NAB SHOW MANAGEMENT PREVIEW

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Brenner Advocates for The User Experience

Emmis Chief Technology Officer Will Receive NAB Radio Engineering Award at Show

BY RANDY J. STINE

INDIANAPOLIS — Paul Brenner isn't your traditional NAB Radio Engineering Achievement Award recipient. With a background steeped in information technology, he's more comfortable with chip design than tweaking transmitters.

NEWS MAKER

Such a combination is less unusual than it once was. But Brenner reflects modern engineering in another way as well. He embraces the future of radio and isn't afraid of change it will bring. In fact, he sees himself as trying to help define the medium's future, and others agree.

Paul Brenner reviews an HD Radio-enabled smartphone app with Samantha Kowal, a member of his design team.

At 43, the senior vice president and chief technology officer at Emmis Communications is admired for what colleagues call his forward thinking and strategic initiatives.

Brenner's job focuses on technology business development, industry partnerships, broadcast engineering strategy and development of fresh broadcasting and Internet content distribution systems.

However, many who know him say this award — bestowed since 1959 to industry leaders — doesn't merely

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FM HDs Push 'Uneven' Digital Radio Power Hike

They Cite Impact on Mobile Reception

BY LESLIE STIMSON

WASHNGTON — Should the FCC allow stations to increase HD Radio power "asymmetrically"?

If it does, as many observers expect, the change would come at what could be an important juncture for U.S. digital radio.

In a separate but related development, iBiquity Digital, Intel, Emmis Communications and BIA/Kelsey, backed by NAB funding, have collaborated on a prototype cellphone with an enabled FM HD Radio chip. It will be demoed at the NAB Show.

But to persuade wireless carriers to build such mobile devices, proponents feel stations need more flexibility to raise digital power — to support advanced data features afforded by digital radio technology, including transmission of visual images synched with audio. Higher power also would allow digital coverage to better match that of analog FM, seen as critical to the effort to encourage HD FM chips in mobile devices.

The commission asked for comments on asymmetric recent field trials as well as the process by which FMs

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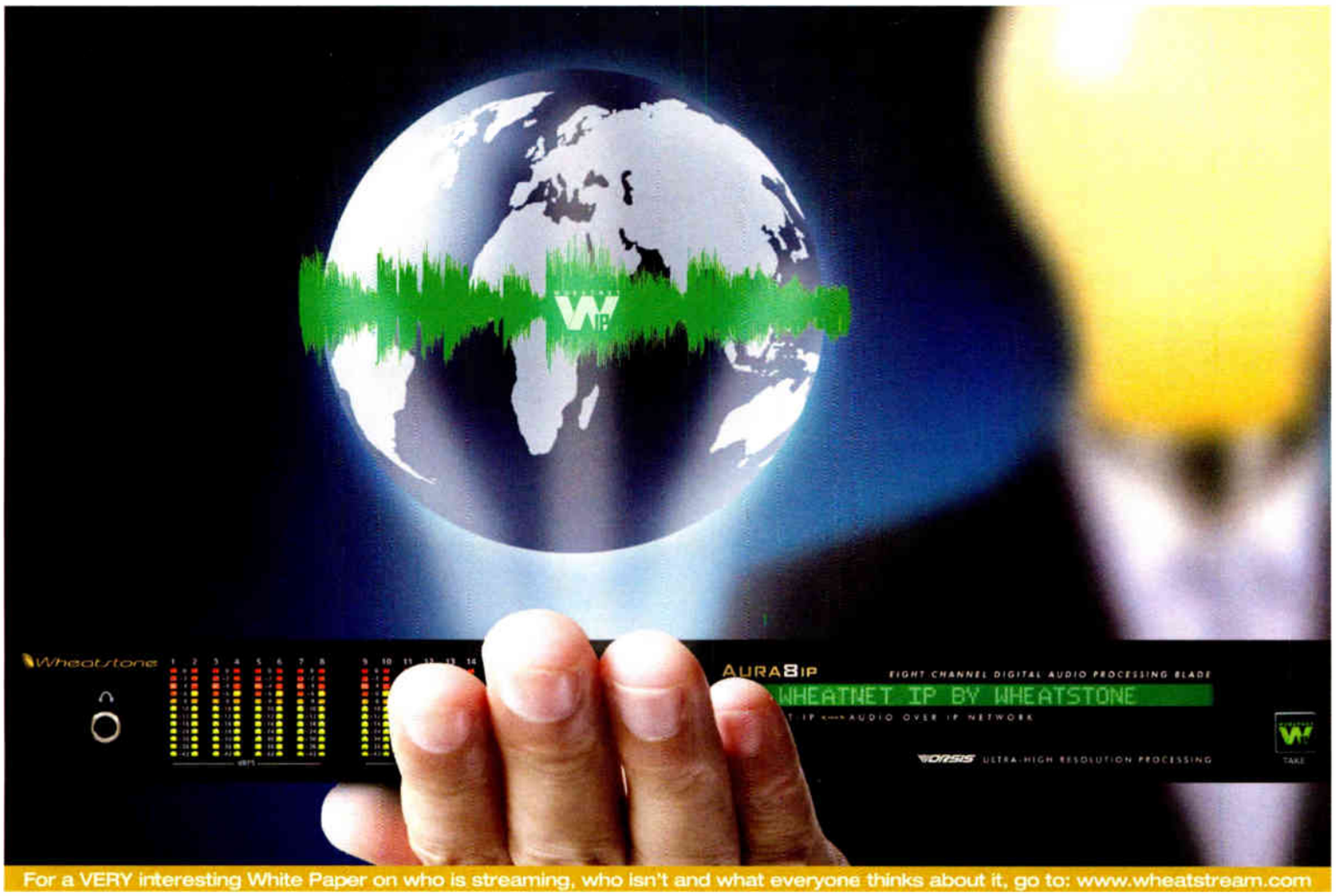

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Selected content from Radio World's "The Leslie Report" by News Editor/Washington Bureau Chief Leslie Stimson.

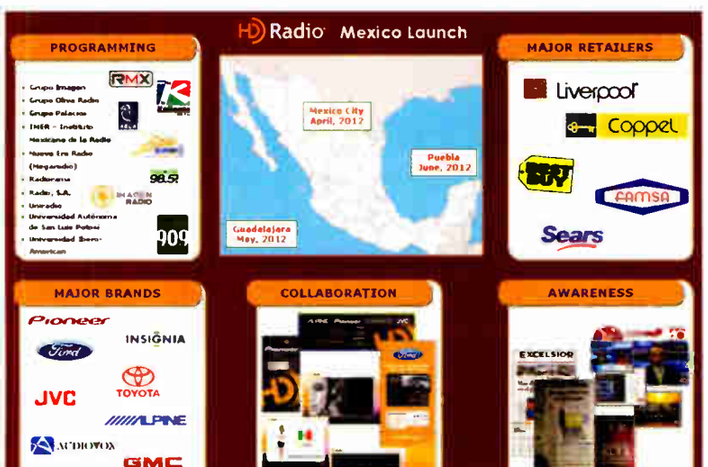
MEXICO CITY SET FOR HD RADIO LAUNCH

It's been nearly a year since the Mexican government approved the use of HD Radio throughout the country. Stations have been conducting on-air testing of the technology for a while and now, preparation for the consumer launch is underway in the capital.

Tech developer iBiquity Digital and the retail, receiver, transmission and automaker companies with which it is working are preparing for an April 16 consumer launch of HD Radio in Mexico City.

That date holds despite a 7.4-magnitude quake that struck southern Mexico in March. Though the epicenter was about 15 miles east of Ometepec, Guerrero, and felt some 200 miles away in Mexico City, damage was minimal, according to various news reports and iBiquity.

Last June the Mexican government approved the voluntary use of HD Radio on both AMs and FMs for the country. Previously, it had been allowed in an area near the U.S. border.



Some 20 million people, around 16 percent of Mexico's population, reside in its capital city, according to iBiquity.

Most of the stations airing a digital signal are FM; Mexico is migrating its AMs onto the FM band.

The six stations airing digital signals in Mexico City are FM, including commercial and non-commercial stations. Around 20 stations total are on the air with an HD Radio signal in the country, iBiquity Director of Business Development for Latin America John Schneider told me. Some have been on with HD since 2008.

"Our idea is to do a coordinated launch market-by-market," said Schneider, though the stations are on-air now with a digital signal. They will begin to promote the technology on April 16. That's also the day stores are committed to having HD Radio receivers — portable, tabletop and aftermarket — for sale at all price points.

Ford, Toyota and Volvo have sold vehicles containing HD Radio receivers in Mexico. Ford told the tech developer the automaker has sold 20,000 vehicles with its Sync system with the MyFord Touch entertainment and communications system, which includes HD Radio. Volkswagen will sell vehicles containing HD Radio receivers in Mexico soon, according to iBiquity.

Sales training is underway at retailers. Three major chains have committed to carrying the product initially, according to Schneider. Best Buy, one of those chains, will carry boombox and portable products initially, while Pioneer will focus on aftermarket car radios. Audiovox will market tabletops and portables.

Broadcasters are buying HD Radio transmission products from Broadcast Electronics, Continental, Harris and Nautel.

IBiquity is working with stations in Puebla and Guadalajara, southeast and northwest of Mexico City respectively, for the next consumer launches.

Both Schneider and other iBiquity folks I've talked to about the Mexico plans expect the rollout to be easier than it has been in the United States because of several factors. The technology is more advanced at launch; HD Radio is on something like its third generation of transmitters; there have been several iterations of the receiver chipset; and CE prices have come down.

As for Mexico specifically, commuters spend even more time on traffic-clogged roads than we do in the United States, making their commutes, and therefore, in-car and in-public-transportation listening time, longer. They also get most of their news on radio (as opposed to television as in the U.S.) And finally, radio is still king of the uncluttered dash in Mexico.

IBiquity is planning an event in its booth during the NAB Show to celebrate the Mexico City launch.

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EAS Community Warns FCC on TTS

Manufacturers, FEMA Urge Commission Not to Forbid 'Text-to-Speech'

When finalizing rules about EAS this winter, the FCC deferred action on one involving text-to-speech software in CAP receivers.

The decision occupied only a paragraph within a 130-page document, yet it prompted a strong, unusually unified response from the manufacturing community, FEMA and others who say the commission is making a dangerous mistake.

The full order stipulates how stations and other participants receive alert messages formatted in the Common Alerting Protocol. (Among other outcomes, the FCC dropped a proposed requirement that stations must accommodate messages from state governors, the so-called "governor's must carry" provision.) Stations need to meet various CAP requirements by June 30, as we have reported.

But the FCC deferred action on text-to-speech for a future proceeding, and blocked use of such software in the meantime.

In doing so it went against advice from the EAS-CAP Industry Group, whose recommendations have played a key role in FCC EAS implementation. The group had said that in the absence of attached audio files, EAS devices that handle text-to-speech should be allowed to create the audio portion of alerts by constructing audio from the CAP messages.

The FCC demurred, saying that performing text-to-speech conversion in EAS equipment software, as opposed to software an alert message originator might employ, "could result in differing audio messages being broadcast for the same EAS message, depending upon which software brand and version a given equipment manufacturer elected to incorporate into its EAS equipment." It cited concerns about the accuracy and reliability of the technology.

NO BACKUP

Numerous suppliers of EAS gear and services have asked the FCC to reconsider. They include Sage Alerting Systems, iBiquity Digital, TFT, Monroe Electronics/Digital Alert Systems, Alerting Solutions Inc., MyStateUSA, Communications Laboratories Inc. (Comlabs) and Warning Systems Inc.

These are members of the ECIG and are involved in EAS in varied ways; some are fierce competitors. But they told the FCC that their feelings "represent a consensus."

They warned of "very significant and potentially adverse implications" that would result by a ban on text-to-speech. The impact on EAS participants and originators, they wrote, may be "profound," removing important backup capability where an audio file from an originator might be missing or damaged. Broadcast radio listeners might hear only header tones, Attention Signal3 and EOM tones.

"Listeners may know that there is an emergency situation ... but they will have no information about the nature of the emergency," they wrote. "The potential for widespread confusion and/or disregard for the EAS could be the result." Visual media could have audio components impaired.

Further, CAP EAS originators including FEMA may be affected, because the IPAWS system uses text-to-speech translation at the CAP receiver. The National Weather Service CAP feed also relies on text to speech. "Apparently NWS may not necessarily and consistently create audio files for download construction of EAS protocol messages by these devices."

And the FCC decision could hurt state aggregator and distribution systems in place or underway. Dissemination systems might need changes that would cost agencies money that isn't available. There could also be unforeseen consequences for people with disabilities.

> **The potential** for widespread confusion and/or disregard for the EAS could be the result.
>
> – EAS-CAP Industry Group

UNINTENDED CONSEQUENCES

Almost simultaneously with their comments, FEMA itself petitioned the FCC to reconsider.

The agency — which administers EAS, developed the Integrated Public Alert and Warning System profile and operates a CAP message aggregator — warned of unintended consequences that could "severely limit" what local emergency management officials can do with CAP.

Antwane Johnson, division director of IPAWS, wrote that the FCC apparently had relied on comments from Sage in support of a marketplace approach to text-to-speech conversion; but he said the FCC action actually precludes marketplace activity and discourages further development of the technology for EAS.

Also, contrary to what the FCC said, he could find no evidence of concerns about the accuracy and reliability of text-to-speech software. And if this prohibition stands, Washington state and at least two other states would have to "stop using this active, tested method of alerting the public." He listed other complications and scenarios too. (I've posted links to his succinct comments and those from ECIG at *http://radioworld.com/Apr-11-2012*.)

In short, FEMA said, the FCC should stick with the original ECIG recommendations. Alert originators then could provide audio message files if they desire.

'SEVERE' IMPACT

In late March, RW reported on our website that an FCC advisory committee had added its voice. The Communications, Security, Reliability and Interoperability Council recommended that the FCC reverse the ban.

Alerting company Global Security Systems also did so, saying the decision would have "severe impact" on the usefulness of alerts. It repeated arguments that the exemption would force stations, originators and the interconnecting IP relay networks to seek more bandwidth, which may not be possible and could "deter the success of the entire process."

Several state and local emergency management agencies have filed comments supporting FEMA and ECIG, and I'm told that Nebraska state emergency planners think they will have to put its state CAP project on hold until a solution is found.

One source told me: "Over half of the states already have a CAP system deployed or under contract, and there is

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FROM THE EDITOR

Paul McLane

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ASYMMETRICAL

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would notify the commission they have increased power unevenly. Seven comments were filed, from 11 broadcast entities, four equipment manufacturers, iBiquity Digital and NAB. Six reply comments had ensued by the end of January. All were favorable but one.

Excerpts:

SUPPORT ASYMMETRICAL SIDEBAND POWER

Several executives contributed to a filing by the National Association of Broadcasters. Executive Vice President of Legal and Regulatory Affairs Jane Mago headed the list:

NAB supports the request by iBiquity Digital Corp. and National Public Radio for authority for FM stations to operate with asymmetric digital power. Permitting such operations will enable many digital FM stations to increase power in a single digital sideband and thus improve their digital radio service without causing interference to adjacent stations. ...

In many areas today, increasing digital power by 10 dB (or less) would potentially cause interference to a first-adjacent signal on only one side of the subject station's signal (operating on either the upper or lower first-adjacent channel), so the full potential digital power increase on the opposite (non-limiting) side cannot be achieved. This unnecessary digital power limitation is especially harmful to listeners of multicast (*i.e.*, HD2, HD3, etc.) channels, where, in digital drop-off areas, the multicast channel completely drops out (mutes), rather than blending to the analog signal as the digital signal does for the main channel.

Now, iBiquity and NPR have demonstrated in their studies that digital coverage can be improved with asymmetric sideband operation, increasing power up to the already authorized 10 dB level in one digital sideband, where interference is not a concern, while protecting reception of a vulnerable first-adjacent station that may be potentially impacted by increasing the power in the other digital sideband.

These reports demonstrate that asymmetric sideband operation can enable incremental but significant improvements in digital radio coverage, particularly by filling in drop-out areas that can disrupt service to listeners in mobile (automobile) environments. Increasing the power in a single digital sideband also should improve reception inside buildings and enhance the performance of portable radios and other handheld devices.

Increase in total digital power for various configurations compared to legacy configuration (-20 dBc, symmetric sidebands)

Description	LSB Power (dBc)	USB Power (dBc)	Asymmetry (dB)	Increased Total Digital Power Above Legacy (dB)
LSB equivalent to -20 dBc, USB equivalent to -14 dBc	-23	-17	6	3.96
-14 dBc symmetric sideband case	-17	-17	0	6.00
LSB equivalent to -20 dBc, USB equivalent to -10 dBc	-23	-13	10	7.40
LSB equivalent to -14 dBc, USB equivalent to -10 dBc	-17	-13	4	8.45
-10 dBc symmetric sideband case	-13	-13	0	10.00

An iBiquity chart summarizes the increase in total digital power for various sideband configurations compared to the legacy configuration of –20 dBc with symmetric sidebands. Ideally, the improvement in digital SNR should track this increase so that, for example, in the case where lower sideband (LSB) power is set to –23 dBc, upper sideband power (USB) is set to –17 dBc and total increased digital power is 3.96 dB, the expected improvement in digital SNR would also be 3.96 dB.

IT HELPS AVOID INTERFERENCE

Crawford Broadcasting Director of Engineering W.C. "Cris" Alexander (who is also an RW contributor), wrote:

For a number of years, Crawford Broadcasting Co. affiliate stations have operated employing HD Radio technology on both AM and FM. During this time, we have dealt with different degrees of interference, particularly in short-spaced or "rim-shot" situations that could have been helped by the application of asymmetrical sideband operation.

At KBRT(AM) in Avalon, Calif., a

(continued on page 6)

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ASYMMETRICAL

(continued from page 6)

Engineering E. Glynn Walden; Lincoln Financial Media Co. VP Engineering Barry Thomas; Clear Channel Communications EVP Engineering & Systems Integration Jeff Littlejohn; Nautel Ltd. Head of Engineering Tim Hardy; Continental Electronics Corp. President Dan Dickey; Radio One Acting VP Corporate Engineering John Soller; Greater Media VP Radio Engineering Milford Smith; and Warmus and Associates VP Roy Stype, also representing Carl E. Smith Consulting Engineers.

Mr. Hardis' claims are based on an incorrect reading of PM emissions mask requirements, as set forth in Section 73.317 of the commission's rules. Specifically, the engineering statement demonstrates that Mr. Hardis has incorrectly attempted to reinterpret the FM emissions mask rule as applying to a set of aggregated, multiple emissions within a particular bandwidth.

However, rather than measuring the aggregated channels removed from the relevant carrier by between 120 kHz and 240 kHz, the FM emissions mask is properly applied to "any emission" in that frequency. As a result, contrary to Mr. Hardis' assertion, the joint parties were correct to state that HD Radio operation at the –10 dB power level comply with the commission's FM emissions mask. The accuracy of the interpretation advanced by the joint parties is reflected by the historical practice of the FCC and the broadcast engineering community. ...

The filings made in this proceeding by Jonathan E. Hardis reimagine Section 73.317 by using Total Power Spectral Density (PSD) as the basis of his arguments. Under his interpretation of this rule, Hardis contends that the IBOC power is 5 dB higher than the –25 dBc mask. However, the traditional understanding and practice of the FCC and broadcast engineering community has been to treat each spurious emission as a separate entity with each IBOC carrier, as defined by the iBiquity specification, to be at –45.8 dBc or 20.8 dB below the mask.

THE QUESTION HAS INDUSTRY CONSENSUS

IBiquity Digital Corp. wrote:

The comments demonstrate a broad industry consensus that the use of asymmetric sidebands will allow broadcasters to enhance their digital service and that the FCC should authorize this mode of operation. The National Association of Broadcasters, National Public Radio, Nautel Maine Inc., Crawford Broadcasting Co. and a coalition of companies operating more than 315 commercial radio stations and equipment manufacturers all offered unqualified support for the asymmetric sideband proposal. ...

The Hardis comments reflect Mr. Hardis' longstanding opposition to all aspects of IBOC technology rather than any valid criticism of the asymmetric sideband proposal. The comments of a single individual relying on a misreading of the commission's rules and the information in this docket should not stand in the way of advancing a sound technical proposal with unanimous industry support.

First, the Hardis comments assert that iBiquity's power measurement methodology misstates digital power and that IBOC transmissions at power levels above –20 dBc violate Section 73.317 of the commission's rules. Second, the Hardis comments take issue with current industry practice, which does not include extended hybrid carriers when calculating digital power. In both cases, the IBOC operations in use throughout the radio industry comply with the commission's rules and good technical practices that broadcasters have endorsed through open industry standards setting activity. Mr. Hardis' concerns should be dismissed.

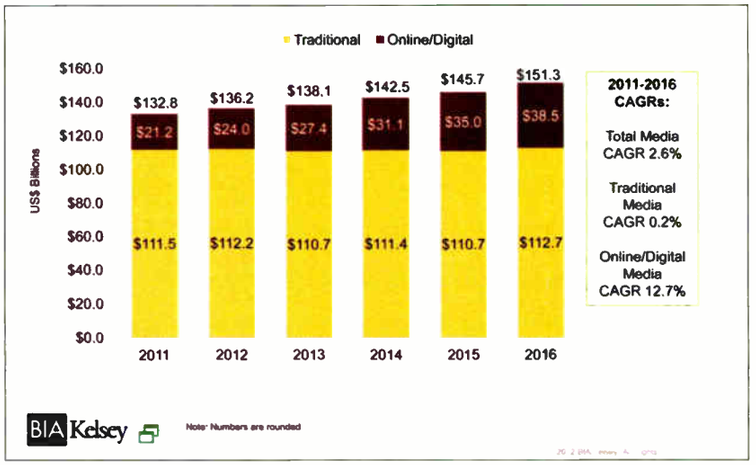
The comments demonstrate a broad industry consensus ... The Hardis comments reflect Mr. Hardis' longstanding opposition to all aspects of IBOC technology rather than any valid criticism of the asymmetric sideband proposal.

– iBiquity Digital Corp.

NEWSROUNDUP

EAS: The revised EAS rules take effect on April 23. The regs codify the obligation to process emergency messages in the Common Alerting Protocol and eliminate outdated alerting rules. Broadcasters must have operational CAP-compliant encoders/decoders at their stations by June 30. Federal Register in March publication triggered the effective date.

DIGITAL AD GROWTH: BIA/Kelsey predicts more growth in the digital segment of local media advertising through 2016. In its new U.S. Local Media Forecast, the company forecasts that local online/interactive/digital advertising revenues will climb from $21.2 billion in 2011 to $38.5 billion by 2016. This includes



mobile. The growth in the digital segment will offset slower-than-anticipated growth in total local media advertising revenues,. BIA/Kelsey forecasts total local media ad revenues to grow from $132.8 billion in 2011 to $151.3 billion in 2016.

LPFM vs. TRANSLATORS: The FCC made some decisions regarding the thousands of pending FM translator applications so it can open a licensing window to create more new low-power FMs later this year. The commission says it's going to need to dismiss large numbers of the some 6,500 pending translator applications in the top 150 markets to ensure there's enough room to license both LPFMs and translators. The agency adopted a market-specific FM translator processing approach. It compromised with a cap of 50 translator applications allowed for a company nationally (up from 10) and instituted a cap of one application per applicant per market for the most "spectrum-limited" markets. Also, more AMs that want to operate on FM translators will be able to do so. On the effective date, the agency is removing the May 1, 2009 date restriction from pending FM translator applications that are eventually approved so they can re-broadcast the signals of AMs. The agency eliminated third-adjacent channel protections for full-service FMs in order to fit more LPFMs on the dial.

REACTION: Prometheus Radio Project Policy Director Brandy Doyle said the FCC actions on LPFMs (above) will allow the first new urban community radio stations in decades. The agency "has opened the door for communities to use their own local airwaves, and that will be transformative." Community groups are preparing to apply for new LPFMs, according to Prometheus. Common Frequency hailed the decision, saying it will change the media landscape. It's unclear how many more LPFMs will complete the application and licensing process successfully.

STILL TO COME: Some decisions in the LPFM/translator issue were deferred, including interference adjudication and the possibility of allowing higher-power LPFMs. The FCC is asking for comment on how to implement provisions of the Local Radio Community Act, such as whether and under what conditions it should allow waivers of second-adjacent channel spacing requirements for full-service stations to allow more LPFMs in a market. Complaint procedures for cases of third-adjacent channel interference to full-service FMs and interference to FM translator inputs are of interest to the agency, as are whether LP10s or LP250s should be licensed. Comments to MM Docket 99-25 are due 30 days after Federal Register publication.

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World Radio History

BRENNER

(continued from page 1)

recognize Brenner's 9-to-5 accomplishments. It reflects the contributions that Brenner has made toward radio throughout a varied career.

These include working on initiatives to encourage the inclusion of HD Radio as standard in smartphones; helping Garmin launch an HD Radio-based traffic system last October; and serving on the HD Radio Technical Standards Task Force. In that capacity he has worked with CBS Radio Senior Vice President of Engineering Glynn Walden to identify what broadcasters need to deliver a consistent digital radio and data services experience.

WHAT PEERS SAY:

Paul is one of a few real forward-thinkers in this industry and an excellent example of a balanced, sophisticated media technology leader. I'm proud to be able to work with him.

Barry Thomas, CPBE CBNT
Vice President of Engineering
Lincoln Financial Media

Paul's background in IT combined with broadcast engineering expertise has enabled Paul to work effectively with automakers, software companies and portable device makers. His success with these companies lead to the formation a data distribution business, the Broadcaster Traffic Consortium, a partnership of more than 16 radio companies using FM RDS and HD Radio technology.

John Marino
Vice President, Technology
National Association of Broadcasters

Emmis technology managers in 2002. Kneeling, from left: Sam Caputa, Jeff Dinsmore, Jim Henkel, Ryan Blastick, Curtis Taylor. Standing: Joe Addalia, Paul Brenner, Brian Rozelle, Dennis Martin, Patrick Berger, Jim McGivern and Steve Pepe.

Prior to joining Emmis in 1998, Brenner spent seven years in IT consulting, including a stint at DataShare Corp. He started an IT systems consulting company in the early 1990s called MIS Business Solutions, an Elektek-funded venture. The first IT product he developed was a tool for converting analog modem-based e-mails into Internet-compatible formats, used by a Fox affiliate in 1993.

"I really benefited from that time in IT," Brenner says. "I've designed IT systems and designed software, infrastructures and business models around IT.

"To me, the broadcast piece is just the distribution mechanism."

NON-TRAOITIONAL CAREER PATH

Brenner runs every aspect of technology at Emmis. He oversees IT, the Web and all engineering services for the group's two AM and 18 FM radio stations, including oversight of station chief engineers. In all, about 40 people report to Brenner. In turn he reports to Emmis COO/CFO Patrick Walsh.

Brenner emphasizes that radio needs to offer a consistent consumer experience.

The non-traditional broadcast engineering career path for Brenner — not steeped in hands-on electronics — has created an inclusive management style for his department. He holds a bachelor's degree in e-business and a master's in information systems from University of Phoenix, as well as an sssociate's in electronic engineering technology from Ivy Tech State College in Indiana.

"I understand transmitters and antennas, but I am by no means an expert. I'm better at computer design." He credits his "very bright RF engineers" with taking on "the responsibility of maintaining the RF environment." It's a team he says he respects and trusts.

The engineers, of course, "are just one component of a broad team; and that is really what this industry has become," Brenner says. Emmis has employees who write software, create infrastructure design and conduct business analysis.

The radio industry at large has some "big decisions to make," Brenner says.

"To remain relevant, we have to extend the technical side and increase utilization, make it digital; and the industry has to come together, and we all have to do it the same way."

Radio needs to offer a consistent consumer experience, according to the award-winner. Over the past few years, Emmis has focused capital expenditures on HD Radio improvements and customer relationship management, CRM, for radio.

Radio is "just realizing how much there is we can do with our spectrum," Brenner says. "There is a lot of value and in order to stay competitive, it has to be digitally-encoded spectrum, offering all of the advance capabilities digital radio can offer." Multiple channels on the same carrier, as well as data services and a more consistent user experience doesn't require custom software development by third parties, Brenner said.

Brenner is diversified in his media commitments. In addition to his work for Emmis, he founded and serves as president of the Broadcaster Traffic Consortium, a coalition of 16 radio broadcasters launched in 2008 to distribute local traffic, weather and other map-related data via RDS and HD Radio technology. BTC has established a nationwide network of aggregated analog and digital signals as a data delivery platform.

Garmin introduced the nüvi 3490LMT

(continued on page 12)

HONOR ROLL

Past winners of the NAB Engineering Achievement Award are listed. Beginning in 1991, radio and TV winners were named; radio winners are shown.

1959	John T. Wilner
1960	T.A.M. Craven
1961	Raymond F. Guy
1962	Ralph N. Harmon
1963	Dr. George R. Town
1964	John H. DeWitt Jr
1965	Edward W. Allen Jr.
1966	Carl J. Meyers
1967	Robert M. Morris
1968	Howard A. Chinn
1969	Jarrett L. Hathaway
1970	Philip Whitney
1971	Benjamin Wolfe
1972	John M. Sherman
1973	A. James Ebel
1974	Joseph B. Epperson
1975	John D. Silva
1976	Dr. Frank G. Kear
1977	Daniel H. Smith
1978	John A. Moseley
1979	Robert W. Flanders
1980	James D. Parker
1981	Wallace E. Johnson
1982	Julius Barnathan
1983	Joseph Flaherty
1984	Otis S. Freeman
1985	Carl E. Smith
1986	Dr. George Brown
1987	Renville H. McMann
1988	Jules Cohen
1989	William Connolly
1990	Hilmer Swanson
1991	George Marti
1992	Edward Edison & Robert L. Hammett
1993	Robert M. Silliman
1994	Charles T. Morgan
1995	Robert Orban
1996	Ogden Prestholdt
1997	George Jacobs
1998	John Battison
1999	Geoffrey Mendenhall
2000	Michael Dorrough
2001	Arno Meyer
2002	Paul Schafer
2003	John W. Reiser
2004	E. Glynn Walden
2005	Milford Smith
2006	Benjamin Dawson & Ronald Rackley
2007	Louis A. King
2008	Thomas B. Silliman
2009	Jack Sellmeyer
2010	Steve Church
2011	L. Robert du Treil

World Radio History

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World Radio History

BRENNER

(continued from page 10)

personal navigation device last fall; it was the first Garmin PND to include HD Digital Traffic. The company also introduced the 2400 and 2500 series, which are HD Radio-enabled, according to Brenner. All the devices use Navteq real-time traffic, distributed using the signals of BTC HD Radio stations.

The service updates every 30 seconds, according to Garmin. More models and capability are planned, Brenner says.

'SILICON VALLEY MOMENT'

Meanwhile, Emmis, Intel and iBiquity — along with BIA/Kelsey — have collaborated on a smartphone with an integrated FM HD Radio chip. The trio will demo a device in Las Vegas at the 2012 NAB Show. The partnership was born during a "Silicon Valley moment," he says.

"More than two years ago I sat in a Palo Alto office among a group of chip design leaders, white-boarding and brainstorming the overall system of delivering content via HD Radio to smartphones." The result was a pitch to NAB that garnered the support of radio industry leaders.

NAB FASTROAD originally funded the project; FASTROAD is now managed by the new NAB Labs. NAB helped "to fund the design a complete ecosystem of an HD radio built into a smartphone with an app and a backend ecosystem that feeds synchronized data to the user. It will be a game changer," Brenner says.

The move could open the door to FM capability in cell phones if wireless carriers buy in. The industry groups with which Brenner is involved are talking with wireless carriers, whom he says can't wait to see the demos.

As the radio industry tries to navigate its future, Brenner wants to continue to advocate for a digital conversion for all of radio within the next 10 years. He's worked with car manufacturers on ways to keep radio relevant in the dashboard.

Brenner lives in Indianapolis and is engaged to be married. He says that while he's honored by the award, he doesn't view receiving it as an individual thing.

"It's really a reflection of all the people working around me. It tells us we are working on the right things. I appreciate the recognition, but I'm also so happy for all of the people working so hard on some really important radio developments."

NEWSROUNDUP

NAB: Gordon Smith has inked a five-year deal to remain president and chief executive officer of the NAB; the agreement with the board keeps the 59-year-old at the N Street headquarters through 2016. The former Republican U.S. senator from Oregon joined NAB in November 2009; he succeeded former National Beer Wholesalers executive David Rehr, who resigned as president and CEO of NAB just after the spring show that year. Rehr joined NAB in 2005; he succeeded Eddie Fritts, who was at the helm of NAB for more than two decades.

APRE: The Association of Public Radio Engineers has chosen Mike Starling, executive director of the Technology Research Center and NPR Labs, as the recipient of the 2012 "Meritorious Service Award." Starling is one of the APRE founders.

APRE cited Starling's work as leader of NPR Labs' "Tomorrow Radio" HD multicasting team. "Mike is and always has been passionate about radio, a firm and steady advocate for the technology, for the medium and for stations," APRE members state in the nomination. The award will be presented at the annual APRE Engineering Awards Dinner on Friday April 13 in Las Vegas.

TOKO: Electronics parts manufacturer TOKO is expanding its HD Radio test and certification facility based in the Tokyo area. HD Radio product development has increased over the past 12 months by Japan-based companies such as Alpine, Aisin, Clarion, Fujistu-Ten, Denon, Marantz, Mitsubishi Electric, Onkyo, Panasonic, Pioneer, Sanyo, Sony, and Yamaha, among others, according to TOKO and iBiquity Digital. Product categories are across the OEM, auto aftermarket and consumer electronics. TOKO and iBiquity point to product development increases driving growth of HD Radio Technology in North America — not just in the United States — but also in Mexico.

World Radio History

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World Radio History

Wheatstone: A Streaming Plan Matters

More radio stations need to find a way to coexist profitably with the Internet; yet the clock is ticking.

That's one big takeaway of a white paper from manufacturer Wheatstone Corp. Its topic: the viability of streaming Internet radio, and the impact of sound quality on monetizing those streams.

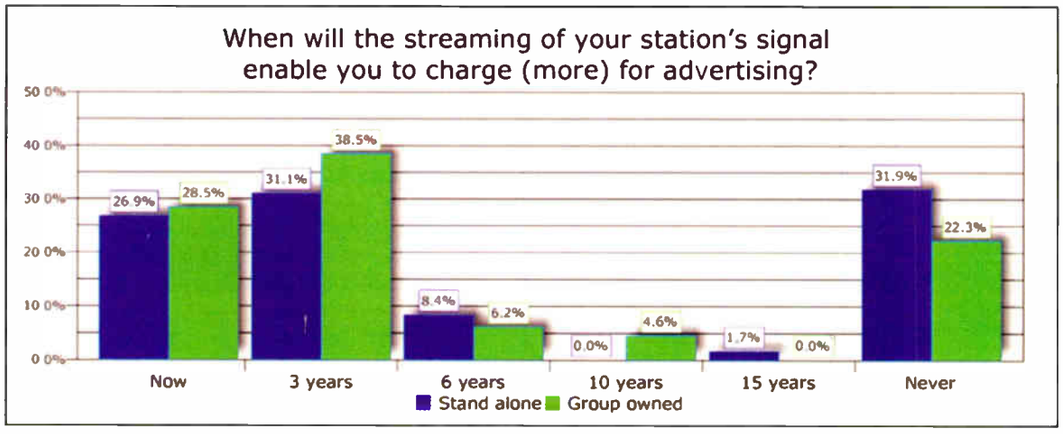
Summarizing, Wheatstone said the findings argue in favor of "proper audio processing, a solid IP network and, of course, a sound business/game plan" in setting up a strategy.

Like other observers, author Josh Gordon notes that Internet radio soon will be a part of every new car's dashboard, and that younger listeners with a more digital orientation will become more prominent consumers. He then sifted through his own recent research and interviews with industry observers to explore what role streaming should have for stations in this landscape.

Among people quoted are consultant Bill Tanner, Cumulus engineering exec Gary Kline, consultant mark Ramsey, station owner and engineer Larry Langford and engineer Joshua Pierce.

Soon, radio will face competition from Internet radio stations for valuable drive time hours, the paper states; yet while a number of stations stream signals, many do so with "little enthusiasm and minimal attention to sound quality."

Gordon described a past survey in which radio station personnel were asked how soon streaming would enable them to charge more for advertising. About a quarter said they could do it now and about a third thought they could do it within three years. But another third said they thought streaming would "never" enable a station to make more money on advertising sales.



"'Never' is a long time," Gordon wrote. Referring to the accompanying chart shown here, he said, "this is a big divide."

Talking to stations about the audio quality of streams, he continued, "I found a stark contrast between organizations that had a business rationale for streaming and those that did not. At stations where streaming could be described as a money maker, investment in sound quality was high because, in many cases, sound quality is actually more important to the business success of an online stream than it is for an over-the-air signal."

The paper concludes that while profits from streaming are starting low for many, some stations and services are making money.

"The key is to use streaming to target and service an audience better. Whenever an audience is targeted, audio quality must be maintained at competitive levels to ensure that listeners don't slip away to other media competitors."

A link to a PDF of the report, "The Case for Audio Quality and Audio Processing in Streaming Radio," is posted on the links page for this issue, *http://radioworld.com/Apr-11-2012*.

World Radio History

World Radio History

DXers Ride Marconi's Wavelength

BY SAUL CHERNOS

Imagine the awe and personal satisfaction Guglielmo Marconi must have felt on Dec. 12, 1901 when he announced the first transatlantic wireless reception.

Marconi and his team used a kite to raise a 500-foot antenna atop Signal Hill in St. John's, Newfoundland, and waited for pre-arranged Morse code signals from Poldhu, Cornwall, more than 2,000 miles away. The signals he reported were extremely faint, occurred during daylight and lacked independent authentication. However, he soon achieved comparable distances under more optimal circumstances from a ship in the mid-Atlantic and, later, from Nova Scotia.

Saul Chernos is shown with a Tecsun receiver at the Signal Hill National Historic Site, reception point of the first transatlantic wireless signal.

Radio proceeded to capture imaginations the world over. Even as it works to define itself in today's digital age, some dedicated listeners continue to get the same charge Marconi did.

DILIGENT LISTENERS

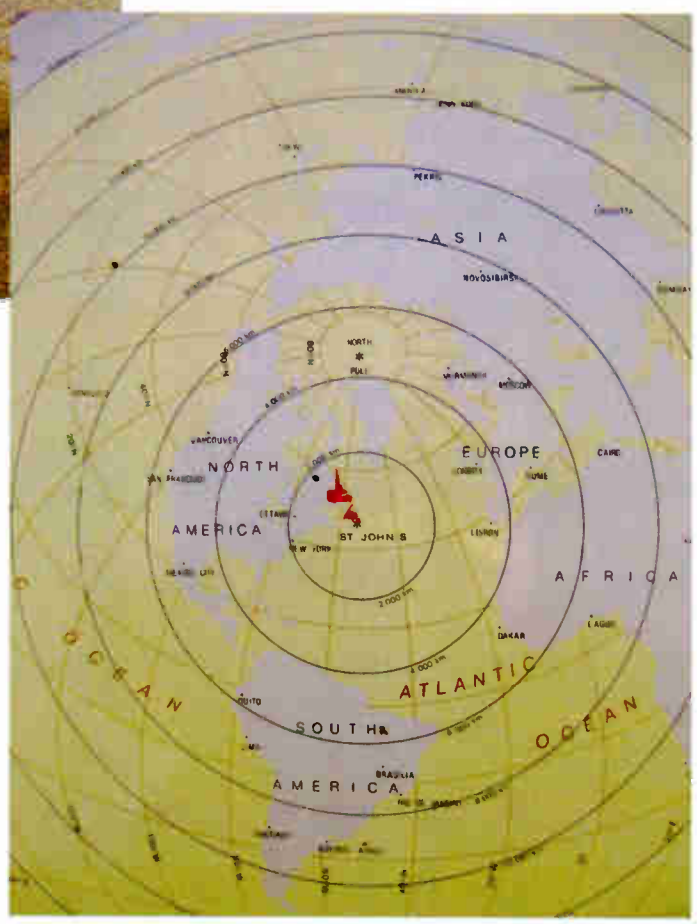
Each fall for the past 20 years, a group of us has met near the southeastern tip of the Avalon peninsula, a two-hour drive from Signal Hill, to set out lengthy arrays of wire and hunker down with the latest high-tech receivers.

Scattered around the world, sometimes in big cities where noise and interference are rampant, some of us go to considerable lengths for quiet, remote listening.

In 2007, the late John Bryant travelled to Easter Island in the South Pacific. Using portable receivers and 500-foot longwires, Bryant circumnavigated the globe, hearing Radio Farda in the United Arab Emirates in the evening over an eastern path, followed by a reception to the west of the BBC broadcasting from Oman just before dawn.

Newfoundland's Avalon Peninsula, while less isolated than Easter Island, is ideal for our purposes. With modern-day conveniences such as bed-and-breakfasts and a hardware store, it's closer to Belfast and Algiers than to Kansas City and Los Angeles, and the immediate proximity to saltwater helps tease out the distant signals.

This map is part of a display on the outdoor grounds at Signal Hill, titled 'The Newfoundland-Centered World.'



THINKING IN UTC

The weather is dry and cool as I drive south from St. John's, with Chuck Hutton, an electronics engineer from Seattle, and Jim Renfrew, a Presbyterian minister from Rochester, N.Y.

Brightly colored wooden houses and busy windmills dot the jagged coastline, and we pass roadside restaurants advertising moose burgers and cod tongues. But sunset is a couple hours away and there's work to do before any of us can spin the dials. We're feeling rushed as we reminisce about DXpeditions past and present, invoking Marconi's ghost and those of contemporaries such as Reginald Fessenden and Nikola Tesla.

Our banter ends abruptly when we greet our hosts, Ollie and Ken Perry, and proceed to install ground rods, insulated 18-gauge copper wire and assorted clamps, resistors and other longwire antenna components. It's quite a trek through the swampy, dense brush, and tough keeping the wire straight to maximize its directionality.

Nightfall sets in around 4:30 p.m. local time, but we're thinking in Universal Coordinated Time by the time we plug in our radios. I'm the most low-tech in our group, with a second-hand AOR 7030 Plus receiver and a handheld Tecsun PL-380 that Gary DeBock, another Washington state DXer, modified with a tiny external loop consisting of wires wound tightly around a ferrite stick.

Chuck and Jim, on the other hand, exemplify a quickly growing trend in the hobby, using Perseus receivers that capture audio and spectrum analysis from the entire AM band and feed this to their laptop computers. When they're not actively listening, they've programmed their Perseus software to record at optimum times such as the top of the hour, when stations tend to identify, for review later on.

Still, the excitement is in the here-and-now, and it isn't long before we land our first interesting catch.

GOLOS ROSSII

Working down the dial, Jim stops on 1395 kHz when he hears a man reading international news in English and suspects Radio Seagull, which has been testing a new trans-

(continued on page 22)

World Radio History

SATELLITE SIGNAL LEVEL METER AND SAT IDENTIFIER

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expensive indoor equipment from lightning hits. Transient Suppressing Diode technology works to block high voltage surges. The lightning protection units can take multiple strikes, with no need for resetting or replacing.

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heater will completely stop signal outages caused by snow and ice. This reliable dish back-side electric heater keeps snow & ice from forming on the dish, by heating the reflector when snow and ice conditions are present. Purchase the HEATsat to upgrade existing satellite antennas, and ask for it to be included with your new dish purchases.

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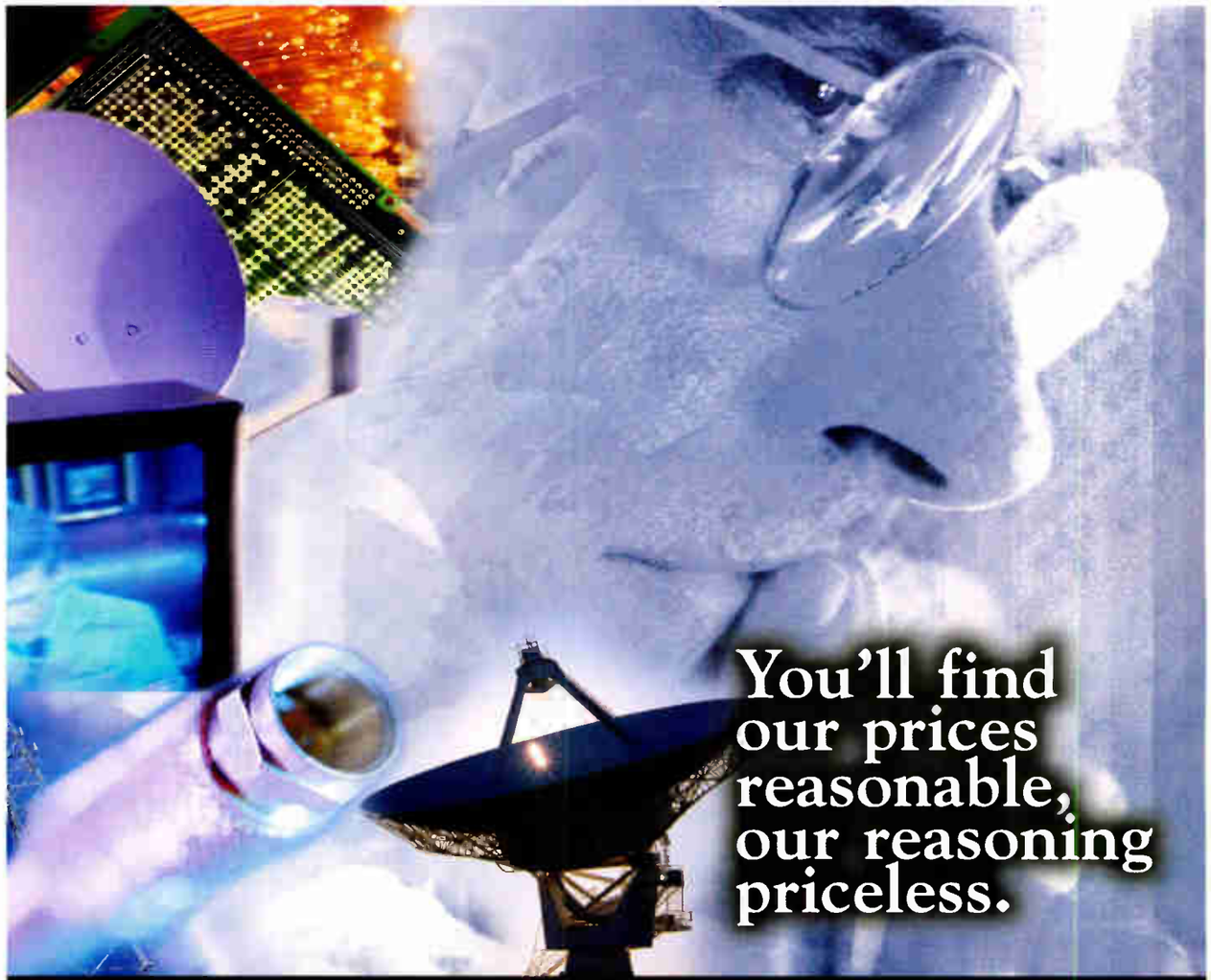

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World Radio History

Manage Your Site With Google Sites

Free Online Resources Help You Track Wires and Log Audio

Reginald Swedberg works at KJNP (AM/FM), a missionary radio operation near Fairbanks, Alaska. There is no paid staff; all personnel are volunteers who raise financial support like the other missionaries.

WORKBENCH
by John Bisset
Read more Workbench articles online at radioworld.com

Redgy has been at KJNP since 1991, and he is the only radio technician. Like a lot of small-market engineers, he also helps with a little bit of everything around the station, from programming to bookkeeping. That level of responsibility has taught Redgy to work efficiently.

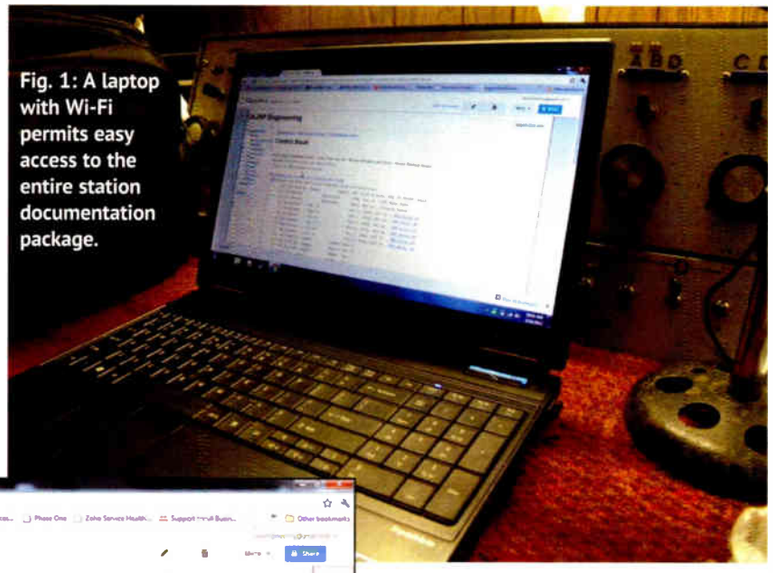
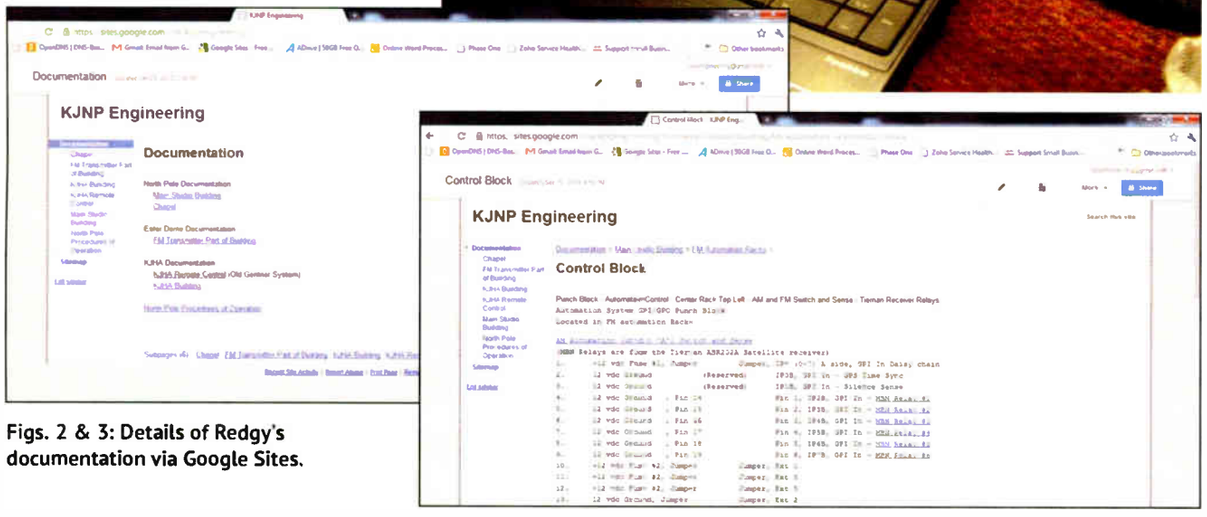


Fig. 1: A laptop with Wi-Fi permits easy access to the entire station documentation package.



Figs. 2 & 3: Details of Redgy's documentation via Google Sites.

To this end, he is trying a new form of station documentation. As the staff updates equipment and works on various items, new documentation is being done on Google Sites, a Web application intended to make information accessible to groups of people who need quick, current access. (Find info at the Radio World links page for this issue, *http://radioworld.com/Apr-11-2012*.)

Each piece of equipment gets it own page. These are set up with a base page of the individual station buildings, linked to each room, linked to each rack, then linked to each piece of equipment.

Pertinent information is entered on that page as well. There are links to each connection to the equipment, both ins and outs, to bring you to where things are coming from or going to.

Redgy has grown to like the system even more as he uses it. As pictured in Fig. 1, he can use a laptop on Wi-Fi to access the information from whatever location he is working. Use the links to track wires, instead of looking up wire numbers. He finds it easy to update by editing the page whenever needed. Redgy uses the "file cabinet" feature to keep PDFs of manuals, drawings or charts.

Screen shots, pictured in Figs. 2 and 3, give you an idea of how versatile this application can be.

Because it's cloud-based, Redgy can access the documentation at home. He can look something up on his smartphone, if need be. Another plus: If Redgy is out of town and someone else needs to come in and do some work, that person has a resource that is easy to use and navigate.

In concern for security, Redgy does not put passwords or secure information online; he keeps that information "in-house" so that if someone would hack into the page they would not get any sensitive information.

A unique way to utilize Google Sites. Reach Redgy at *kjnpengineering@gmail.com*.

Logging recorders — dedicated units or automation software add-ons — are handy for policing air talent, verifying that spots aired on schedule and archiving material for assembling "best of" programs for weekends and vacations.

But they can be cumbersome, expensive and, in the case of tape-based systems, easy to forget to load. Low-power and community stations especially are in need of inexpensive, dedicated, set-and-forget recorders.

Al Peterson, engineer at the Arlington, Va.-based Radio America Network, tells us about a free Linux broadcast audio logging program called Rotter that runs 24/7 on as little as a P3 Celeron computer from the junk closet.

(continued on page 20)

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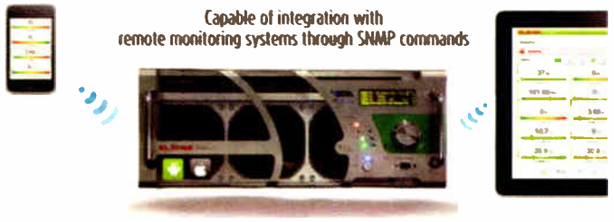

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Is Your Facility RF Risk-Friendly?

BY LAWRENCE BEHR

One in a series of occasional articles to help AM radio engineers and owners enhance their operations.

Many broadcast engineering professionals are responsible for facility management and maintenance. If that is your role, it is important to realize that the RF environment for which you are answerable includes more than your primary transmissions. The overall electromagnetic energy environment of your facility should be monitored as thoroughly as air and water quality.

Electromagnetic energy is generated over a wide spectrum of frequencies from many different sources. They include extremely low frequency (ELF), radio frequency (RF) and microwave (MW) radiation, generically referred to as "EMF."

ELF fields are produced by power lines, electrical wiring and electrical equipment. RF and MW radiation is emitted by your broadcast transmitters, cellular phones, WiFi, microwave ovens, heat sealers, high-frequency welders, induction heaters, flow solder machines, communications transmitters, radar transmitters and many other sources.

These frequencies, along with visible and ultraviolet light, are known as non-ionizing radiation to distinguish them from the more dangerous X-rays, gamma rays and other higher energy level rays, which are known as ionizing radiation. (Ionizing radiation is not addressed here but may be a factor if you operate circuits with very high voltage in TV or shortwave transmitters.)

GUIDELINES

Standards have been set for acceptable electromagnetic energy levels. The American National Standards Institute (ANSI) and the Institute of Electrical and Electronics Engineers (IEEE) have studied and identified acceptable intensity and exposure upper limits. It is your responsibility to identify and document the electromagnetic environment to ensure that your workplace and the general public are appropriately protected from excessive EMF exposure.

The FCC has established maximum permissible exposure (MPE) levels for human exposure to RF. The commission also has published guidelines and procedures for evaluating RF health exposure. While the focus of the FCC is strictly on transmitters it licenses, OSHA is very much concerned with the workplace. OSHA has published its own guidelines that agree with those of the FCC, but go beyond them in a number of areas. Industry Canada standards are similar to OSHA.

WORKBENCH

(continued from page 18)

Rotter is a command-line-only program that writes and date-stamps a new file every hour to a hard disk in MP2, MP3, WAV, FLAC, AIFF or OGG formats. It cleans out files after a predetermined time period; set it for 500 hours and you'll save nearly three weeks of audio. You can then offload from your hard disk to other drives or archival DVDs as needed.

Put a Rotter computer on your LAN, and you can open and review saved files almost immediately at any machine on the network.

Rotter should be synced to an external NTP timeserver on the Internet to avoid clock drift, and the program requires a few dependencies in order to run properly.

Visit *http://radioworld.com/Apr-11-2012* for a link to the download. You can also find instructions on command line syntax and the dependencies necessary to run Rotter. The program was written by Nicholas J. Humfrey of BBC Radio.

Alan Peterson is at *apeterson@radioamerica.org*.

Contribute to Workbench. You'll help your fellow engineers and qualify for SBE recertification credit. Send Workbench tips to johnpbisset@gmail.com. *Fax to (603) 472-4944.*

Author John Bisset has spent 43 years in the broadcasting industry, and is still learning. He is SBE Certified and is a past recipient of the SBE's Educator of the Year Award.

World Radio History

The General Duty Clause of OSHA states that an employer is required "to furnish to each of his employees, employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees." High EMF levels in and around your broadcast facility can affect the general population and, specifically, at-risk individuals.

But potentially hazardous exposure to non-ionizing radiation is a possibility in thousands of occupational situations, with commercial and industrial radiation applications outside the broadcast industry continuing to grow. What's more, in addition to effects on humans, RF energy can interfere with other electronic equipment such as computer systems, wireless devices, RFID systems and medical equipment (defibrillators, pacemakers, infusion pumps, to name a few). Often, these types of equipment are vital to providing workplace or public safety.

As with all environmental concerns, the electromagnetic environment is a risk management issue.

As with all environmental concerns, the electromagnetic environment is a risk management issue. By recognizing it as such, a facility manager has taken a positive step toward protecting employees, visitors and the public as well as avoiding potential litigation should an incident occur.

Few businesses can operate in isolation today, and the lines between safety and mission-critical operations sometimes are blurred. Note that FCC regulations are "health effect" rules, whereas OSHA rules are "workplace safety" rules. There is a world of difference. Then there are lawyer's rules, which are that "any harm or claim of harm can be litigated" — often at great cost!

Welcome to the world of EMF risk management, where you really need to have radiation safety procedures in place.

For more on this topic, see the RF Safety tab under Columns at radioworld.com.

Lawrence Behr is founder of Lawrence Behr Associates and RF equipment manufacturer LBA Technology. A former radio and TV station owner, he was a founding member of the Society of Broadcast Engineers. Find past articles at radioworld.com, *keyword Behr.*

TEXT-TO-SPEECH

(continued from page 4)

unanimous consensus among all of the providers of these systems that the text-to-speech prohibition should be rescinded."

In early April, the Broadcast Warning Working Group issued its own strong support of the FEMA request. "Launching CAP-EAS on June 30 of this year, while at the same time prohibiting the key CAP-EAS benefit of TTS, makes no sense, and will have the effect of damaging the emerging CAP-EAS IPAWS OPEN 'brand' in the eyes of the public," wrote the group, which consists of people involved in various aspects of EAS.

BWWG said Washington state's experience shows that text-to-speech is up to the job and that adjustments to difficult word pronunciations are possible. If the system can support specific pronunciations of words like Skokomish and Snoqualmie as it does in Washington, the group argued, TTS implementation can be made to work. It explored other complications as well. Its comments, too, are at the links page I cited earlier.

Rarely have so many voices in the EAS community spoken in near-unison. I believe the FCC will overturn the text-to-speech prohibition. I imagine this might happen quickly.

This is but one angle of the ongoing EAS story (details of product certification are another). It's interesting to watch how it plays out.

Overall, though, the June 30 CAP compliance deadline stands. Unsure if your station is in compliance? Ask your station legal counsel or EAS equipment supplier.

World Radio History

DX

(continued from page 16)

mitter offshore of the Netherlands. The news ends, and a rapid "Seagull" jingle follows. The signal is good, despite a few deep fades, and during one of those fades we hear a woman say the words, "Golos Rossii." We've just logged the Voice of Russia, in Armenia.

Marconi would have loved it.

Identifying stations isn't always easy. On 1467 kHz, I hear Middle Eastern music and a language I can't understand. I record and move on, with a view to seeking out the linguistic expertise one can find in an international community of DXers.

A few minutes later, I tune to 1593 kHz and hear an almost overpowering signal playing The Who's "Won't Get Fooled Again." When the music is suddenly replaced by the whooshing noise of DRM, Europe's answer to IBOC, I conclude that a German station known to be testing digital switched momentarily to analog. However, I won't get fooled; I'll e-mail an audio clip to the station, hoping staff there keep a music log.

Ultimately, DXing is a game. We have obstacles, but also strategies. When signals are weak or we can't discern the language, we turn to station lists and directories for clues.

Early one evening, Islamic vocal music on 1503 kHz suggests a high-powered station in Bushehr, Iran, that DXers often hear in eastern North America. It's part of a large network, and within a half-hour we find parallels across the band. Some signals are as marginal as Marconi's initial reception atop Signal Hill; others are dominant.

Another tactic is to keep track of operating hours. Shortly after midnight UTC, stations on the All India Radio network sign on with a 1 kilohertz tone and flute music that stands out on a crowded channel. We're rewarded with several Indian stations, including 1143 kHz in Rohtak, which most of us had never heard before.

It also pays to follow current events.

Most programming in Spain is over large national networks, and local news and commercial breaks are infrequent and schedules are unreliable. One evening, aware that the polls had just closed in Spain, we troll some likely channels and are immediately rewarded on

Neil Kazaross sets up a longwire. Note that it hangs from the tree in rear.

621 kHz, where we hear detailed, local election results for the Canary Islands, a Spanish territory off the northwest coast of Africa.

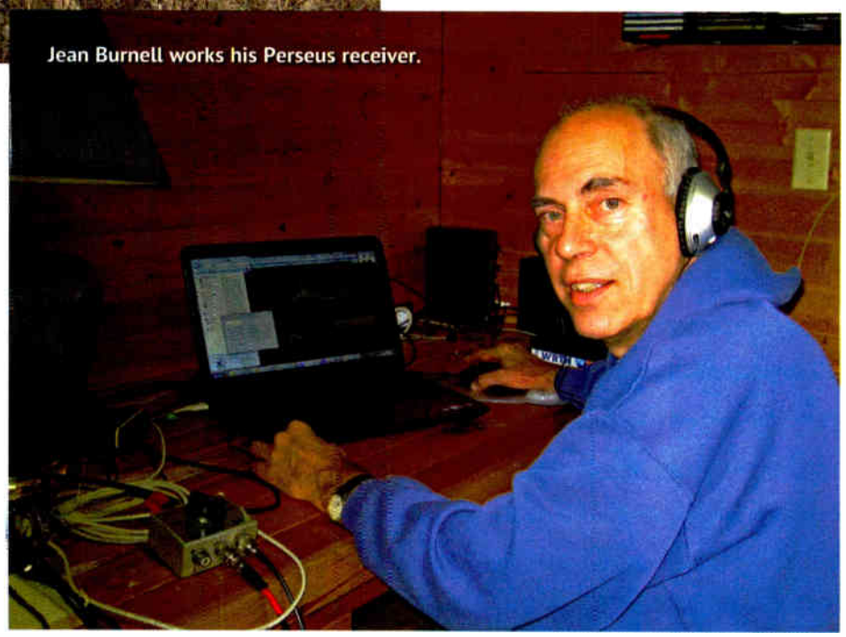
HELLO, SOUTH AFRICA

One reason we can hear stations from other continents is because North American stations operate at 10 kHz spacing, while most of the rest of the world spaces at 9 kHz.

When we hear Croatia on 1134 kHz or Greece on 1512 kHz, and listen in upper side-band, we're sidestepping WBBR 1130 in New York City and WWZN 1510 in Boston. It also helps that the southeast corner of Newfoundland sticks out into the Atlantic so that our south wire aims towards Brazil and Argentina, effectively bypassing the U.S. east coast.

The south wire even offers some directionality to Africa. Every year we snag stations from Angola, Botswana and Nigeria. But conditions to the south are particularly enhanced this time around, and American-accented English talk about Deuteronomy turn out to be Family Radio broadcasting from Lesotho on 1197 kHz.

Towards the end of the two-week period, Chuck and Jim return home. Neil Kazaross, an options trader from Chicago, Jean Burnell, a chemistry professor from Halifax, and John Fisher, a chemical engineer from Kingston, Ontario, settle in.



Jean Burnell works his Perseus receiver.

Neil hears barely audible religious music on 729 kHz. We establish a parallel on 657 kHz and suspicions of Radio Pulpit in South Africa prove correct when the stations identify in Afrikaans. These are probably my most tenuous receptions of the trip, but it's no wonder given that they ring in at more than 7,000 miles from our northerly locale.

It's on this high note that I return to Toronto. I'll listen to my 300 or so audio recordings soon enough, and my companions will have oodles of Perseus spectrum grabs to analyze.

Each visit is unique. In 2004, the sun belched and an aurora blanketed the entire Northern Hemisphere, leaving only Africa and Latin America audible. Two years ago, when sunspot activity was extremely low, we were surprised by early-morning receptions over the North Pole of dozens of stations from Japan, China and North and South Korea.

This time, we celebrate our 20th anniversary with a visit to the Myrick Wireless Interpretation Centre at Cape Race.

This museum includes a replica of the Marconi station that handled Titanic distress traffic in 1912, using brand-new wireless technology. Its current operator, David Myrick, tells us about events planned for April 14 and 15 to commemorate the 100th anniversary of the sinking of the Titanic.

As I look at some of the world's oldest transmitters and receivers, I realize that anyone anywhere can now listen to the world, interference-free, over the Internet. The iPod generation seems to think of radio as something their grandparents huddled around, a fire crackling in the background.

Still, radio is not so much a dying medium as it is an evolving one. Marconi patiently chased transoceanic signals until others recognized the achievement, and his signal remains audible in Newfoundland, Easter Island and around the world, as broadcasters, listeners and communications enthusiasts adapt to new times and explore new frontiers.

Saul Chernos, a Toronto freelance journalist, is DX test coordinator for the International Radio Club of America and the National Radio Club. He welcomes questions to schernos@sympatico.ca *about the hobby or if you would like to schedule a DX test.*

World Radio History

ROC YOUR WORLD

The new ROC console from Logitek

When Logitek introduced its first ROC console back in the 1990s, it marked a revolution in audio console design. One of the industry's first router-based digital consoles, the original ROC boasted simple wiring and access to multiple sources at each fader.

Over the years, the router-plus-console Networked Audio concept has become the standard in console architecture. Although the original ROC was retired years ago, Logitek has continued to develop systems for both TDM and AoIP audio networking. The new ROC takes the best of the original design and pairs it with the latest technology and styling.

The ROC is paired with the JetStream, a powerful 128-channel networked audio node.

Available in multiples of 6 faders (up to 24), the ROC is housed in an attractive tabletop enclosure. Durable Penny & Giles faders, OLED source indication and intuitive controls make the ROC a natural for on-air, production rooms or even in temporary studio setups. Two monitor feeds, front panel headphone connection and user-assignable softkeys will please even your fussiest operators.

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World Radio History

MARKETPLACE

ANALYZE THIS: NTi Audio has issued a firmware update for its XL2 audio and acoustic analyzer. Version 2.32 allows for the "scheduling" of measurement periods, thus offering unattended recording and measurement by the device.

A new "events" feature provides for the triggering of starting and stopping an unattended measurement session through the defining of certain criteria. The "event" feature requires the "Extended Acoustic Pack."

NTi says that these new features should decrease the amount of stored data (as WAV files) in many cases and make that data more relevant.

Info: www.nti-audio.com

BXF: ENCO Systems' DAD playout system has a new format compatibility. BXF is the Broadcast eXchange Format, popular in traffic and billing software applications. It addresses scheduling and as-run information, content metadata and content movement instructions.

An ENCO announcement described such data as "start and kill dates, inventory availability, new carts, schedule and as-play data." Now DAD should understand BXF-oriented information from third-party software suites. Director of Radio Sales and Product Development Patrick Campion made the announcement.

Info: www.enco.com

FLEXING FLEXIVA: Last year's NAB Show saw Harris debut the Flexiva line of solid-state FM transmitters, 10 kW and 20 kW models. This year Harris is beefing up the outputs available, with 30 kW and 40 kW models being introduced. The air-cooled Flexiva transmitters use LDMOS-FET power amplifiers and offer a Web-based remote control option. Besides FM, Flexiva transmitters also handle HD Radio and DRM+.

Also new in the Flexiva line is a digital FM exciter for an easy upgrade path to HD Radio and DRM+ digital broadcasts. The exciter can be remotely controlled via the Web.

Info: www.broadcast.harris.com

MY NEW JACKET: Clark Wire & Cable has an improved version of its 700 Series multi-pair, multi-purpose audio cable. Improvements include a new thermoplastic elastomer jacket that should help flexibility and abrasion resistance while meeting applicable UL listings for harsher installation environments.

The 700 Series offers 4–24 balanced audio pairs, 22 AWG tinned copper conductors within a polypropylene dielectric insulation. Pairs are color-coded and alphanumerically marked. A bonded foil RF/EMI shield is used, as well as a tinned copper drain wire.

Product Marketing Manager Scott Fehl said the improved flexibility and UL listing allow the snake cables to be used in more applications. He cited a "significantly improved" jacket compound as well as core construction that improves flexibility and allows for use in permanent environments such as walls, raceways and conduit.

Info: www.clarkwire.com/cable700series.htm

V-SOFT TRAINING: Something of a tradition for broadcast engineering and terrain mapping software developer V-Soft Communications are its annual Las Vegas software training and demo sessions.

Scheduled for the spring show is a series of sessions, April 14 and 15 at the Excalibur. A release states, "The training will include subjects relating to AM, FM, TV and microwave. Demonstration projects to be covered include move-ins, channel changes, upgrading, predicting interference and coverage, and STL allocations."

V-Soft recommends that attendees bring their own laptops with their software preloaded to maximize the training.

The regular crew of Doug Vernier, John Gray and Kate English will conduct the festivities. The cost is $750.

V-Soft products include FM Commander, Probe4, Microwave Pro and AMPro.

Info: www.v-soft.com

World Radio History

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World Radio History

Steve Goes to the Branch Office

Just a Little Radio-Friendly Landscaping

BY STEVEN LAMPEN

I have occasionally strayed from the straight-and-narrow wire and cable issues (pardon the pun), but if it's a good story, with some broadcast relevance and engineering pointers thrown in, why not?

WIRED FOR SOUND

Read more Wired for Sound articles at radioworld.com

If Bisset can write about nothing, well so can I. So here I go again!

It has now been more than 20 years since the following occurred. The evidence has long since disappeared, so I can tell the story.

My mentor and good friend was the chief engineer of a station in Berkeley, Calif. His STL shot was from his building, literally at sea level, to Mount San Bruno just south of San Francisco.

This meant that most of his shot went over water, the San Francisco Bay. And much of that distance was close to the water. On hot days, the water vapor would do weird things at 951.5 MHz, sometimes even shut them down.

To make matters worse, there was another broadcaster on 951.5 MHz. And, by the most amazing of coincidences, that other broadcaster was me!

The only reason the whole thing worked was that I was vertically polarized and my friend was horizontally polarized. (Well, my friend was not horizontally polarized; the element in his microwave dish was horizontal.)

THAT'S NOT MY AUDIO

Also, my shot was from Alameda, a few miles south of my friend, and shooting to a transmitter site far north of his. In other words, our two shots crossed at almost 90 degrees. But despite the horizontal and vertical isolation and the 90 degrees of angle isolation, sometimes on a hot day, when the water vapor absorbed his signal, his STL receiver would look vainly for some signal. And what signal did it pick up at 951.5 MHz?

Well, nobody was happy when they heard my station's audio coming out of their transmitter. Not kosher.

My friend decided to move his STL dish higher up on a tower to get some height above the water. I was all for it. I mean, we might have switched polarities. Vertical polarization is much less affected by water vapor. But that would have required a switch of licenses and lots of paperwork.

So we both decided to give added height a try first.

Of course, we had to check our shot. Nine hundred MHz is pretty forgiving, but you need to have line-of-sight, especially for maximum signal strength. So we climbed the tower with a small telescope and looked at Mount San Bruno.

What did we see? Nothing! There was a very substantial tree right in our line of sight.

After some triangulation, it became apparent that this tree wasn't on station property. In fact, it wasn't on anyone's property. It was on an island in the middle of a freeway.

But a little thing like a freeway never stopped Lampen. So I told my friend that I would "take care of it."

First of course I had to figure out exactly which tree it was and exactly which branches were in the way. Then I rented the largest chainsaw I could carry and threw it in the back of my VW Rabbit. At 2 a.m. on a Sunday (you broadcast guys would recognize this as the ultimate dead time), I set out.

There was absolutely nobody on the freeway as I quietly pulled off and parked a discreet distance from the tree in a grassy area of the island.

My only real concern was the Highway Patrol, who would find a car parked in the middle of the freeway to be a bit odd. I bet that in our post-9/11 world, this would not be so easy.

I had rented some tree-climbing spikes, the ones that go on the side of your boots. I put them on and, with my tower climbing belt, began to climb the tree. (Those who know me today in a more rotund shape will be impressed that I could ever climb anything!)

If Bisset can write about nothing, well so can I. So here I go again!

It only took me a few minutes to saw off the offending branches. I did a few more above and below, just to be sure. The noise attracted nobody. I climbed down the tree.

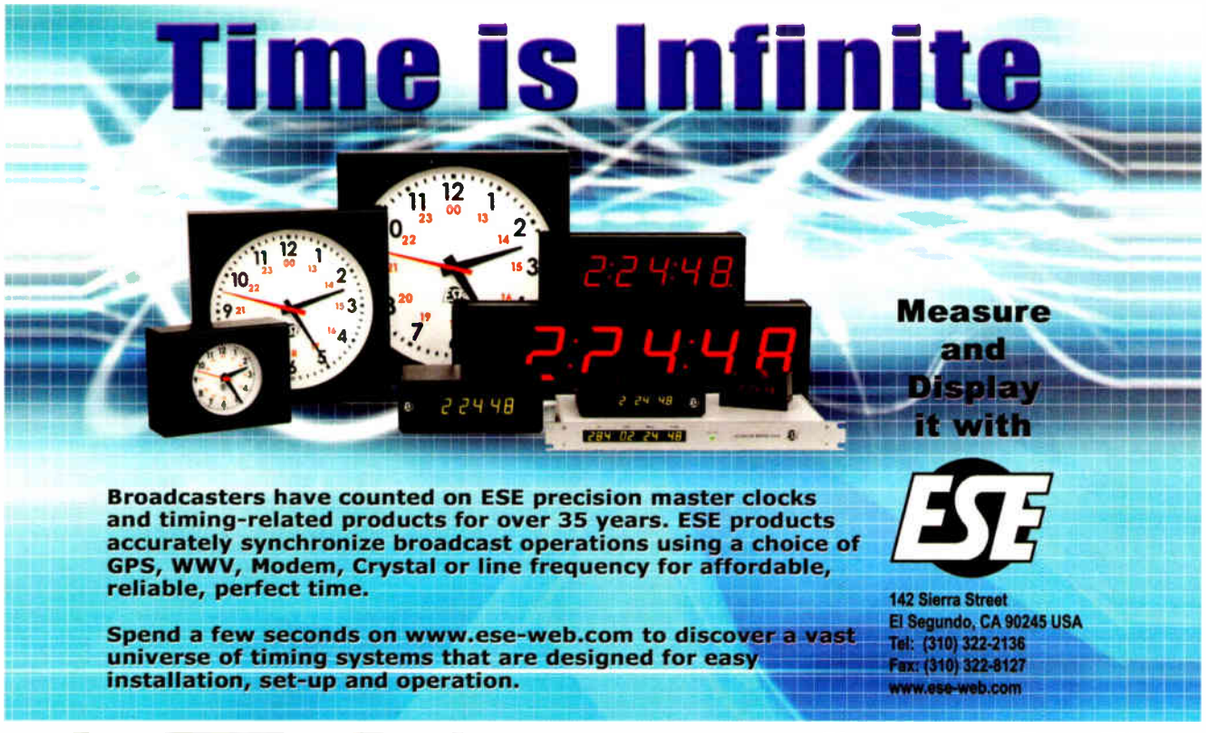
I remember looking at this pile of not insubstantial branches, and imagining what the cleanup crew would say. Who cut these down? And why? I thought it unlikely that they would make the connection to the radio station a few hundred feet away.

If nobody picked up the branches, I knew they'd rot into really nice mulch; and everything on that island would be green and happy.

The station is no longer operational from that location. My friend the engineer knows who he is but since he is still working in the industry, I thought it best to keep his identity secret.

As for that Lampen guy, well, you knew he was crazy a long time ago.

Steve Lampen is multimedia technology manager and product line manager of entertainment products for Belden. He asked the Internet to speak to him in the March 14 issue. Reach him at steve.lampen@belden.com.



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World Radio History

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The basic 6-fader surface can mix up to 12 channels. Flexibility is increased with the addition of the 6-fader extension bay to create a 12 fader surface. Those 6 faders can be placed remotely via Cat5 cable in a Producer's bay, or used as a redundant surface.

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World Radio History

KUZZ Excels at Bein' Neighborly

Bakersfield Station Celebrates a Heritage of Community Service

BY BUSTER SMITH

There are few awards in radio as exclusive as the NAB's Crystal Heritage Award. It's given to stations that have won five NAB Crystal Awards for community service. If that doesn't seem like a big deal, you haven't talked to Sylvia Cariker, public service director and midday host at KUZZ(FM) in Bakersfield, Calif.

At April's NAB Radio Show, the Buck Owens Production Co. station will go home with only the third Crystal Heritage Award in NAB history, an honor Cariker couldn't even imagine when she heard about the first Crystal in 2008, which went to WUSL(FM) in Philadelphia.

"I was thinking that would be so cool, but winning just one is so hard," she says. "Being in country radio, there's a lot of store set by winning the Country Music Association awards or the Academy of Country Music Station of the Year. Nobody really said much (here) about the Crystal Awards.

"Then when we won two and three and four? Now they're excited."

That's because the community-service focus of the Crystal Award program fits so tightly with KUZZ's own community focus.

"It's a symbiotic relationship with the community. We give them what they need and in turn they reward us with their loyalty. We have to be interested in our community. We live here, my kids play soccer with their kids, we all go to church together."

> **For people** who come here and say, 'I can't wait to get out of this market to a bigger one,' I say you may as well just leave now, then.
>
> – Sylvia Cariker

It's a relationship that stretches back to the late 1950s, when KUZZ signed on as an AM daytimer playing the music of artists such as Buck Owens himself. Owens purchased the station in 1966, moving it twice to better AM dial positions and eventually to its current spot at 107.9 MHz, with a simulcast at 550 AM kHz.

Owens owned the station until his death in 2006, and his family still owns KUZZ and sister station KCWR(FM).

"Our local ownership is community, too," Cariker says. General Manager Mel Owens, Buck's son, "was born and raised here."

A young patient at St. Jude's drops by for the station Radiothon. KUZZ raised $168,000 in February to benefit children via St. Jude's.

So what is KUZZ's secret? Relentless engagement with the Bakersfield community, including at least five outside events a month. One of the station's signature events is the Bakersfield Relay for Life, which now raises $2 million a year for the American Cancer Society. "Our station has had a team out there for all 21 years of the event," Cariker says. "We have a team out there, we walk, we do fundraisers."

Cariker does more than walk, though. She also serves as the event's media coordinator. It's a role she's happy to fill for many organizations that come to KUZZ seeking help.

"I like to get in there at the beginning of someone's campaign or event and publicize the heck out of it," she says. "One of the things I do as public service director is offer my services to do media training for any group that wants it."

She makes sure that groups remember to include radio when they're looking for publicity. She cites the example of the Kern County Court-Appointed

(continued on page 32)

World Radio History

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World Radio History

KUZZ

(continued from page 30)

Special Advocates (CASA), which trains volunteers to assist neglected and abused children through the juvenile court system.

In need of more volunteers, CASA turned to KUZZ for help.

"They were doing TV public service announcements and newspaper articles," Cariker says. "I said, 'Let's bring radio into the mix.'" KUZZ worked with CASA to create a series of 30-second radio PSAs that ran in heavy rotation.

"In two years, where they used to graduate six CASAs, they're now graduating 24. The only thing we did differently was adding radio." She shared the experience with KUZZ's sales department to help them share the impact of radio with prospective advertisers.

Cariker shares her PSAs with Bakersfield's other radio stations too. "I have wonderful relationships with the other public service directors in town," she says. "We have an understanding that if we do the heavy lifting, creating and producing a public-service campaign, they'll air it, too."

The result goes beyond simple community service. It also contributes to a station culture in which staffers become a permanent part of the Bakersfield community.

"For people who come here and say, 'I can't wait to get out of this market to a bigger one,' I say you may as well just leave now, then," Cariker says. The result is an air staff with deep ties to the community. Morning man Steve Gradowitz, a Bakersfield native, has been with KUZZ since 1986; afternoon jock Chris Conner came to the station in 1977. For most of that time, KUZZ has occupied the top spot in the Bakersfield ratings.

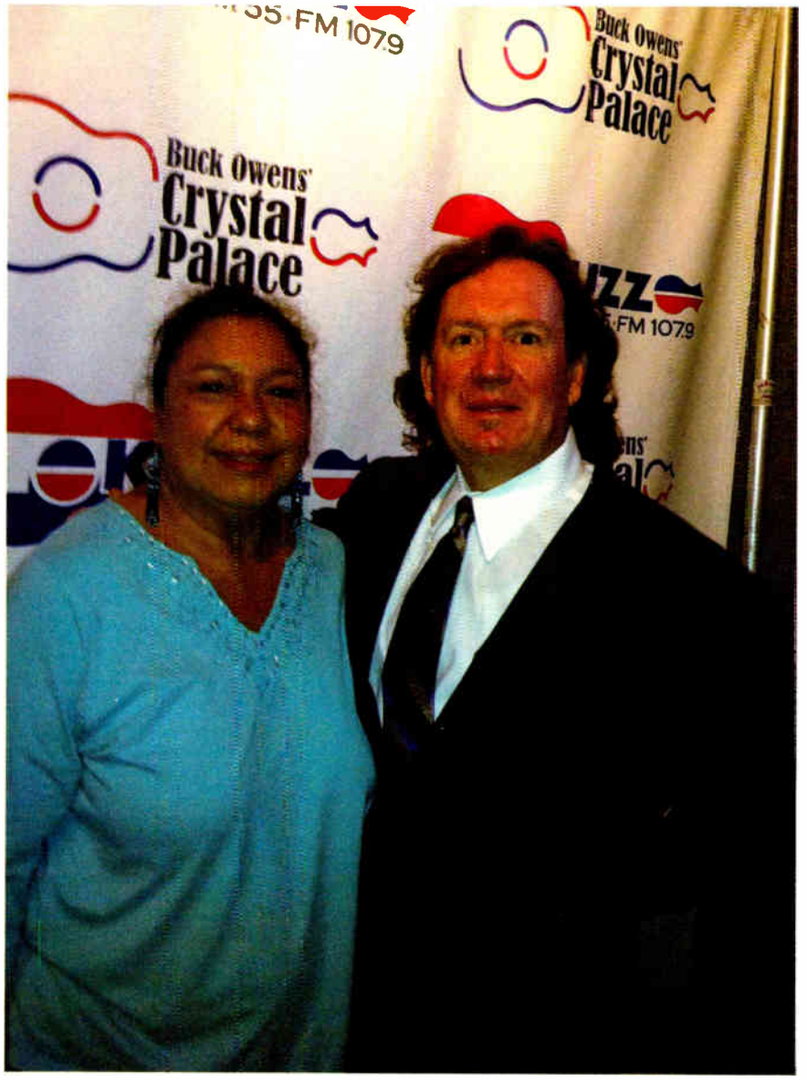
That sort of community connection was to be expected when a station just "acts naturally," to borrow a phrase from one of Owens' biggest hits and from his philosophy.

"I remember talking to (Owens) when we won our first Crystal Award, and he said, 'We're just being neighborly.'"

Cariker will accept KUZZ's Crystal Heritage Award at the NAB Show Radio Luncheon on April 17 in Las Vegas.

Buster Smith covers radio from Reston, Va.

The morning team of Steve Gradowitz and Geoff Emery, top left, survey gifts donated by listeners to 70 local families in the seventh year of the campaign 'KUZZ Cares for Kids at Christmas.'



Sylvia Cariker, public service director and midday host, and Mel Owens Jr., GM/owner

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World Radio History

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The more you saw, the more convinced you were that IP consoles made sense for your station. Problem was, you had small spaces to work in. Some behemoth board that looks like a '78 Oldsmobile just wouldn't fit. But there was no way you'd settle for some cheap plastic PA mixer that looked like a refugee from the church basement. "Wouldn't it be great," you thought, "if someone made an IP console that didn't take up a whole room?"

Then you saw the new RAQ and DESQ consoles from Axia, and your problems were solved. With the power and features of a big console, but minus the ginormous space requirements. RAQ will drop right into those turrets in your news station's bullpen – the reporters can send their finished stories right to the studio. And DESQ is perfect for the auxiliary production rooms.

But what sealed the deal was finding out you could run two RAQ or DESQ consoles with just one Axia QOR.16 mixing engine — you know, the one with all of the audio I/O, the power supply and the Ethernet switch built in. That brought the cost down so low that when you told your GM the price, he actually didn't swear at you (for once). Make another decision like this, and you might just be changing the sign on your door from "Chief Engineer" to "Genius."

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World Radio History

Be Sociable, Yet Legal and Safe

New Social Media Outlets Present Potential Pitfalls for Broadcasters

BY RANDY J. STINE

Liability issues are never more than a mouse click away in today's social media-centric world.

Maybe you heard that the FCC plans to fine a cluster of five Clear Channel stations in Los Angeles over an online contest. The notice of apparent liability, proposing $22,000 in penalties, was released in January and charged the stations with failing to disclose all material rules of an online contest (read more via the links page *http://radioworld.com/Apr-11-2012*).

Or maybe you're a radio station owner or general manager with a hot-shot young webmaster throwing around names like Pinterest and Tumblr that leave you wondering how to pronounce them and what they are.

Should you be concerned?

You must, at least, pay attention.

THINK BEFORE YOU POST

"The game is changing. Delivery methods are changing. It's not enough to just broadcast content over the air anymore," said Kevin Goldberg, a member at Fletcher, Heald & Hildreth specializing in First Amendment and intellectual property issues.

Claire Magee. 'Someone may have granted a license to use their image for public display on Twitter or on Facebook, but that person still owns the picture.'

As radio stations use as much social media as possible, lack of editorial control by broadcasters becomes more evident, Goldberg said.

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"Things happen fast and quick. There are a lot of young people in the business who may not be legally savvy; and that scares GMs, especially considering many managers are not as familiar with social media. Stations must think before they post," he said.

Goldberg, who will appear on an NAB Show panel discussing legalities of social media, cited a recent example of contesting by a client that presented challenges.

"This was my client's first-ever Twitter contest. We had vetted the rules numerous times and suddenly realized a day or two before the contest was to launch that we had no way of verifying the age requirement to verify a winner.

"It's difficult sometimes to think about all the ways a contest can go wrong. A station can be sued for fraud or breach of contract very easily," he said.

In fact, there have been settlements

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for hundreds of thousands of dollars for defamation based on a single tweet or series of tweets, he said.

"You can defame someone on social media just as easily as you can over the air," Goldberg said.

MISINTEPRETATION

Katharine Larsen, media law attorney with Levine Sullivan Koch & Schulz, said because of the constraints of social media, defamation and liability issues play out a bit differently.

"For instance, with Twitter you have to express yourself in 140 characters or less. If you end up trying to shorten the details, you have to worry that a statement might be misinterpreted or taken as untrue because of the structural constraints of Twitter."

Lee Petro. 'Broadcasters should consider a section in the employee handbook that covers social media and decide what to do when an employee tweets or posts something disparaging about an advertiser.'

Larsen, a featured speaker on the NAB panel, warns broadcasters to watch for endorsement issues and commercial misrepresentation claims. Those are traps into which her clients fall occasionally.

"If you have a picture of someone pointing to a sign with your call letters and you publish it on a website, you have to have consent of that person, and written consent is best. Otherwise you have endorsement claim with possible misrepresentation," she said.

Sites like YouTube, Facebook and Pinterest, which has gone from cult favorite to hit site since late last year with 10 million monthly U.S. visitors, present lots of copyright infringement issues, according to Claire Magee, assistant general counsel at Allbritton Communications.

Some managers might think, "If they uploaded it to the Internet, why can't I use it?" However, this is not a valid defense, Magee said.

"Someone may have granted a license to use their image for public display on Twitter or on Facebook, but that person still owns the picture." The license, she said, does not extend to you and your station.

Another common question facing broadcasters is who owns Twitter/blog/Facebook content on a page or site that was started by an employee who later left the company, said Lee Petro of Drinker Biddle & Reath.

"Broadcasters should consider a section in the employee handbook that covers social media and decide what to do when an employee tweets or posts something disparaging about an advertiser," said Petro, who will appear on the panel.

For marketing and promotions, Petro said stations have to ensure that they own the intellectual property of the materials that they use on the various sites.

"Further, there are federal and state advertising restrictions relating to online promotions that must be followed. If stations have properly protected their own IP through copyright and trademark registrations, they can utilize social media takedown procedures to remove infringing or confusing posts."

The session "Legal and Safe, But Sociable" is scheduled for Tuesday morning April 17, part of the Broadcast Management Conference at the NAB Show.

COMING UP

Watch for NAB Show news coverage, "Cool Stuff" Awards and more in your next few issues.

World Radio History

Radio Talks Digital Strategies

Even Now, Many Managers Are Still Asking About the ROI From Streaming

BY CRAIG JOHNSTON

After more than a decade of radio streaming, many people still are wondering whether the phenomenon can actually provide real profits. The answer depends on whom you ask, according to Skip Pizzi, director of digital strategies at the NAB.

"There (is) a wide variety of business models that folks are using ... particularly in the new media space, where people are still trying things out."

As radio stations seeking to increase listenership strive to become ubiquitous, Pizzi encourages managers to experiment with online content, not just copy their on-air programming onto the Web.

He used the analogy of broadcast television. "They do some news, some soap operas, some movies, some sports." However, the advent of cable created "channels that were just one of those things all the time." Then you've also got "on demand" offerings, streams that appeal to newer audiences who are selectively interested in just bits and pieces of a channel's regular programming.

A real game changer in streaming radio has been the smartphone, says Jennifer Ferro, general manager of streaming radio pioneer KCRW(FM) in Santa Monica. When the iPod was introduced, it offered music portability but eliminated radio from the equation. Now, however, though a smartphone can be used like an iPod, allowing the user to listen to his or her own music, it can also easily access the Internet for streaming content.

Ferro cites a lack of trustworthy audience measurement systems as a hindrance to Internet radio's profitability. "I really believe the current metrics that everyone uses in radio are not at all capable of reflecting our audience usage," she says.

Though her station is noncommercial, Ferro believes the same rules apply to the radio industry in general when it comes to integrating online features.

"Any sort of ... audio content provider cannot afford not to be streaming, not to be podcasting, not to be making their content available for on-demand listening on any device possible."

She believes that when commercial radio managers hesitate about jumping feet-first into the world of streaming, it's because of these limitations in quantifying non-broadcast audiences. "All of your advertisers are looking at that [on-air] metric, but that metric only focuses on one aspect of the way people consume media."

Alexis van de Wyer, president of AdsWizz Americas, encourages radio stations to look beyond simply duplicating their on-air ad delivery strategy.

This graphic from AdsWizz demonstrates how listener evolution can be followed on a quarter-hour as well as daily basis. This image shows average quarter hour evolution for a pure-play streaming client throughout each day (upper) and throughout one week (lower).

GO BEYOND COPYING YOURSELF

"What we found is that there is actually a pretty big difference between the broadcasters that try to reproduce what they used to do over the air, and the ones that truly embrace digital advertising," he says.

Utilizing the multimedia capability of Internet streams "allows you to have much more targeted ads, allows you to combine display with audio and streamed video, and allows you to track your ads and really report your performance."

Van de Wyer can even put a number on how much per-spot revenue a station misses by not taking advantage of what can be done with Internet optimization.

"The money (these stations) get is roughly five times less than the money that (stations get) ... when they target by device, when they target by location. All those elements will allow broadcasters to get much more money out of each impression, which allows them to get more revenue."

Getting more money per spot is important, he says, because Internet stream listeners may not put up with as many ads as on-air listeners. Charging more per spot "allows them to play fewer ads, which is very important online, because listeners online actually come to expect a slightly different experience." Van de Wyer adds that listeners seem happier hearing ads for products that are of actually of interest to them.

Noncom KCRW has been active in the new media space.

OUTSOURCING

Because profit loosely is defined as what's left of your revenues after you subtract your expenses, it's important to focus on the costs of streaming. Whereas the on-air broadcasting operation costs about the same regardless of how many are listening, costs for Internet bandwidth and copyright royalties increase and decrease in sync with number of listeners.

Zackary Lewis, CEO of Liquid Compass, a content delivery network or CDN, has made the argument that outsourcing streaming to companies like his is the smartest way to keep these incremental costs at bay.

"If you have a T1 connection at your studio and you have a 64 k stream, the equivalent of an FM-quality radio, you would only have the capability of having 15 [online] listeners to your station at any point in time," he says. And that would preclude any other uses the station might want to make of its Internet connection.

As Lewis explains, CDNs buy Internet bandwidth in such massive quantities that the economies of scale, along with the efficiencies of their own IT infrastructure, allow them to pass along some of the savings to their customers and still make money themselves.

A plan with a CDN can include "lots of different options as far as enhancement playing, social media integration, ad replacement software and other services, [along with the bandwidth]," he says, adding that for qualifying stations, ad spots can replace cash payments.

Clear Channel's iHeartRadio is an online network of stations best known as a mobile application, though it can be accessed on various video game consoles, too.

Brian Lakamp, president of Clear Channel Digital, declined to discuss profit specifics, but says that iHeartRadio encompasses "900 of the nation's most popular live broadcast and digital-only stations from 150 cities, plus user-created custom stations, delivering everything listeners want, in one free, fully-integrated digital listening service."

While unfortunately there are no industry-wide figures on the profitability of streaming radio, the fourth quarter 2011 financial filing from Salem Communications provides an example worth mulling. Overall broadcast revenue at Salem increased 2.8 percent compared to the same period a year earlier, but the Internet revenue portion increased 37.1 percent. Internet operating income nearly doubled. (Salem owns or operates 96 stations; it calls itself the largest commercial U.S. radio broadcasting company that provides programming for audiences interested in Christian and conservative opinion radio content.)

At the 2012 NAB Show, a day-and-a-half track of the Broadcast Management Conference titled "Digital Strategies Exchange" promises a non-technical look at technical innovations for radio, including Internet radio streaming, mobile devices and social media. The Digital Strategies Exchange track will run Tuesday afternoon and all day Wednesday.

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MOBILE

(continued from page 36)

CEO of Jacobs Media and its jacAPPS division. Smartphone users are used to downloading mobile applications designed for specific types of smartphones and their operating systems.

"What you're starting to see with mobile apps for radio is a combination of a native application and mobile-enabled Web pages," said Jacobs.

"At the end of the day, the ability of a radio station to get their icon on the desktop of a person's smartphone is the best branding you can have. It's akin to having a pushbutton on a car radio."

As to some features that a station can add through an app, Jacobs listed links to podcasts, videos, news, schedules, social media, the last-five-songs, places for listeners to post pictures from station events and more.

Some stations emphasize fun. "We did an app for one station that wanted to allow listeners to gossip. So now they've got a gossip section."

He noted that a station format will dictate some of the design of a given app. For example, "News stations and sports stations provide a significantly higher level of content, written text news, so that listeners can read the news stories."

While such features may increase the cost to create a station app, they also provide a sponsorship possibility beyond traditional radio advertising.

This station app allows listeners to gossip.

A smartphone can be plugged into a car's audio system and used to access radio websites while driving. And radio managers are also watching the new emerging subclass of mobile devices: in-dash Internet receivers.

These may seem to cut both ways. They're another opportunity for stations to reach listeners with their audio streams; but they presumably take away from over-the-air listening; and each in-car Internet model could be yet another device that needs a customized app.

Help is on the way on that front, however. Earlier this year, Livio Radio launched its Livio Connect API (application platform interface) middleware framework protocol, which allows apps written for smartphone operating systems to work with in-car Internet radios using a certain chipset. That should simplify a radio station's path into a car's dashboard entertainment system.

And while the in-car radio may draw fire from officials who want to ban cell phones from cars altogether, Jacobs said carmakers "are collectively very sensitive to this. They understand the consumer demanding a better experience in the car, but they always have an eye toward Washington, D.C."

He said Ford, for one, has promoted hands-free, voice-activated systems where the driver doesn't even have to look at the dashboard to tune his Internet radio, much less reach out and touch it.

What you're starting to see with mobile apps for radio is a combination of a native application and mobile-enabled Web pages.

– Paul Jacobs

Listening to Internet radio with mobile devices is a parade that's well underway. The trick for radio is to get out in front of it.

Speakers at the panel "Is Mobile Marketing the Future of Advertising in Radio?" include representatives of JacAPPS, Pandora, ESPN Digital Partnerships, Hipcricket and Marketron.

Craig Johnston is a longtime contributer to Radio World. He interviewed Craig Parshall of the National Religious Broadcasters in February.

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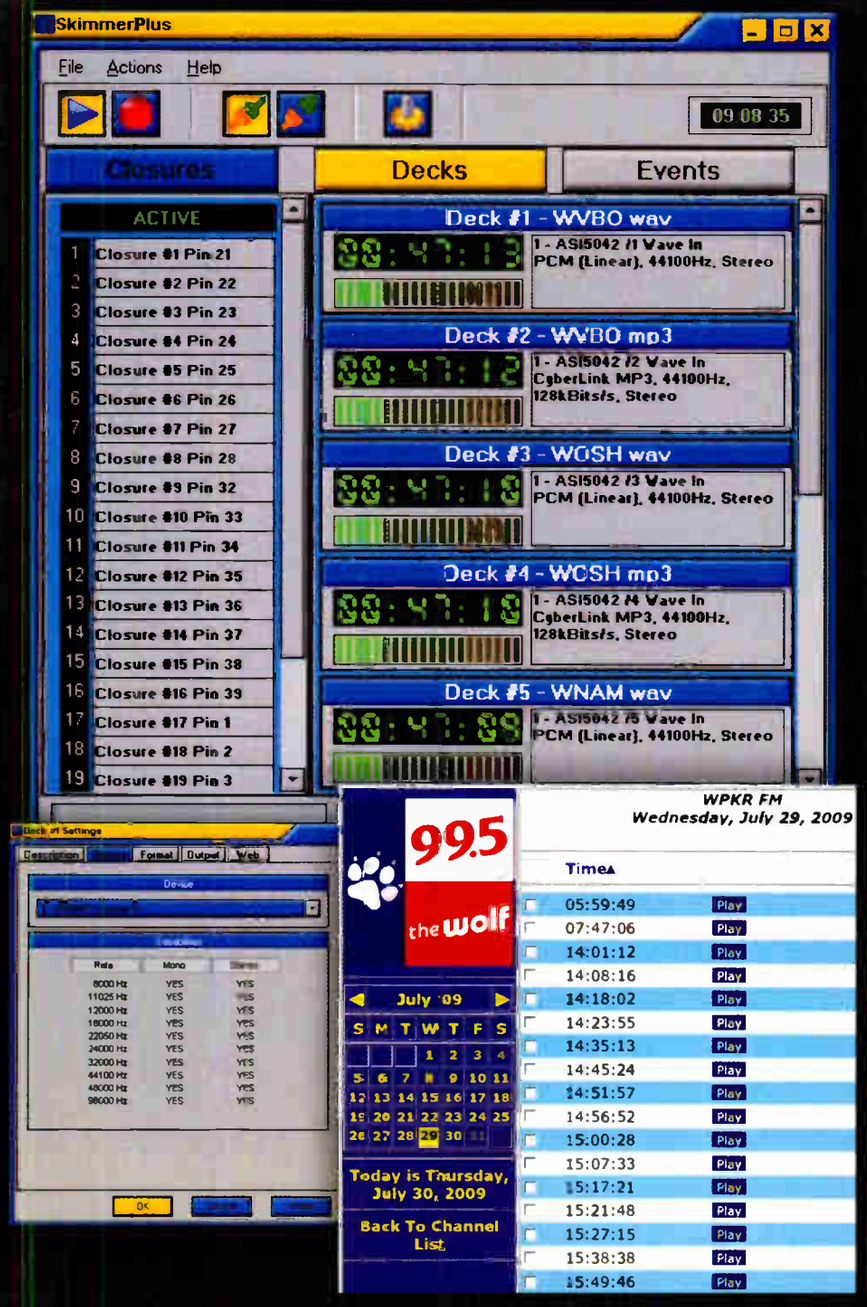

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PEOPLENEWS

David Gale

David E. Gale, staff engineer for Cornerstone University Radio in Grand Rapids, Mich., received the Carl E. Lee Broadcast Engineering Excellence Award from **the Michigan Association of Broadcasters**. Gale was drafted by and worked for the Armed Forces Radio Network during the Vietnam War. After, he helped to build several radio stations in Michigan. ...

Mary Ann Seidler

The Telos Alliance rearranged some responsibilities of two of its principals. **Frank Foti** takes the title of chief executive officer. **Mike Dosch**, who was named CEO in early 2011, now is president and focused on the product businesses of the Axia and Telos Systems divisions. Foti remains head of the Omnia Audio division, where daily operations are now led by Cornelius Gould. Tim Carroll remains head of the Linear Acoustic division. ...

Mary Ann Seidler joined the U.S. effort of Italian transmitter maker **Elenos Group**. A release said Seidler would be leading the company's expansion into the North American market.

Seidler was with codec maker Tieline Technology as VP for North American sales. Before that she spent a decade with Telos Systems, some of that as director of European and international sales. She has also worked as a news- and sportscaster. ...

Tieline America named **John Lackness** vice president of sales for the Americas, replacing Seidler. Lackness began his broadcasting career as a DJ and radio engineer in Texas. He then transitioned into sales, including five years as sales manager for Marti Electronics. Most recently he was in charge of the Southwest region for distributer SCMS. ...

Digital Jukebox founder **Jim Barcus** has retired from the company he launched in 1995. As Radio World reported earlier, Barcus recently established a new sales and support team to run the operation. Now, he writes in a letter to clients, "I am turning the company over to the **Paley family**. Carol, Ted and Ron Support will be handled by **Robert Parsons**, who himself has many years in the radio automation industry as a support technician." ...

Jim Barcus

Veteran equipment salesman **Michael Uhl** joined **StoryLeaders**, which describes its mission as "helping people influence change" through the science of selling. Uhl most recently was account executive with the Telos Alliance. He previously worked at Sierra Automated Systems. He started in the radio industry 34 years ago last month, working for Jack Williams at Pacific Recorders & Engineering. ...

Michael Uhl

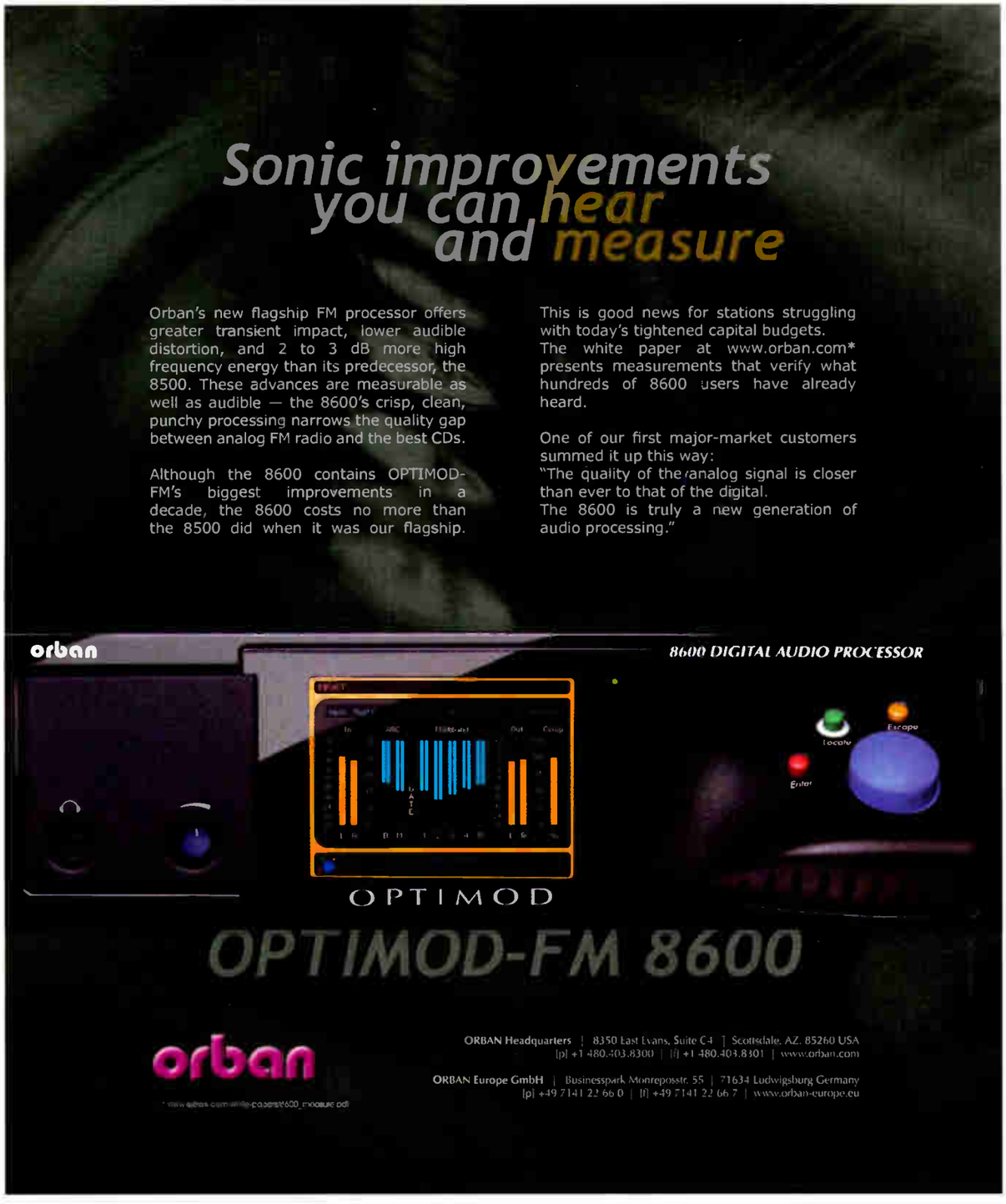
James Tunnicliffe was named to Harman's **Soundcraft Studer** operation as a field support and applications engineer for the eastern region of the United States. Tunnicliffe previously was with Euphonix, working as a field service engineer and product specialist, starting in September of 2002. ...

James Tunnicliffe

The **North American Broadcasters Association** named **Michael McEwen** as director general. He succeeds retiring Secretary General **John Harding**. ...

Amy Levine, senior counsel and legal advisor to Chairman Julius Genachowski, left the FCC. **Charles Mathias**, associate bureau chief in the Wireless Telecommunications Bureau, is acting legal advisor to the chairman. ...

Mobile apps developer **jacAPPS** said that **Kate Levy** will lead its mobile apps development. Before joining jacAPPS in 2011, Levy was a developer and software engineer for GoKnow, a software company.



World Radio History

Omnia.9 Fits the Bill in Birmingham

Excellent Presets, Lack of Overprocessing Impress This Alabama Broadcaster

USERREPORT

BY BOB NEWBERRY
Market Engineering Manager
Clear Channel Birmingham

BIRMINGHAM, ALA. — We received our Omnia.9 in mid-October of last year, after a decision to acquire one several months earlier based on several video presentations and panel discussions featuring its creator, Leif Claesson.

By the time the unit arrived, I felt I had a pretty good understanding of the concepts behind the Omnia.9. What I wasn't prepared for was how those concepts, which I had researched thoroughly ahead of time, would be clearly explained — on the front-panel display of the Omnia.9 — as soon as I powered it up.

OUT OF THE BOX

Starting from the input end, I was most curious about the function of the much-heralded "declipper" circuit.

I was aware of how many recordings get clipped at the recording studio, in a misguided effort by the record producers to add competitive loudness to their product.

Before installing the Omnia.9 at our transmitter site, I took some time to listen to the action of the declipper as well as to the AGC and multiband compressor, by connecting the unit in one of our studios. A unique feature of the Omnia.9 is the internal patch point system that allows monitoring of each successive stage of processing individually.

The Omnia.9's built-in oscilloscope display confirmed what I was hearing by restoring the crest of severely clipped audio recordings. Amazing. Finally, the axiom "garbage in, garbage out" doesn't necessarily hold true.

This is an effective tool to have at any radio station and I knew that in the CHR world this circuit alone would be worth the price.

Once at the transmitter site, I easily connected our microwave-delivered AES audio to the Omnia 9. At our plants we use a composite (MPX) signal between the stereo generator in the processor and the FM transmitter's exciter input. The Omnia.9 has an RDS encoder, but we elected to continue to use our external WorldCast Systems FMB-80.

First, we fed the RDS encoder a reference pilot signal from the Omnia.9. Then the Omnia.9, in turn, fed the RDS-encoded subcarrier back into the processor. This closed-loop feature allows the Omnia.9 to "ride the gain" of the audio processing based upon where the RDS subcarrier modulation is at any instant.

One of the Omnia.9's AES outputs was then connected to our HD transmitter. The diversity delay of the Omnia.9 makes blending the two signals a snap. The only other connection needed was the IP Ethernet cable to allow all aspects of the Omnia.9 to be controlled conveniently from my laptop wherever I may be.

Speaking of remote control, I was pleasantly surprised to see the many signal displays that are available on the front are also shown on the PC remote software. Not only are all the adjustments and displays duplicated, but those patch points I mentioned earlier are available via an IP audio stream on your laptop. No matter where you are, it is possible to make adjustments and hear the live results instantly.

Never have I been this excited about an audio processor. Words like "loud" and "open" might appear to be mutually exclusive, but the Omnia.9 achieves both splendidly. What a treat, being able to hear and indentify individual instruments and their location within the sound field.

The bass is tight and distinctively clear without having the "boominess" of an overstuffed low end. The higher frequencies are clean, clear and free of any apparent distortion or the "fuzz" you hear with a crazy amount of processing sometimes employed on a CHR station.

The amazing thing is, this finely tuned end result doesn't mean any loss in volume.

Leif Claesson and his crew have done a wonderful job crafting the processing engine and GUI display. You will find a variety of good profiles loaded onto the box that will give any format a great sound signature or act as a starting point for further refinements within minutes of your unpacking the box.

The Omnia.9 is a distinctive processor and I am grateful for its help with our CHR format in Birmingham.

For information about the Omnia.9, contact Omnia Audio in Ohio at (216) 241-7225 or visit www.omniaaudio.com.

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KQ103 Chooses Vorsis AirAura

'Loud' and 'Best-Sounding' on the Dial Make a Florida Broadcaster Happy

USERREPORT

BY BILL SULLIVAN
Chief Engineer
WHKQ(FM)

ORLANDO, FLA. — Most radio stations in highly competitive markets take a serious interest in their on-air sound. At WHKQ(FM), better known as KQ103, we're no exception. In fact, we've probably been more obsessive about it than most in the last few months!

Our station recently went through a format change, and our new Spanish CHR format was going to require significant changes to our on-air processing. We were rebuilding our studios entirely, and since we'd never been satisfied with our previous processors, we decided it was time for a change.

We accepted many offers to evaluate several manufacturers' processors with varying results. Our experience with the flagship processor of one manufacturer was not promising at all. The unit had to be sent back for repair once during the demo period, and much of its functionality came in the form of promised "future free upgrades." We passed.

In August, Wheatstone allowed us to evaluate their flagship processor, the AirAura. When we received it (a brand-new unit, not a prototype), we installed it right away. We were surprised to find that we could set up a very acceptable sound using the provided presets. We saw improvement over our old processing right out of the box. A few days later, Wheatstone's Mike Erickson came down and helped us make some additional adjustments. Mike really made it sing and we'd never heard anything like it.

The demo taught us that the AirAura was far better than the rest of the units we'd tried, both in terms of its ability to improve our on-air sound and in the ease of manipulating its settings and parameters.

By far the most important person to satisfy was our general manager. His "golden ears" determine what flies and what doesn't for KQ103.

The AirAura was the first processor we evaluated that gave him what he truly wanted to hear on our station. The decision was made in December of 2011 to purchase it, and Wheatstone scheduled another visit from Mike Erickson for the final tweaks.

For that adventure, we gathered together eight vehicles, including the GM's car, my truck, and even Erickson's rental car, and headed to the roof of the parking garage for the strongest possible signal. Communicating between cars using smartphones and iPads, and using a laptop to adjust the AirAura remotely, we were able to discuss, implement and test various processing changes until we'd arrived at a loud, clean, competitive sound that satisfied everyone.

After several months with the AirAura, we're confident we've found the processor that will give our station the best sound possible. The boss even feels that the AirAura has improved some of the atmospheric and multipath issues he has experienced living on the back side of our antenna pattern.

Not only did we notice the difference, but apparently our competition noticed, too. In the weeks that followed, we took note of perceptible increases in loudness on several other stations in our listening area. We can't conclusively connect the two, of course; but what we do know is that in spite of their changes, KQ103 remains among the loudest signals — and the best sounding — on our dial. And in a competitive Florida market, that's an accomplishment.

For information, contact Jay Tyler at Wheatstone in North Carolina at (252) 638-7000 or visit www.wheatstone-processing.com.

ABOUT BUYER'S GUIDE

Radio World publishes User Reports on products in various equipment classes throughout the year to help potential buyers understand why colleagues chose the equipment they did. A User Report is an unpaid testimonial by a user who has already purchased the gear. A Radio World Product Evaluation, by contrast, is a freelance article by a paid reviewer who typically receives a demo loaner. Do you have a story to tell? Write to bmoss@nbmedia.com.

PRODUCTS & SERVICES SHOWCASE

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1664: Just what it looks like. Two tin cups and a string. But it transmitted sound!

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1936: The advent of the dial desk phone. No more asking the operator to connect you.

1963: Push buttons usher in the thoroughly modern world. Touch tones enter pop culture.

1983: The mobile phone is a reality. Plots in all TV shows get a boost!

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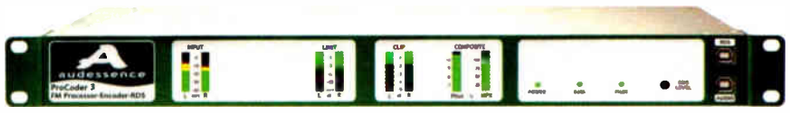
TECHUPDATES

AUDESSENCE PROCODER-3 CAN BE USED IN EXTREME ENVIRONMENTS

The Audessence ProCoder-3 features include a gated AGC, compressor, enhancer, limiter, low-pass filter, stereo encoder, composite clipper, tilt corrector and an RDS encoder.

Also part of the package is a low-power fanless design ideal for harsh operating environments. According to Audessence the ProCoder-3 has a low boot time and low latency.



The RDS is capable of dynamic services such as RT+ and EON and can be fed by various connectivity options including IP.

The adaptive Automatic Gain Control, compressor and brightness enhancer sections can be activated to form a separate processing chain for standalone applications.

Audessence says that a radio station's audio processing can be operated in overshoot-inhibiting "transparent mode" where a multiband audio processor located at the studio feeds one or many of the company's ProCoders via digital STLs over landline, microwave or satellite.

Performance is "within a gnat's whisker" of MPX direct from the multiband unit even on compressed STLs using a suitable codec such as aptX. Such an approach has been used in London where newcomer RinseFM (106.8 MHz) uses Orban 8600 and ProCoder-3 to achieve a big-station sound, according to the company.

Latest software includes ITU-412 MPX power limiter for European use and TMC (traffic data) capability for the RDS via UECP.

Another bonus, for extreme environments, is an "insect-proof" option, recently requested by BBC World Service, that covers up the only case aperture (DIP switches) to guarantee that even tiny termites found on some of their African sites can't get inside.

For information, contact Audessence in England at 011-44-144-488-0444 or visit www.audessence.com.

DAVID SLAYS GIANT AUDIO PROBLEMS

The David IV from Inovonics is an all-digital, DSP-based broadcast processor for FM, FM/HD Radio and online streaming.

Under the hood, it provides comprehensive audio processing, including five bands of dynamic range compression and equalization, gain-riding AGC, stereo field enhancements, sub-bass augmentation and a patented PIPP limiter. Included

are 25 factory presets optimized for popular contemporary world formats and 20 customizable user presets that can be shared over station networks.

Processing is integrated with a stereo generator featuring multiple independent level outputs and an RDS sync with active and metered internal combining.

The processor can accept analog and AES digital inputs at multiple sample rates. Both analog and AES digital line outputs run simultaneously. These outputs can be configured for pre-emphasized analog FM or 20 kHz flat digital and analog audio formats, providing integration options for many station or studio setups.

The David IV may be set up and controlled using the front-panel menu display and jog wheel, or connected to a network for full remote TCP/IP control over all parameters via the supplied software. Field-upgradable firmware updates take seconds and are free.

One of the benefits of the DSP-based design is speed. Inovonics promises a latency of only 4.2 ms from any input to any output, in any mode, and boots or power cycles to live audio in under 1 second. This enables better live monitoring for DJs and on-air talent and reduces downtime in the event of power failures.

Features include a backup and restore function along with a special control over multiband linking and independence. Inovonics says that this control allows the user effectively to blend between a full five-band setup or a more open wideband sound, providing the dynamics flexibility to stand out. List price is $2,950.

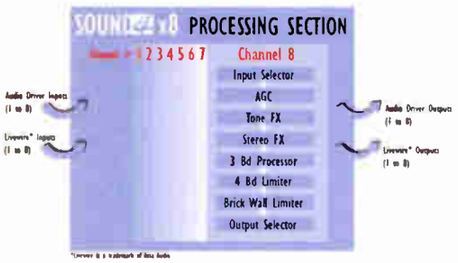
For information, contact Inovonics in California at (831) 458-0552 or visit www.inovonicsbroadcast.com.

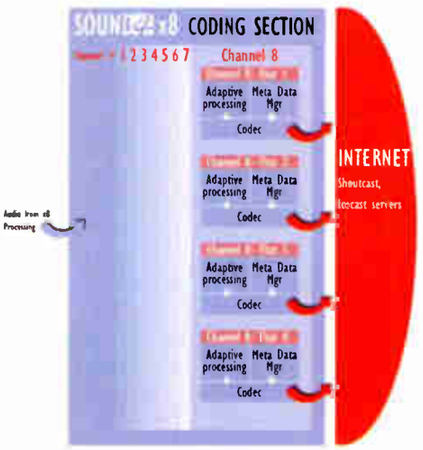
PRODUCTS & SERVICES SHOWCASE

World Radio History

SOUND4 DEBUTS SOUND CARD WITH PROCESSING FOR WEBCASTS

French audio card maker Sound4 says that its Sound4x8 is the first eight-channel processor dedicated to the treatment of Internet radio station streaming. It can process eight channels on a PCI Express card simultaneously and independently. It has eight inputs and outputs. The Sound4x8 is compatible with Windows and Livewire networks.





On processing side, Sound4x8 has an actual processing chain: AGC + tone FX (four-band parametric EQ/two-band EQ) + stereo FX + three-band compressor + four-band limiter + brickwall limiter.

On the coding side, it encodes each output up to four separate streams as MP3 (128 kbps), AAC (32 kbps) or AAC (64 kbps). Each stream can be corrected independently (adaptive processing) to compensate for the differences in sound due to the encoding. A station can thus customize streams according to the audience targeted: low bitrate audio for mobile devices, a higher bitrate for Internet listening.

On metadata side, the Sound4x8 will support different standards and the XML data bridge will allow a total integration with station automation suites.

For information, contact Sound4 in France and 011-33-413-415-540 or visit www.sound4.biz.

DAYSEQUERRA SEES AN ECLIPSE

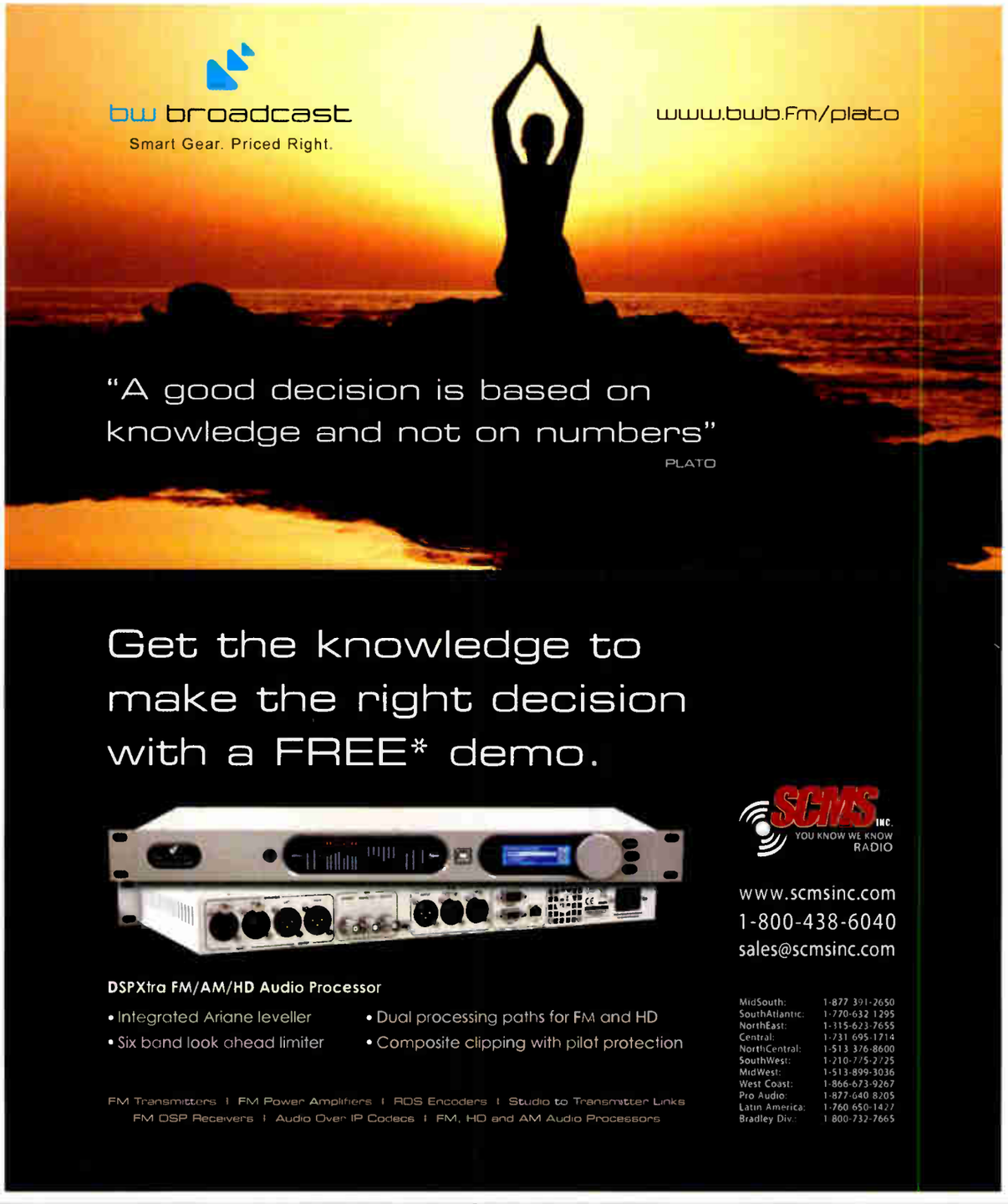
The DaySequerra Eclipse LBR4 Digital Radio Processor is a four-stream AES stereo digital radio processor designed for improving low-bit rate HD Radio multicasts and the HE-AAC v2 codec used in DAB and DRM digital radio.

According to the company the Eclipse features four independent, low-IMD audio processing chains and a proprietary perceptual loudness model developed by DTS based on its research into human hearing.

Each processing chain contains four codec pre-processing algorithms optimized for 24 kbps, 32 kbps, 48 kbps, 64 kbps and 96 kbps rates, tuned to reduce artifacts from lossy compression schemes and low-bit-rate transmission codecs. The company promises that Eclipse's DSP platform delivers a pristine, powerful sound free of processing artifacts.

DaySequerra President David Day said: "Today's radio listener expects choices with a push of a button without the distraction of poor quality and performance."

For information, contact DaySequerra in New Jersey at (856) 719-9900 or visit www.daysequerra.com.



World Radio History

TECHUPDATES

TC LM2 BUILT FOR MULTIPLE APPLICATIONS

The TC Electronic LM2 is a full-featured stereo loudness and true-peak level meter for broadcast, post or live sound duties. For compliance with broadcast standards, the LM2's front displays the all-important digits. For more loudness details, LM2 can be connected to a PC or Mac via USB for real-time Radar Loudness Metering using the included Icon application.

LM2 facilitates normalization and optimum use of dialnorm metadata in AC3 transmission in order to avoid level jumps between regular programming and promos or commercials. The LM2 comes preloaded with factory presets compliant with new ITU-R BS.1770-2, ATSC A/85, EBU R128, NABJ, OP-59, BCAP and more guidelines. The LM2 is field-upgradeable and will keep synchronized with global practices as they refine.

The LM2 offers a variety of 24-bit resolution audio inputs and outputs: AES/EBU, TOSlink, S/PDIF-AES3id, ADAT and analog. The LM2 may connect via USB to a PC or a Mac for access to the Radar display, logging, remote control, preset management and more.

TC Electronic says that the primary application for LM2 is as a loudness meter but that it also does automatic level offset of programs at a high resolution (48-bit, fixed point). Thus the LM2 includes a true-peak limiter to avoid output overload when positive gain normalization is required. For fans of speech normalization, allow LM2 to measure some regular dialog and normalize to that. Otherwise, its relative gate function automatically takes care of all sources.

For information, contact TC Electronic in Ontario at (519) 745-1158 or visit www.tcelecetronic.com.

OPTIMOD UPGRADES AVAILABLE

Bill and Kim Sacks offer factory-authorized refurbishing, updating and upgrading of legacy analog Optimods, particularly 8100 and 9100 models. They also sell new Optimods and offer after-the-sale support and service.

The Sacks say they consider the 8100 FM and 9100 AM Optimods the pinnacle of analog broadcast processing, the most competent analog audio processors made. A refurbished 8000, they say, is cherished for its invisibility and purity on fine arts formats.

The genius of Bob Orban's design is even more audible, they believe, once the machines are fortified with modern low-distortion op amps, new-generation film dielectric power supply improvements with better bypass caps, and the use of high-fidelity audio coupling capacitors. The result is a smoother, open and transparent sound. "We always preserve the original Orban character and polish," according to Bill Sacks.

The company says a legacy analog Optimod — refurbished by them with new caps, chips and precise realignment — is the only first-rate analog processor for stations seeking the silky smooth, pure analog sound of an Optimod.

Roger DuFault, engineer of WNAV(AM) in Annapolis, Md., is among those endorsing the company's work, in his case on an Optimod 9000.

The Sacks also offer a proprietary XT bass EQ modification, a $450 revision upgrade that provides two separate pure L+R bass controls at two frequencies. The existing separate left and right bass EQ controls can produce undesirable exaggerated L-R low frequency information caused by imprecise balance of the two bass controls when adjusting LF EQ on the fly, they say.

The upgrade eliminates LF EQ imbalances and any need to re-null the low-frequency L–R with a tone to prevent unnecessary low-frequency L–R modulation and its attendant potential intermodulation distortion of the 38 kHz subcarrier each time the EQ is adjusted — thus permitting on-the-fly tuning.

For information, contact Bill Sacks, CPBE in Maryland at (301) 880-7109 or visit www.optimod.fm.

BW BROADCAST OFFERS LOW-LATENCY PROCESSOR

BW Broadcast says modern digital FM audio processing has allowed stations to sound louder and cleaner than ever, but with the one big sacrifice of delay. While listeners won't notice, a station's talent does when trying to monitor. Presenters and guests also don't want to listen to a flat unprocessed feed. The company's answer is a low-delay processor designed for this purpose, the DSPXmini-ST.

With pre/de-emphasis and FM-style clipping, the station's talent gets a loud processed signal but with delay of 4 ms, so there are no complaints of an echo in their headphones.

The unit was designed for the BBC, and is available for general sale. According to BW Broadcasting it is also substantially more affordable than competing products at $1,500 list.

For information, contact BW Broadcast at (866) 376-1613 or visit www.bwbroadcast.com.

World Radio History

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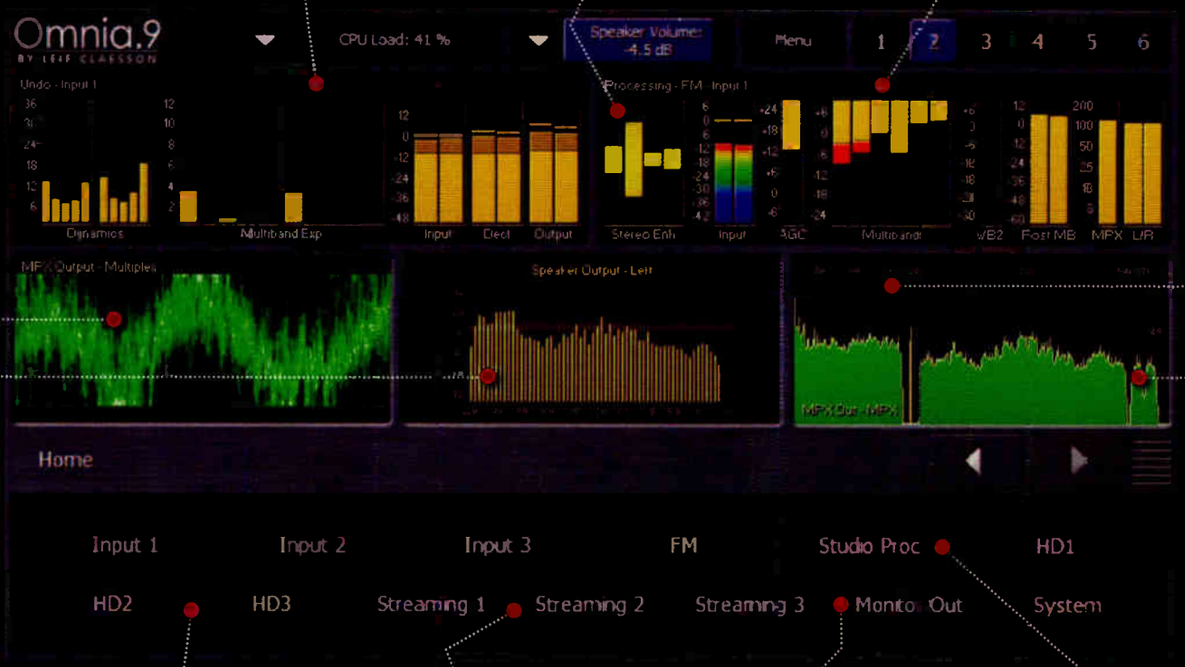
Enables up to 140% Left/Right peak modulation within 100% total modulation, making the choice between being loud or clean a thing of the past. (Due to special sauce inside Omnia.9)



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Built-in RTA and pink noise generator allow you to calibrate your speakers to ensure your processing decisions are made on accurate, calibrated monitors.

RDS ENCODING
Send RDS without losing loudness by using the built-in RDS encoder. Loudness is maintained due to the method of embedding the RDS signal. (More of that special sauce makes this possible)

PROCESSING FOR FM, HD, AND STREAMING AUDIO
FM, HD-1, HD-2, HD-3, 3 audio streams, all have independent processing cores (multicast version).

BUILT-IN ENCODING FOR STREAMING AUDIO
No need for outboard encoders. Encodes to AAC, MP2, MP3, WMA, or Vorbis formats (multicast version).

SELECTABLE PATCH POINTS
Monitor and measure audio at virtually any point in the processing chain for each individual core.

SEPARATE STUDIO PROCESSING CORE
Provides low-latency, independently-processed audio for talent monitoring.

More stuff. Less space.

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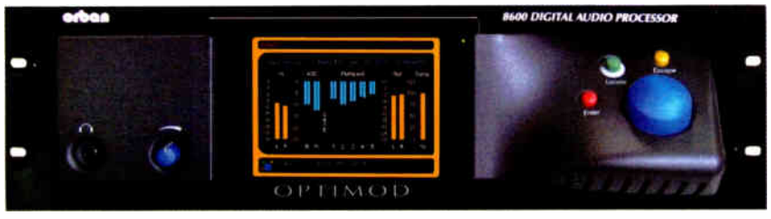
World Radio History

TECHUPDATES

ORBAN OPTIMOD-FM 8600 DECREASES DISTORTION

Orban says that its Optimod-FM 8600's improved peak limiter technology decreases distortion while increasing transient punch and high-frequency power handling capacity.

According to the company, compared to the FM channel peak limiter in the Optimod-FM 8500, the new peak limiter typically provides 2.5 to 3 dB more power at high frequencies, which minimizes audible HF loss caused by pre-emphasis limiting.



"Problem material" that used to cause audible distortion is handled cleanly.

The 8600 provides stereo enhancement, equalization, AGC, multiband compression, low-IM peak limiting, stereo encoding and composite limiting. Processing for digital media like netcasts and HD Radio is standard. The FM and digital media processing paths split after the 8600's stereo enhancer and AGC. There are two equalizers, multiband compressors and peak limiters, allowing the analog FM and digital media processing to be optimized separately.

Orban offers an 8600 upgrade kit for 8500 and 8500FMs that is installed in the field by replacing the DSP board and CPU module. The upgrade requires no soldering or special tools.

For information, contact Orban in Arizona at (480) 403-8322 or visit www.orban.com.

AXEL FLIES THE FALCON LINE OF PROCESSORS

Falcon is a line of digital audio processors by Axel Technology that the company says fits demanding requirements of FM, broadcast TV and webstreaming, cable and satellite TVs.

According to Axel its Falcon processors provide detailed, clear sound to deliver impact at high volume density, widening stereo image for a deep surround sensation.

The Falcon 15 FM is marketed as a compact and cost-effective three-band digital audio processor, stereo encoder and RDS encoder.

The Falcon Five Elite FM is Axel's top of the range. This is a five-band digital audio processor with a composite output featuring a stereo generator and RDS encoding. It includes remote management via Web browser and SNMP. It is also available in a TV version.

The Falcon Three TV SDI is a three-band digital audio processor. Axel says that it is the first digital audio processor for TV featuring SDI-in and SDI-out with embedded audio. It has been designed in order to satisfy requirements of SDI digital TV broadcasters that aim to manage TV audio loudness and equalization, including protection against overmodulation and accurate AV sync. Main features include stereo and RDS/RBDS encoder.

The Falcon line allows any broadcaster to find their own sound signature including the ITU.BS 412 multiplex spec for FM stations and ITU.BS 1770 loudness spec for TV stations.

For information, contact Axel Technology at 011-39-051-736555 or visit www.axeltechnology.com.

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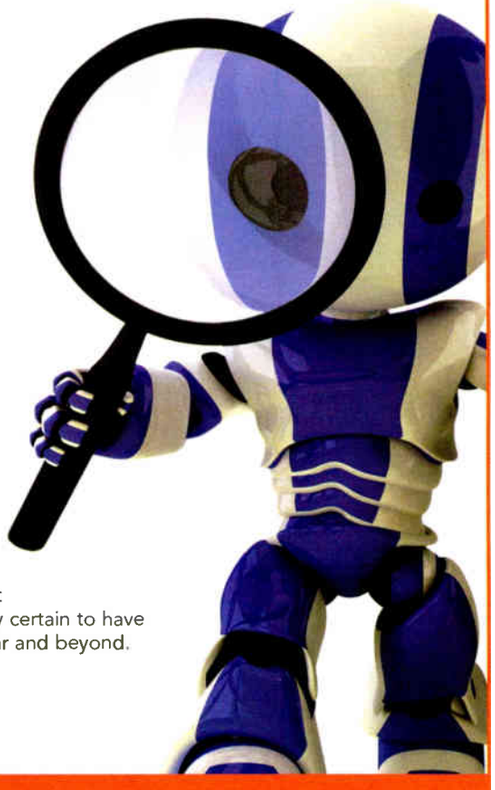

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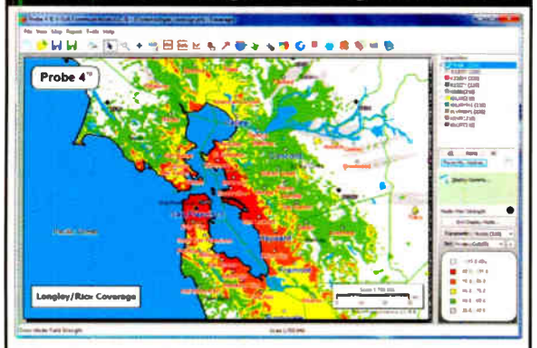

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WANT TO SELL

It's free and it has been expanded. The only cost is to keep us informed as to how the system is performing and let us know how you are using it. DIY-DJ, is a Linux based radio automation system and now sports a record scheduler (DIY-DJ-RECORDER) which allows you to schedule the recording of a network or any other program for replay later as well as a basic logging system. Beside these additions the system schedules music, does voice tracking (ALWAYS hit the vocal), create a shell, live assist, exact time events, join satellite feeds, automated temperature announce, do unattended remote events and more. Call (406) 679-0527 or email krws@digitaldevelopment.net for a copy today.

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Wanted: old analog automation equip, filters and EQ, tube amps, reel to reel, cart machines and parts. Pacific NW area. 503-493-2983.

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Radio broadcasts of Major League Baseball, NFL, and some college football games that are on cassette tapes, approx 100 to 125 games, time period of entire collection os from the 1950's – 1970's, BO. Must purchase entire collection. Contact Ron, 925-284-5428 or ronwtamm@yahoo.com

(3) Broadcast Electronics 900-2110 Cart Playback machines & TTC Record and Playback cart machine, removed from station, not working, needs repairs, BO. dukenrat@sonic.net.

UREI LA-4 compressor/ limitor, $550; Aphex 230 Master Voice Channel, microphone audio processor, $475; Broadcast Electronics Model 150, 8 fader – rotary, 2 chnl audio console, $250; Marti RPT-30 remote pickup xmtr, 161 MHz, $500. John, 757-284-8455 or john.dolive@hotmail.com.

WANT TO BUY

Collector wants to buy: old vintage pro gears, compressor/limiter, microphone, mixing consoles, amplifiers, mic preamps, speakers, turntables, EQ working or not, working transformers (UTC Western Electric), Fairchild, Western Electric, Langevin, RCA, Gates, Urei, Altec, Pultec, Collins. Cash - pick up 773-339-9035.

2" plastic "spot" reels 6.5 or 8" diameter, as used for quad video. Wayne, Audio Village, 760-320-0728 or audiovlg@gte.net.

Equipment Wanted: obsolete, or out of service broadcast and recording gear, amplifiers, processing, radio or mixing consoles, microphones, etc. Large lots preferred. Pickup or shipping can be discussed. 443-854-0725 or ajkivi@gmail.com.

I'm looking for San Francisco radio recordings from the 1920's through the 1980's. For example newscast, talk shows, music shows, live band remotes, etc. Stations like KGO, KFRC, KSFO, KTAB, KDIA, KWBR, KSFX, KOBY, KCBS, KQW, KRE, KTIM, KYA, etc, I will pay for copies... Feel free to call me at 925-284-5428 or you can email me at ronwtamm@yahoo.com.

Looking for a broadcast excerpt of a SanFrancisco Giant's taped off of KSFO radio from 1959, interviews with Willie Mays, Dusty Rhodes & some play by play excerpts, also features a homerun by Willie Mays and Felipe Alou stealing second base, running time is 18:02, also looking for SF Giants games and/or highlights from 1958-1978 also taped off KSFO Radio. Ron, 925-284-5428 or ronwtamm@yahoo.com.

Looking for KFRC signoff radio broadcast from 1930 Andy Potter, running time is 0:22 & also the KLX kitchen the program guest is Susanne Caygill, a discussion of women's affairs with a long promotion for Caygill's appearance at a local store. Anne Truax, Susanne Caygill, running time is 13:44. Ron, 925-284-5428 or email ronwtamm@yahoo.com.

Looking for KTIM FM radio shows from 1981-1984 if possible unscoped. R Tamm, 925-284-5428 or ronwtamm@yahoo.com.

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Superior Broadcast Elenos 10 to 300 watt FM bdct xmtr ETG 250/300, $2500; LPB TX 2-20 AM 20 watt bdct xmtr & LPB T8 line couple for TX 2-20 xmtr for carrier current operation, $400. John, 757-284-8455 or john.dolive@hotmail.com.

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Passionate, visionary/innovative & driven Radio/TV show host, production, motivational speaker, graphic designer, and published author. Unique approach with great ethic. Rayvon Walker, 682-667-0744 or walklikeaking@msn.com.

World Radio History

READER'S FORUM

KUDOS TO 'REAL MEN'

I read Mike Vanhooser's letter in the Feb. 15 issue about chasing copper thieves with his Jeep. That was hilarious!

I've done something similar, and having been there I can tell you it truly is a great time. Nice to see that there are a few of us "real men" out here still, willing to chase down a dirtbag who would do your station harm.

One night years ago when responding to the KSTN(AM) site, I spotted one such dirtbag messing around inside. I chased him around the property and eventually to his vehicle. He took off, so I jumped in my truck and followed while on the phone with the PD dispatcher. The dispatcher kept yelling at me to stop chasing him, let him go, not to put myself in danger, etc. I kept screaming back at her to shut up a second and take my report of our current location!

In this day and age, a pizza can get to the transmitter site faster than the cops. These days we hear over and over, "Just call the cops, and leave the area for your safety." Yea, sure, if you're a big weenie. A real engineer sticks around and makes sure his/her site is safe. Admittedly, it's always fun to see a dirtbag get a knee in the back and eating dirt when some cop jumps on him and the dog is ripping his ankles off.

Station owners and management prohibit engineers from getting involved, or even defending themselves in any way, possibly because the P/C lawyers weenie-ized them without them realizing it, just like everyone else.

Mass kudos to Mr. Vanhooser, and if he's ever out this way, I'd like to invite him to lunch and to spend a few hours at the gun range.

Paul Shinn
Stockton, Calif.

FRUSTRATED BY HD RADIO

I have really tried to like this new broadcast medium. I cannot. The promotion is terrible; big yellow box stores claim you have to subscribe; and there is no hook to keep the ears on. The new medium shows promise, but falls flat because of technical and programming.

I have three HD Radio receivers, including the Radiosophy. All three are great analog radios but suffer in the terrain of San Diego. Main reason: If listening to an HD2 station and you lose it, the mashup can tear your hair out as the radio falls back to the analog signal. I personally know consumers who have taken their car radio back because they believed the radio was broke. It is the technology.

There has to be a better mousetrap out there to hook radio listeners. Reading that this has been a standard for nearly 10 years amazes me; it remains a mystery to the group that buys radios. A big #fail to the FCC and the company that pushes it.

Christopher Carmichael
Owner
SDRadio.net
Santee, Calif.

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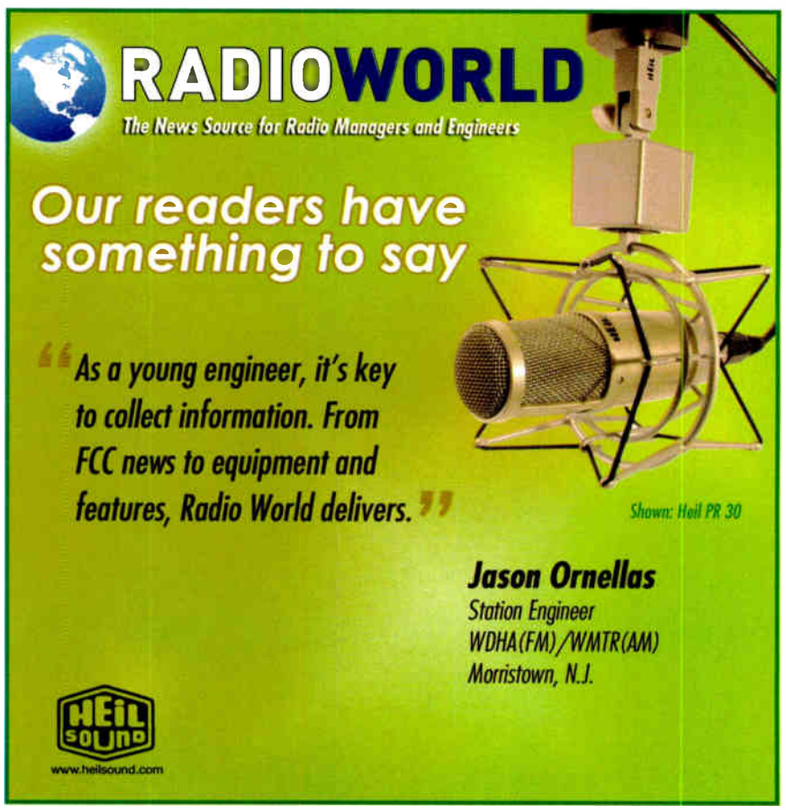


World Radio History

OPINION

Innovate In-House for HD Radio

Underuse of Those Channels Represents An Opportunity to Flex Creative Muscle

COMMENTARY

ALAN R. PETERSON

The promise of HD Radio has been more stations, more diversity and more programming choices than ever before, for a much grander listening experience by way of the same stations we have enjoyed since forever.

In spite of the Kassof study referenced in Leslie Stimson's excellent article "HD Awareness Remains Low" in the Feb. 15 issue of RW, I am not convinced that consumer confusion is entirely to blame.

Creative offerings on many HD channels are limited, uninspired, in many instances simply rebroadcasts of existing stations elsewhere in the chain; sometimes nothing more than duplicating a sister AM station or a co-owned out-of-market signal.

Don't get me wrong; there are some innovative things happening on those "secret" channels — here in D.C. there are bluegrass, Vietnamese talk and opera — but a lot of HD channels are going unused or underutilized, and frankly if I wanted to hear an AM station that badly, I'd turn on my AM radio.

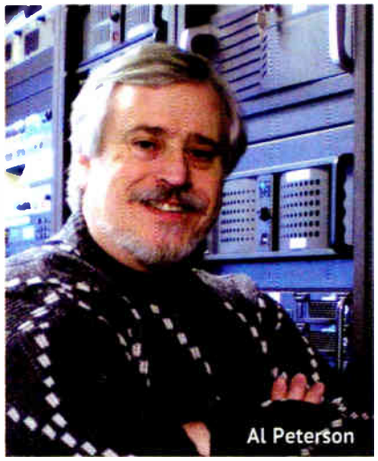
It does not help that receiver prices are still irrationally high for the typical consumer. In late January I could obtain a portable HD receiver online from Best Buy for $49.95, while a rudimentary RCA MP3 player from Target sold for half that.

It is also hard to ignore Internet broadcast forums, with engineers and radio gadflies warming up the orchestra to play the swan song for HD Radio, calling it a technology that has failed for one reason or another.

I don't agree; at least not yet. I have given all the other "wonder" technologies a fair chance along the way, including AM stereo, Quad FM and goodness knows what else. Some worked, some fizzled, some just died a natural death (carts, 45 rpm vinyl, et al).

Rather than blame the technology or the marketing, consider the severe dearth of creative and innovative programming that deserves a shot and should be airing.

Fellow broadcasters, let me share a strategy for your HD allocations that probably won't cost you more than the equivalent of a couple of spots on your main channel, if that.



GET 'GRUMPY' INTO MY OFFICE

At any station that still has a live and local airstaff, there is one grumpy pain in the butt — male or female — who is unhappy about everything: the music, the lack of creativity, the rigid formatics, you name it.

They won't quit their job, but will angrily mutter to anyone in earshot, "Man, if I ran this place, I'd ..."

That's the person you want programming your HD channel!

Why? Because they are hungry. Because they want the challenge. Because they know something is missing in the market. Because maybe they really are on to something. And because all that is airing on HD2 is just a rebroadcast of the satellite news/talker. There truly is nothing to lose.

They won't come to you to make the proposal, so you bring it to them. Take them aside one day for this conference:

"Marty, I know you have your own opinions about the way we run the FM, and that you have your own ideas on how things should be. Well, we have an HD channel we're not doing anything with. It's all yours. Come up with the music, the formatics, the elements, everything. As long as it doesn't compete directly with our main channel or eat too much into your own station duties and show, I'll support it completely.

"I'll put aside space on the music server for your material, you can use Ed's old office to work out of, and you are free to ask anyone on the floor if they'd cut some occasional voicework for you. There's nothing in the budget right now for this, so for the time being it will have to be a labor of love. More importantly, it's a chance for you to do things your way, just as you've wanted. I want to launch in 45 days, so get moving. And good luck."

You might need to look at that BMI music agreement again, and perhaps add another automation terminal at some expense (or go the standalone system route on a spare computer). You may also need to sell it to the corporate office, which had other ideas about that HD channel.

Too weird? Remember, different off-center thinking is what gave us New York's legendary Z-100, the Music of Your Life, the "Howard Stern Show," all-sports talk, the "Froggy" format ... need I continue?

Decades ago when FM radio was the loss leader, it was innovative programming in that band that dethroned AM as king. Radio needs innovation, and has always turned to the folks inside those foam-lined walls for inspiration.

IT'LL NEVER WORK

No doubt this will be met by many objections, ranging from existing workloads to the fear of undisciplined talents being turned loose on the air, to "it's too simple to work," led by critics crying why it cannot be done and why we shouldn't even try. The people I would rather hear from are those who come up with workarounds and share their efforts.

Each FM station has, essentially, triple the audio-carrying capacity it previously had. The underuse of HD is radio's opportunity to "go with its gut" and utilize its creative — if not cranky — people once again.

Alan Peterson, KJ4IVD, CBT CEA, is production director and assistant CE for the Radio America Network. An earlier version of his strategy was posted on www.dcrtv.com.

Comment here at radioworld@nbmedia.com. *Reach the author at* apeterson@radioamerica.org

Radio needs innovation, and has always turned to the folks inside those foam-lined walls for inspiration.

CORRECTION

A Tech Update in the March 14 issue described RIZ Transmitters as being in Hungary. The company is based in Croatia.

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