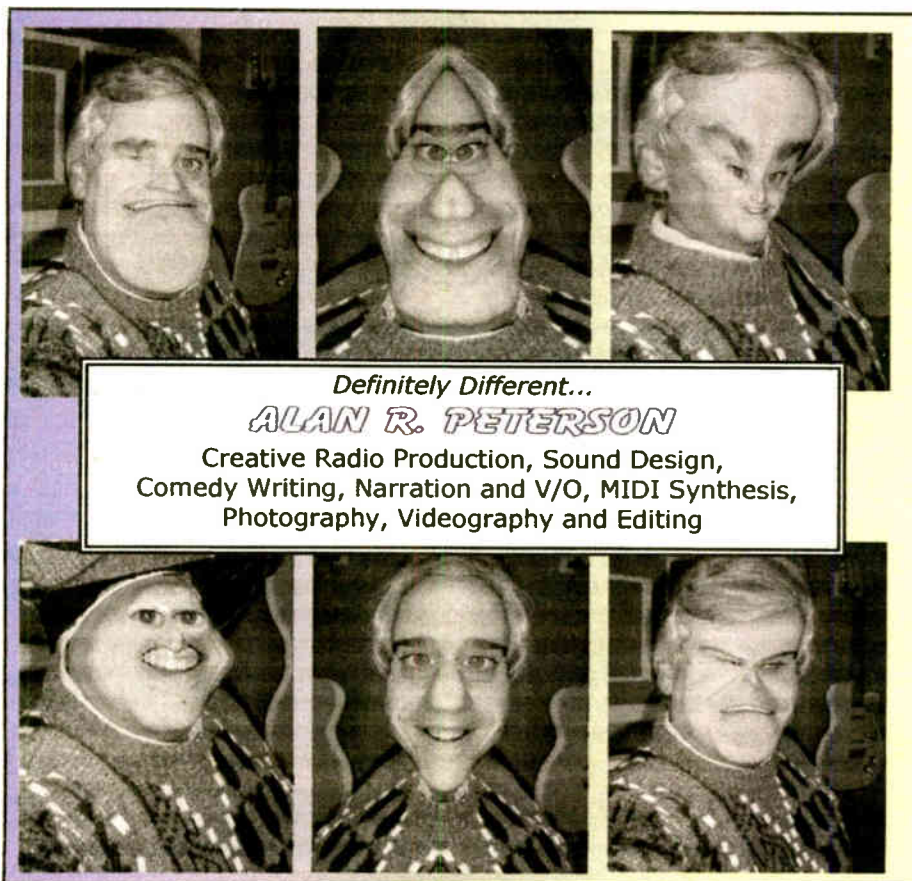
The fine print

Now there is no guarantee that a new air name and a loony looking label are going to nail down the job of your dreams. But if you haven't been getting a nibble with your current package, maybe a change is indeed in order, especially if you intend to be a part of the ride for the long haul and need to whomp others gunning for the same job you are.

After shaking my New Year's hangover, I peeked up at the calendar to discover I have been at this professionally since 1979. I cannot tell you how many times I have reinvented my demos, my on-air pitch and my presentation during those years. Among my worst efforts was the one where I included the photo of me riding an elephant in the Clyde Beatty-Cole Brothers circus (I guess Donna was right).

If this is the year you reevaluate your career, there is much you should be doing. Get honest input from your friends, listen to the work of others to see how you compare, and if you are going to do some fancy artwork on your CD jacket, make sure it focuses on you and not somebody else's clip art.

As long as we're not both trying out for the same gig, I hope you meet with success in 2004. Good luck.

PRODUCT GUIDE

Soundcraft Micro Mixer for Computer Recording

Soundcraft is out with a micro-mixer, the Compact 4. The unit is suitable for applications requiring simple mix facilities, and the company says it shines when recording vocals and music onto a computer using a soundcard.

An input can be routed to the record output by selecting the record button on the channel. The small, four-input mixer accommodates a variety of inputs: microphone, line and a special direct input (DI) for guitars and keyboards, as well as stereo inputs for keyboards, CD/tape or turntable (with RIAA EQ).

A blend control allows users to control the mix of the computer playback and signal of the track being recorded, which are blended for the artist headphone output.

A larger model, the Compact 10, is available. The Compact 10 has four mono and six stereo inputs with additional 1/4-inch line input jack sockets on four of the stereo inputs.

For more information, contact the company in California at (818) 920-3212 or visit www.soundcraft.com.

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Buy into partnership, AM, FM, translator or CP. Areas in RI, CT, MA, FL. Michael Cardillo, 151 Morgan St, Cranston RI 02920. 401-942-8341 after 6PM EST.

Want to buy translators, AM's or FM's in western US. Please contact Dougs@ihradio.org or 530-584-5700 ext 11.

STUDIOS

Want to Sell

ATI Audio Distribution Amplifier 2016-1. We have about 10 of these as a result of studio renovations. They cost over $1,100.00 new but will let these go for $200.00 each plus S&H. Contact Michael Raley at (704) 523-5555 for more information or e-mail Mraley@rrb.org for a picture.

Audio Arts 8400 Distribution Amplifier. We have about 15 of these as a result of studio renovation. They cost over $1,100.00 new but will sell "as is" for $200.00 each plus S&H. Contact Michael Raley at (704) 523-5555 or e-mail Mraley@rrb.org for a picture.

Audio Cord Cart machines. We have about Several "E" series playbacks at $20.00 each, 10 "DL" series playbacks and two "A" series playbacks at $20.00 each. Most of them have been refurbished. We also have one "A" series P/R mono, two "E" series p/r mono, two "DL" series p/r mono and two "DL" series stereo p/r at $100.00 each. Call Michael Raley @ (704) 523-5555 or e-mail Mraley@bbnradio.org for more information. No connectors are available. Will sell "as is". Shipping and handling charges apply. Call Michael Raley @ (704) 523-5555 or Mraley@rrb.org for some pictures.

Enberg BA - 6 Announciator. three of them in great condition with no more than eight years of use in them. Original cost was $359.00 each but we will sell them for $200.00 each "as is" plus s/h. Call Mike R at (704) 523-5555 or e-mail Mraley@rrb.org for more information.

Tascam CD 301 (Have two working units) will sell as is for $225.00 each plus s/h. Email Mraley@rrb.org for a picture or call (704) 523-5555.

Tascam Ministudio Porta One Cassette. Four mic lines for remotes This cost $600.00 new but will sell "as is" for $ 75 .00 plus s/h. Call Mike Raley at (704) 523-5555 or e-mail mraley@rrb.org for a picture.

Ten Nidec motors for Audio-cord "E" series. 117v 6H 3.1w 0.2amp 12p and 600rpms. Will sell "as is" for $5.00 each. Working condition just somewhat noisy. Call Michael Raley (704) 523-5555 or e-mail Mraley@rrb.org.org for pictures.

TFT 713 AM Frequency and Modulation Monitor. Cost $3,400.00 new but will sell for $1500.00 plus S&H. Needs re-calibration. Call Michael Raley at (704) 523-5555 or e-mail Mraley@rrb.org for a picture.

Two B.E. Record Playback cart machines Two Stereo units "as is" for $65.00 each and two mono units "as is" for $50.00 each. Call Michael Raley @ (704) 523-5555 or e-mail Mraley@rrb.org for pictures.

Two Denon DNM 1050R Professional Mini-disc Rec/PB Deck. Both units manufatored in 2001 and were used on our test bench in our downlink room. Has low impedence and headphone jack. We are asking $570.00 for each unit plus shipping and handling. I can e-mail two pictures and the "Main Features" portion of the manual. Please contact Mike Raley or Ron Muffley at (704) 523-5555 for more information or e-mail Mraley@rrb.org for pictures.

Two RTS 416 Distribution Amplifiers. Has slight problem pushing +4. Cost $1,173.00 new but will take $325.00 for each unit plus S&H. Call Michael Raley at (704) 523-5555 or e-mail Mraley@rrb.org for a picture.

Well the minidisc craze came and went and we are stuck with more than a dozen Sony MDS-JE470 units that never got out of the box. Yep! Brand spankin' new, never even opened. We bought these new at $175 each but will let them go for $135.00 which will include shipping if address is in the lower 48 states. These can record and includes a remote which can record as well. Has PC connection in the back as well as a digital optical out. To order call Mike Raley @ (704) 523-5555 or e-mail Mraley@rrb.org for a picture if what one looks like.

Technics SL-D2 record player can let go "as is" for $125.00 plus s/h. E-mail Mraley@rrb.org for a picture or call Mike at (704) 523-5555 for more information.

TAX DEDUCTIBLE EQUIP

A non-profit 501©(3) Christian Ministry, seeks tax deductible donations of working professional grade live/post radio production equipment of studio automation systems, modulation monitors, DAT, CD players, mikes, turntables, mixing boards, and other radio production equipment. Also, need transmitters, translators, transmission lines, and antennas to be used in our Youth Radio Ministry Training Program. All donations will receive a tax deductible receipt and God's blessings for their donations. Minister Dr. R. Hodges, 916-721-3285 or info@lwcr.org.

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McMartin BF-5K, 5kW FM. Factory rebuilt in perfect, like new condition, includes new tubes, tested & tuned on your frequency. Guaranteed, fully adjustable from 0 to 5.5 kW. Goodrich Enterprises Inc, 402-493-1886.

CCA 2500 FM, 2.5KW w/Gentner remote controller, $1200, pick up only. Danny Br4ou, KJMJ, 601 Washington St, Alexandria LA 71301. 318-445-4843.

Classic Collins 20v2 transmitter. Operating when removed from service. Tuned to 790. Buyer arranges shipping or pickup. Phil Mueller, KCYN, 2575 N Radio Hill Rd, #6-1, Blanding UT 84511. 435-259-1035, 435-260-8033 (cell), email: exnews@frontiernet.net.

Collins 830-1D 1 KW FM xmtr. Circa 1974, tuned to 89.1 MHz. Includes 310-Z1 exciter, located 30 miles south of San Jose CA, $3100/BO, FOB San Jose location. Brant Herrett or Terry Green at KUSP radio, 203 8th Ave, Santa Cruz CA 95062. 831-476-2800; email: brant@kusp.org.

QEI FMQ 10000 transmiitter tuned to 100.1 in good working condition and can be retuned on the field. This was installed in March of 1994 but will be replaced by another xmitter sometime at the end of the winter. This xmitter cost $30,000.00 new but will let go for $18,000.00. Call Mike Raley @ (704) 523-5555 or e-mail Mraley@rrb.org.

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TRANSMITTERS WTS (Cont.)

QEI FMQ series 6.0 to 9.6FM. This xmitter did a tour of duty in Argentina but some goofy laws in this country made it impossible to permit the station to operate at this power. To make a long story short it was only in operation no more than four months. Will let this go for $ 18 ,000.00. Call Mike Raley at (704) 523-5555 or E-mail Mraley@rrb.org for pictures.

Tepco Corp J-3250, 250W RF power amplifier, low hrs, like new cond, maintained by factory engineers, mostly used as back-up RF power amplifier, $1250.00/BO.

Tepco Corp J-340-(M), 1 to 40 watt FM translator w/local modulator included for local managing, low hours, like new cond, maintained by factory engineers, mostly used as a back-up translator, $2000/BO.

Want to Buy

AM lower powered transmitters, used, complete & in good working order. Michael Cardillo, 151 Morgan St, Cranston RI 02920. 401-942-8341 after 6PM EST.

Transmitters for Part 15 FCC. FM, in good working order, must be complete. Michael Cardillo, 15ˉ Morgan St, Cranston RI 02920. 401-942-8341 after 6PM EST.

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Sports announcer or radio personality with tons of enthusiasm and loves his work. Willing to start at bottom and work to the top. Michael, 904-733-8163.

Big time rookie out of ABS looking for fresh start in broadcasting. Willing to learn and relocate and blast off in radio. 817-909-6071 or DesmaJR@hotmail.com

Dependable, hard-working radio rookie looking for opportunity to start and grow. Ultimate dream is to deliver news or jock any format. Lynden, 817-329-9608.

Multifaceted rookie would love to work in Texas but will go to Alaska, Hawaii, Canada or anywhere. Give me the change. Preston 817-426-0846 or jospbs@juno.com.

Radio School graduate, 10 years as a vocal artist, interested in on-air and production. Comfortable in front of people, hard worker and dependable. Ready to relocate. Kayka 918-734-5381.

Friendly, Eager to work, ISCET Certified, Commercial FCC License with radar, NABER Certified two way radio technician, amateur radio extra, seeks CE, asst CE, FT, PT, Contract, AM/FNM, Cable, TV. Mitchell Rakoff, mitchellrakoff@yahoo.com; 718-969-5224.

Is Your Radio Station Ready?

Planning, Not Panic: A Checklist to Help Broadcasters Prepare for the Unexpected

This checklist was prepared by a contingency planning coordinator for a major network in support of a new Web site on the issue at www. mediadisasterprep.com, which describes itself as the Internet's only Web site dedicated to helping broadcasters prepare for, mitigate and survive disasters that could threaten their operational viability. While related to the topic, this list is separate from the MSRC list described on page 8.

1) *Know your risks.* That means *all* your risks: natural, manmade, socio-economic/political and criminal/terrorism. Draw on data readily available on the Internet and through local authorities, along with your own experiences and instinct.

2) *Once risks are identified, assess their likelihood and impact on your entire enterprise.* Some risks are greater than others, depending on the time of year and the geographic location of your plant. Remember to consider your on-air *and* back-office operations.

3) *Assess your general preparedness and available assets.* Begin at the beginning with the most likely hazards to befall any commercial enterprise: fire and flood. Are there plans for evacuating the building, notifying key decision-makers at any hour, relocating and resuming your critical operations, maintaining client care and employee welfare and obtaining vital supplies under inhospitable conditions?

Go on to create scenarios for the crises your organization is most likely to endure. For each one, there should be a plan of action for response, recovery and mitigation.

4) *Utility provisions.* Should you lose commercial power, is there a second commercial grid onto which you can be auto-switched? Do you have sufficient electrical generating capacity to sustain life-safety, environmental and broadcast systems at studio and transmitter sites? Is your fuel supply topped off and "polished" regularly? Do you test the system under a heavy draw at least quarterly? How about backup power at any intercity relay sites you may require to complete your STL loop?

If you lose phone service, does every key member of your ops team have a cellular or Nextel phone (preferably both), and spare batteries and chargers to go with them? Does every member of the staff have those reach numbers at hand?

If you rely on landlines to get your signal or any of your production components from point A to point B, do you have microwave backup and/or a second fiber vendor onto which you can hot-switch your traffic?

Do you know who on your staff is an amateur radio operator? Have you installed the necessary gear for said staffer(s) to establish ops, not for commercial broadcast but to gather critical health and welfare information for verification and subsequent dissemination to the public?

If you lose municipal water service, are you on a priority list for bottled water and beverage service? Do you maintain a reasonable inventory of bottled water on-site in the event access to your facilities is impeded? Do you know methods of manually flushing commodes in the event your sites lose water pressure?

5) *Ringdown lists.* Are personnel files updated at least semi-annually to make sure you have current home address, home phone, cellphone, pager and e-mail information for *everyone* on your staff? Are these files kept in an easily transportable format like Microsoft Access, so they can be maintained off-site, on laptops or PDAs and printed out onto Rolodex cards with ease? Are they cross-referenced by department, job function, last and first name and geographical location?

Do you maintain a similar set of files for your key vendors, news contacts, public officials, miscellaneous experts and non-profit disaster relief agencies? How about your client lists and contract files? How and where are they backed up and maintained?

6) *Panic protocols.* Does each member of your staff know how to interpret and implement EAS notifications? Are there all-crisis guidebooks that are well-organized, up-to-date and prominently displayed in all operational areas of your station to help even novices commence emergency response plans in the absence of a manager?

Do those plans include management of sensitive commercial inventory? For example, the removal of all airline spots when reporting a plane crash.

Do you have a speed-dial system — hardware or vendor-based — to reach off-site personnel and bring them into the station? Do you have some sort of on-air code that staffers can use to initiate a designated response when normal communications channels are down?

Are there general background packets on hand to help non-news people speak intelligently and informatively about the types of crises most likely to affect your listening or viewing area?

Have you established and promulgated clear ground rules for program interruption, in terms of circumstances and style, and joined-in-progress programming restorations and programming normalization?

7) *Staff cross-training.* Emergencies can be routine and still be all-hands-on-deck events. Have you trained your back-office staff for on-air and production operations like call screening, board ops, field producing, reporting and emergency announcement processing (cancellations, delays, relocations, etc.)?

8) *Financial planning.* Do you keep a petty cash fund of approximately $100 per employee on-site for emergencies in which cash is the only

accepted currency? Depending on the nature of the crisis, these could be more the rule than the exception.

9) *Human factors.* It would not be unusual for staffers to work extraordinarily long shifts under stressful circumstances in a cataclysmic emergency. Are you prepared to shelter your personnel in-place? Do you have cots or sleeping bags, and a quiet place to deploy them? Are there phones for them to use to keep in touch with their families?

Do you have a stock of energy bars and other nutritious snacks on hand? Have you stocked comfort items like bathroom tissue, paper cups and plates, plastic utensils, microwave oven,

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> **D**o you keep a petty fund of $100 per employee for emergencies in which cash is the only accepted currency? Are you prepared to shelter personnel in-place, with cots or sleeping bags on hand?

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refrigerator/freezer, toaster oven, etc.? Is there access to grief counseling and stress management?

10) *First aid.* Do at least two people in every department and on every shift know community first aid and CPR? How about rescue resources? You'll need more than aspirin and bandages. Do you have materials for immobilizing injured limbs; an automated external defibrillator; instant hot and cold packs; smelling salts; pocket masks for rescue breathing; and a first aid guide approved by the American Red Cross? How about portable oxygen and personal respirators in the event of a biological or nuclear emergency?

11) *Alternate facilities.* Use the same rigorous risk assessment to evaluate sites for an alternate facility. Will you want a fully equipped "hot" site, consisting of reserved space with a bare-bones control platform and STL? Can you bunk with a co-owned sister, a TV station affiliated with the same network as your station, the local newspaper, a sponsor or the local cable head-end?

What facilities will you want or need in place to activate this site on short notice? How will you get the right people there quickly? What are the cutover and cutback procedures? Can you apply existing automation technologies to the process?

With specific regard to transmitter sites, have your community's broadcasters addressed the paradigm shift away from co-locating backup facilities at the main site? Given the widespread public aversion to new tower construction and short-spaced allocations that might preclude a new tower location, have you collectively explored backups on each other's towers to make sure there is always a viable facility available?

12) *Resource pre-positioning/Rights of first refusal.* Have you pre-arranged with vendors of key products and services for priority response to your primary and alternate facilities in the event of a crisis? Can you reach them when normal communications channels are down? Have you supplied them with a list of your needs to assure

availability at a moment's notice?

13) *Target hardening.* Assuming that your station is a likely target of deliberate damage in your community, what steps have you taken to improve access control and tracking; facilities reinforcement; entrance interlocks; impact-resistance glass in window lines accessible to the public; alarms and sensors; fencing; on-site patrols; and recorded TV surveillance?

14) *Geographic diversity and flexible response.* Do you keep your station vehicles and remote assets together in the station lot or garage? Have you thought about allowing at least some of these vehicles to go home with employees for a more rapid emergency response? This ensures you have at least some broadcast assets away from your main facility in the event it is compromised, or access if it is restricted in any way and for any length of time?

Similarly, might it be advantageous to consider more than one alternate facility if there is no one place that minimizes all significant risks to your operations?

15) *Long-term vs. short-term crisis plans.* Not every emergency will be a newsworthy crisis that affects your entire listening area. In fact, the most vexing crises will be local, affecting only you and your facility. How will you address business continuity under these conditions? Do you have a "bridge" plan for short-distance, short-duration relocation that can be free-standing for "physical plant emergencies" or the first part of another, more extensive plan for lengthier relocation farther away from your main facility in a community-wide crisis?

16) *Community service obligations/special needs.* Broadcasters must always stand ready to serve the public interest and convenience and necessity, even under inhospitable conditions. Do you have ready access to the experts and relief resources your community will need to get through your common crisis? Has your risk analysis taken into account broader community needs in terms of information and comfort, such as temporary shelter, food and water, medical care, pets and special populations like the elderly, children and non-English speakers?

17) *Format considerations.* 9/11 proved that while all-news and news-talk listenership soared, many listeners stayed with non-news stations to which they were partial, often just to hear a comforting voice. Is your non-news station ready for the challenge?

Do you have a network affiliation, or a partnership agreement to share content with a spoken-word sister station or competitor, or with a local TV station? Have you re-subscribed to a wire service? What's your plan when the music has to stop?

18) *Non-broadcast distribution.* TV stations which lose over-the-air transmission facilities and have no backup immediately at hand should have ready an all-hours contact list for cable MSOs in their service areas, and contacts at the new direct-to-home satellite providers. Direct fiber and/or microwave paths to these providers should be established to maintain a dial presence for cable and satellite subscribers until over-the-air operations can be restored.

Radio stations should continue to stream via the Internet if those facilities are intact, and should also reach out to cable operators for carriage on local access channels if located in

OPINION

Disaster

markets without an all-news radio station or local TV news operation.

19) Emergency operating provisions. Did you know that FCC rules allow broadcasters to operate at full power and maximized pattern, regardless of license parameters, and at any time of the day or night in the event of an emergency where life and property are at risk? Check with your staff or contract engineer on the rules governing emergency operating procedures.

20) News on the cheap. If news is not a big part of your routine programming, have you thought about recruiting interns from a local college journalism program to use your facility as an off-air lab on the condition that are available for on-air and support duty during an emergency? This is a great way to make sure there is always an extra hand around, even if paid newspeople exist, during the hours when the latter are out gathering news, or simply not on duty.

21) Disaster preparation that pays for itself. The costs of contingency planning almost require the effort to be somewhat self-sustaining. Can you compile disaster resources suitable for public consumption into a booklet you can sell to sponsors as a high-profile, year-round marketing investment? How about creating contingency packages for key clients who can provide critical recovery services and products to your community?

22) Pre-production considerations. The time to prepare imagers, bumpers, graphics and other production elements is *before* disaster strikes. Once your risk analysis is complete, you'll know what ills are likely to befall your community. You can take advantage of the calm before the storm to consider various branding and image strategies and tactics, and work with your voice talent or graphics and promotions people to bring the same level of professionalism to spontaneous programming that you bring to your routine presentation. The polish conveys a feeling of calm competence to a frightened audience.

23) Dupe and distribute. As is the case with backup technology, don't keep your critical data backups on-site or in any high-risk environment and backup vital station records daily — not just servers, but laptops and even PDAs, where possible. Make more than one backup, and keep all but *one* backup off-site, preferably at a number of sites to which key employees will have easy access.

24) Employees on travel. Require daily status checks from all employees on business travel, and see if you can persuade vacationing staffers in critical positions to leave a way for them to be reached, at least through a third party, such as a relative.

Explain that the nature of our business requires all essential personnel to remain "in-pocket," even when they have every right not to be.

25) Drill your plans — early and often. Every disaster plan looks great on paper, but it is not until they are exercised that their flaws are revealed. Drill your plans at least twice a year. Vary the hours, days and scenarios with each exercise. It's a bit disruptive, but so is the real thing.

26) Extraordinary resource planning. The secret of surviving disasters is smartly anticipating anything and *everything* you might need to continue or enhance your operations. For example, if you're in a market where airborne traffic reporting is more the exception than the rule, have you thought about how you'd cover a regional disaster from the air? How will you keep your Web site up and running?

27) Memory joggers. Have you thought about assembling wallet cards containing your critical internal and external contact information? In a crisis, the brain races in a million different directions. Anything you can do to simplify the thought/action process will help.

28) Sharing capital expenses. In the days immediately following 9/11, when mayoral news conferences were taking place in New York City with some frequency, the networks and local stations pooled resources to establish a single multilateral fiber loop from City Hall that fed all the city's broadcast news operations simultaneously from a single video/audio source. The broadcasters rotated camera responsibilities, enabling them to better deploy their already-strained field resources elsewhere while still covering an important, but generic news event.

This kind of system works well at emergency operations centers, sports arenas and airports — where everyone will need to be on an ongoing basis in a disaster. It pays for itself year-round by freeing up resources for a growing number of "one-shots," and works for transmission plants. Why not explore the possibilities elsewhere?

29) Vehicle preps. Make sure your field fleet maintains assigned vehicles in accordance with the manufacturer's maintenance schedule, and more frequently as applications demand. No one should park a station vehicle without checking for adequate tire pressure and making sure it is fully fueled with critical fluid levels topped off. Make sure each car has jumper cables, battery-powered air compressor (which can also help you dry out water-logged electronics), a high-powered spotlight and flares/safety reflectors.

If your vehicles are parked in precarious places during news coverage, you might want to consider installing a conspicuity package of flashing strobes in the head or taillights, on the roof or on the dashboard and rear deck.

30) Owning the reliability image. Your station can talk the talk, but you have to walk the walk to master this aspect of disaster preparedness. It helps to do some news programming and promote it even when things are quiet. Even if you have no news department — and after 9/11, we'd have to politely question that decision — and you have empowered your air staff with some of the aforementioned tricks, you can promote them to your advantage.

It can be as simple as reminding your listeners of what you've done to assure that you'll stay on the air no matter what. No one wants to profit from the misfortunes of others, but you need to let your listeners know you'll be there when the going gets tough.

31) "Go Teams"/"Go Kits." The A.H. Belo stations use a common design for much of the engineering across their station group, so that a Belo technician from one station can feel at home in *any* Belo station. When reporters and crews travel to other markets, they come self-contained, drawing on a "Go Kit" that is reserved for such purposes and contains nearly everything they would need to sustain themselves without much help from a host station. These gear assemblies are even prepared for international customs clearance.

The reporters and crews themselves are rotated monthly on and off a "Go Team," each member carrying a common pager number and tasked to go anywhere news is breaking on an hour's notice. Belo goes so far as to limit the amount of social drinking "Go Team" members can do when they are "on rotation." Go Kits, Jump Bags — whatever the name, the purpose is the same: to have essential supplies at your fingertips when you have to fly out the door.

32) The importance of routine maintenance. When was the last time you had your guy wire clocks checked; tower re-lamping done; inspected your fire extinguishers and any battery-operated life-safety devices; overhauled your mechanical transcription systems, programming and engineering control surfaces, etc? There'll be no time and no available bodies during a crisis. Take advantage of downtime to keep your systems in peak operating condition.

33) It is cheaper to undo than to do. Procrastination is the trap door of disaster planning, and delaying one's planning for contingencies can render the entire process moot. It is almost impossible to plan well in the midst of a disaster. Because they can happen at the most inopportune times, the idea is to have a failsafe plan tested and in place *before* it is needed. If the protocol is commenced, then cancelled shortly thereafter, the costs are usually far less than those incurred winging a plan on the fly in the thick of a disaster.

Remember, most plans created for unthinkable events are easily and quickly adapted to the emergency routine. In any event, it is money well spent. 🌐

World Radio History