



RADIO WORLD

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Transmitter Manufacturers Explore TV

In a soft domestic radio transmission market, suppliers pursue TV here and overseas

BY RANDY J. STINE

Two well-established radio equipment manufacturers are diversifying their product portfolios to include television as a way to capitalize on future international growth.

Nautel and Broadcast Electronics each have made announcements related to TV transmission products in the face of soft domestic sales.

The separate moves coincide with a recent announcement that Harris Corp., which is active in both TV and radio transmitter manufacturing, is selling off its Broadcast Communications Division. But BE and Nautel each say its own developments have more to do with long-term strategy than short-term market share opportunities.

Nautel, which makes AM and FM radio transmitters, will begin manufacturing for the television market, focusing initially on the power range of 2 W to 100 W UHF. That low-power TV transmitter segment presents the largest opportunity in the television marketplace, the company said. The company expects to begin taking orders for its

NT100 digital television transmitter by the end of the year.

Nautel believes the television space is a natural progression for the company, said Chuck Kelly, director of sales.

"In the last five years [Nautel] has grown a great deal. Our market share has grown considerably even as the market itself has fallen back some. We can absorb the peaks and valleys of the market, but this allows us to broaden the base by adding more products. That is what TV accomplishes for us."

Nautel employs 175 people at its headquarters in Hackett's Cove, Nova Scotia, and another 25 in Bangor, Maine. The company, under new ownership since the fall of 2011, is still evaluating whether to add employees because

of the market expansion.

Kelly, heading up Nautel's television project, said clients have asked the company to get into the TV side of the business. "Our customers who deal in radio and TV have told us they are worried about the financial stability of TV equipment manufacturers. At the same time, there is a lot of room for growth on the TV transmission side of the business. We put a lot of time into listening to our customers."

Nautel plans a full line of TV transmitters, including high-power products; but radio will remain Nautel's main focus and will continue to be "what we think about all the time," he said. Though U.S. radio in general faces increased pressure for listeners from new online and satellite-based competition, and saw its revenue fall in 2008 and 2009, the growth in radio advertising

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ISLANDS IN THE STREAM

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Pandora and Clear Channel may be competitors, but now they're also allies in the fight for "fair" royalties. With Internet streaming services now the focus of legislation in Congress, this issue is gaining major traction, Matthew Lasar writes.

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World Radio History

RADIO IN TV

(continued from page 1)

ing revenue since that point has been steady, Kelly said.

"Online media face challenges in the future as the existing mobile data networks move to a cost for usage model, while free over-the-air radio allows increased and higher quality content choices. Thus, we believe in the long-term viability of the radio business both in North America and worldwide."

Nautel is working with several companies on the television project, Kelly said, including Denmark-based ProTelevision Technologies and a South Korean component maker. He declined to say where the company's television transmitters will be assembled.

"We have worked and cooperated with several other organizations on this project. The modulator is coming from ProTelevision, which is well-respected. There are components in the transmitter coming from South Korea as well."

Nautel will incorporate technology it



A Nautel logo highlights the addition of TV.

and studio automation systems among other products, recently entered a strategic partnership with television transmission equipment designer and manufacturer Larcen. Under the plan the companies will cross-sell each other's products. Combined, the companies can provide a full portfolio of radio, studio automation and television broadcast solutions, BE officials said.

"For us there is strategic value. The DNA of a TV transmitter and a radio transmitter is virtually identical," said Broadcast Electronics President/CEO Joseph Roark. "Ninety-five-plus percent of a transmitter's hardware is the same.

has no representation in a given market. Each company will service their products, manufacture their products and warranty their products. Our initial focus is to maximize our distribution channel strengths to provide our customers with complete offerings in both radio and TV."

Roark described Larcen's "culture" as similar to BE's in terms of attitude and approach to business. "Both have a strong commitment to our customers and apply a lean business approach with a focus on innovation, quality, delivery and cost as being paramount in our methodologies."

The partnership will not affect BE's radio customers, Roark said, and BE's R&D funding remains in place.

"BE continues to spend millions per year on R&D on hardware and software development, including a new social media company, Commotion, which will allow our customers to actually monetize their use of streaming, Twitter, Facebook, their website or any other form of electronic communication," he said.

"This is all part of [BE's] strategy to



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has developed, like its Advanced User Interface, into the TV side, he said.

Kelly said Nautel timed its announcement to coincide with the IBC2012 fall conference in Amsterdam. "That allowed us to take what in effect was a concept car to the show to gain feedback and get broadcasters' impressions of the new TV transmitter. The [IBC] has high visibility in parts of the world yet to be built out on the television side."

Nautel plans to market the NT100 TV transmitter in the United States as well as abroad. The fact that the Federal Communications Commission has set a September 2015 deadline for LPTV and TV translators to end analog television transmission and convert to digital played a role Nautel's timing, Kelly said.

"We're approaching the TV market globally, but yes, the opportunities in the U.S. are an important part of that strategy."

Separately, Broadcast Electronics, which makes FM and AM transmitters

For us, getting into new markets and broadening our exposure and increasing our opportunities for bids, especially with governments, is so substantial we recognized we had to enter the market."

Roark said there are only two significant players that do anything similar on a global stage. "That is Rohde & Schwarz out of Germany, and Harris."

Larcen, based in Ontario, Canada, is known especially for low-power offerings in North America, Roark said, with substantial market share in that segment of the business. He said Larcen has broadened its scope and range of products recently to include a range of high-power solid-state digital transmitters available in air- and liquid-cooled models to serve various global standards.

BE and Larcen will continue manufacturing their respective radio and TV products, Roark said.

"Each company will be responsible for promoting their partner's products through their channels when the other

evolve and expand the breadth of services and products that our customers need to be successful."

BE is privately held and doesn't release earnings or publicize its number of employees. The company, based in Quincy, Ill., believes all radio and TV equipment suppliers have seen sales declines this year. "The equipment industry has seen substantial declines in domestic activity due to both macro-economic issues and our customers' focus on acquisition opportunities made more affordable by cheap money and lower multiples on radio station properties," Roark said.

"In general, the radio market has been quite soft domestically. There was a boom from 2005-2007 with HD Radio transmitter sales," Roark said. "but today, most companies are only buying replacement equipment when they have no other choice, as their cash is being committed to acquisition activ-

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Change Would 'Stifle Small Businesses'

The owner of a small broadcast equipment company speaks out against proposals

Progressive Concepts is a radio broadcast equipment supplier based in the Chicago area. Eric Hoppe founded the company in 1990, starting it as a catalog sales organization; it has since expanded to other sales channels as well.

Hoppe opposes proposals in Washington to close a retail sales tax "loophole." The issue affects buyers and sellers of broadcast equipment. As part of Radio World's coverage of this issue, which we began in our Sept. 26 edition, I asked Hoppe to expand on his perspective.

McLane: What is Progressive Concepts' position on the Marketplace Equity Act?

Hoppe: As you know, there are currently two separate bills on the Hill, the Marketplace Equity Act and the Marketplace Fairness Act. If either one were passed, it could have devastating effects on small Internet-based businesses like Progressive Concepts.

The biggest problem with both bills is that they set the exemption limit far

too low for small businesses. One sets the exemption limit at an annual gross sales of less than \$500,000, while the other sets the limit at \$1 million in annual gross sales. The exemption limit would allow businesses whose annual gross sales are below the threshold to be exempt from the new law.

It is my opinion that even a business with \$2 million to \$3 million in gross annual sales is likely to lack the resources necessary to deal with the added costs associated with bringing their business into compliance with the plethora of new tax regulations from 44 other states. Unfortunately, there are no provisions in either bill for raising the exemption level.

Small businesses like Progressive Concepts would find themselves overburdened by additional administrative



Eric Hoppe, right, and administrative assistant Beth Yucus stand outside Progressive Concepts in Streamwood, Ill.

costs incurred by having to comply with over 44 new state sales tax laws. Larger online e-tailers such as Target or Wal-Mart are already collecting taxes in those states because they already have "nexus" [a physical presence of some sort] in those states, so they would be completely unaffected by the new law.

How do the existing retail sales tax laws affect your business operations? Do you currently collect state tax?

Progressive Concepts is located in Cook County, Ill. The existing sales tax laws have little effect on Progressive Concepts because the laws in Cook

FROM THE EDITOR



Paul McLane

state (interstate) and international sales. We also do a good deal of business with the federal government, who are exempt from state sales tax in Illinois.

There are only five states that currently have no sales tax: Alaska, Delaware, Montana, New Hampshire and Oregon.

If the proposed changes take effect, what impact do you anticipate they'd have on you?

It would be incredibly difficult for a small business with less than three employees such as Progressive Concepts to have to comply with the myriad of tax laws found in the other 44 states that currently collect sales tax. I find it ironic that the federal government would even consider passing a law that most certainly will stifle small businesses at a time when they should be nurturing them. After all, it's the economic engines of small businesses that keep this country running.

Backers including the Consumer Electronics Association say this change simply would close a collection loophole; they consider it a matter of fairness and say the loophole is hurting brick-and-mortar retailers.

I vehemently disagree with anyone who claims that a change will "simply close a collection loophole." The way that taxes on interstate commerce are

Even a business with \$2 million to \$3 million in gross annual sales, Hoppe said, 'is likely to lack the resources necessary to deal with the added costs.'

County are relatively easy to comply with. We simply collect the appropriate tax rate from any customers who are inside the state of Illinois and pass it along to the state in the form of an annual sales tax return. However, can you imagine the added time and costs associated with filing out 45 individual sales tax returns and mailing in 45 checks? Some states will require monthly returns, thereby compounding the problem for small businesses. It's a huge can of worms that I'd rather not open.

A very small percentage, less than 1 percent, of our total sales originate within the state of Illinois. The majority of our sales are derived from out-of-

currently treated do not contain a "loophole"; they are the law.

Let's take a quick look at the Constitution of the United States of America, specifically the fifth and sixth paragraphs (clauses) of the ninth section of the first article.

They state: "No Tax or Duty shall be laid on Articles exported from any State. No Preference shall be given by any Regulation of Commerce or Revenue to the Ports of one State over those of another; nor shall Vessels bound to, or from one State be obliged to enter, clear, or pay Duties in another."

So what do I say to anyone who feels

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NEWSROUNDUP

IEEE: Organizers are moving the IEEE Broadcast Symposium west for at least the next two years in an effort to grow attendance. Held for 60 years in the Washington area, the IEEE BTS will be in San Diego in 2013 and San Antonio, Texas, in 2014.

ANTITRUST: The Radio Music License Committee filed an antitrust complaint in federal court against SESAC, alleging the public performance-right licensing agency is acting as a monopoly, forc-

ing commercial broadcasters to pay exorbitant rates to perform musical works in the SESAC repertory publicly. The action comes as the RMLC is fresh off legal settlements that led to lower rates for radio with ASCAP and BMI.

RURAL RADIO: The FCC clarified and upheld its rural radio policies. In particular, it clarified aspects of new policies for evaluating mutually exclusive proposals for radio service, as well as for considering applications to change a station's community of license. In 2009, the commission changed its

allotment and assignment procedures for new stations, putting less emphasis on total population served when considering competing proposals.

2.3 GHZ: AT&T, the largest wireless communications services (WCS) licensee on the 2.3 GHz band, and its neighbor SiriusXM reached a deal that allows AT&T to use the spectrum for mobile broadband while limiting interference to satellite radio. The deal also provides for mitigation should such interference occur. The FCC updated its WCS rules to reflect the change.



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

VERDICT FOR DIGITAL RADIO IN BRAZIL?

Digital Radio Mondiale supporters hope Brazil selects a digital radio technology by the end of the year. However, judging by conflicting press reports from that country, it's not clear if that's a likely timeframe.

Both DRM and HD Radio are under consideration. Brazil is South America's largest country in both population (about 200 million) and land mass. The country represents a huge receiver market.

DRM representatives demonstrated the technology to broadcasters, manufacturers and other radio experts in Sao Paulo in October, and have formed a chapter of the DRM Consortium. "The DRM community are confident that the Brazilian government is analyzing all the options thoroughly in order to come to the best choice for this country and its people, as well as the continent," stated DRM Consortium Chair Ruxandra Obreja.

DRM originally was developed to help transmitting bands under 30 MHz, which are challenged by environmental noise, fading, narrow channel bandwidth and skywave interference from distant stations. The system, now called DRM30, operates on short-, medium- and long-wave.

The DRM standard for broadcast frequencies above 30 MHz, called DRM+, uses the same audio coding, data services, multiplexing and signaling schemes as DRM30, but introduces an additional transmission mode optimized for those bands.

In Brazil, the DRM system has been tested in major cities like Sao Paulo, Belo Horizonte, Rio de Janeiro, Brasilia and Duque de Caxias, according to the DRM Consortium.

HD Radio, too, has been tested in Brazil. In 2008, HD Radio AM and FM were tested in four cities: Sao Paulo, Belo Horizonte, Ribeirao Preto and Cordeiropolis.

This summer, the Ministry of Communications conducted new HD Radio AM and FM tests in Sao Paulo, Belo Horizonte and the capital city Brasilia, iBiquity Digital tells me.

According to population estimates in the CIA World Factbook, Sao Paulo is the largest metro at nearly 20 million people, followed by Rio de Janeiro with 11.8 million. That website estimates Belo Horizonte at 5.7 million,

Porto Alegre at 4 million and Brasilia with 3.7 million.

A technical report summarizing results of the DRM and HD Radio tests was expected soon, according to iBiquity Digital and the DRM Consortium.

The Brazilian government also is forming a digital radio consulting council, which will study the systems and make a recommendation to the Minister of Communications. They were supposed to have their first meeting this month, but all members had not been named as of early October, according to published accounts.

Brazil must pick a digital radio standard yet this year, with the actual transition to take several years, according to a news account that quotes Minister of Communications Paulo Bernardo.

However, another account reports that Bernardo told the Brazilian Association of Radio and Television Stations he wants to avoid a hasty decision and the decision will have to wait until next year. That's because Brazil needs to decide whether it wants to migrate AM stations to the FM band by moving those AMs to TV Channels 5 and 6, which will be vacated as Brazilian TV broadcasters transition to digital. The government must decide this issue before settling on a digital radio standard.

Regulators also want digital radio receivers to be manufactured in Brazil, according to various local press accounts.

I imagine that as Mexico has allowed stations to transition to HD Radio on a voluntary basis, so, too, would Brazil, recognizing that not every station will have the money or the desire to go digital. Receiver module and chip manufacturers, of course, would like a common platform in South and North America.

Whichever standard Brazil chooses, the choice is going to have ramifications for broadcasters, technology developers and equipment manufacturers, given the size of the country's population, fifth in the world.

I see Brazil possibly adopting dual standards, DRM for digital AM and HD Radio for FM, spurring both transmitter and receiver sales. For DRM especially, that would be the first of what I would call consumer-grade receivers for DRM to be readily available.

With HD, Brazilian broadcasters would get a system that's much farther along than it was when "IBOC" was introduced in the U.S.



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RADIO IN TV*(continued from page 3)*

ity and debt repayment.”

“This is true in transmitters, but also the ancillary products, antennas and towers. There is still domestic business to be

had, but it is a fraction of what it used to be for all equipment manufacturers and service providers. We believe there is an ever-growing, pent-up demand for equipment that continues to be deferred due to acquisition spending; but the day will come when equipment must be replaced, not repaired.”

The international market is where growth has been significant, Roark said, in hardware, software and ancillary equipment.

“Our business model has gone from 60 to 70 percent domestic, to 70 to 80 percent international. Our distribution reaches more than 130 markets around the world and we expect continued growth as nations continue their broadcast infrastructure buildout, whether it be analog or digital,” Roark said.

“Even international has slowed a bit this year because of the European debt and banking crisis as well as political unrest in historically strong markets.”

Larcan CEO Steven Bell stated in a press release that the company is excited to partner with BE, “to drive the companies forward for innovation internationally.”

OPPORTUNITY

Meanwhile, some observers speculated that BE and Nautel see Harris’ decision to sell its equipment division — including its TV and radio transmitter manufacturing operations — as an opportunity to gain their own market share in television. Harris has said it hopes to announce a sale by the end of this year. The company has indicated it prefers to sell that entire division intact.

BE has said it explored purchasing pieces of Harris Broadcast. Nautel declined to comment on whether it had approached Harris about buying the broadcast equipment division.

Mary Ann Seidler, director of North American sales for transmitter company Elenos USA, said other companies may think this is a good time to steal market share from Harris.

“I can’t speak for BE or Nautel and can only guess to the timing of this news,” she said. “It’s interesting to see others get into TV. [BE and Nautel] have a business philosophy they are following.”

Elenos earlier this year expanded its business presence in the U.S. and Canadian markets. Seidler said Elenos will continue to focus specifically on FM radio.

Asked for comment about the Nautel and BE news, one Harris executive said the global conversion to digital is providing a growth market sure to attract new players.

“Making an investment in the mission-critical infrastructure of digital television is a task that our customers don’t take lightly,” said Rich Redmond, vice president of product management and strategy, transmission systems for Harris Broadcast Communications.

“Broadcasters look for companies with a long proven track record of solid deployments, technology leadership and a global service and support system that is prepared to assist throughout the transition and long after its completion,” he said.

Many DTV broadcasters are looking for a total solution that extends far beyond the transmitter, from content creation through multi-channel delivery, which requires an entire suite of hardware and software solutions, Richmond said.

“There is certainly a long-term viability for this space,” said Redmond. “Globally, more than 80 percent of TV viewers watch over-the-air television, and less than half of the world’s countries have converted to digital. Government mandates are in place for more DTV conversions, and that process will continue for years to come.”

But Redmond said radio, at least internationally, also continues to present



Jason Rouse, BE assembler, finishes the build of a 5 kW STX LP main/alternate radio transmitter system.

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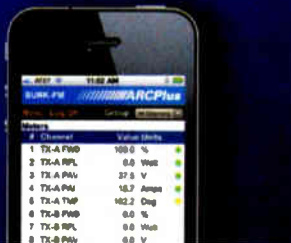
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Nautel demonstrated its NT100 TV transmitter at IBC.

opportunities.

“We are especially beginning to see opportunities internationally for DAB — one early project being in Norway, where they are shutting off FM signals and converting to DAB radio nationwide. So we see many attractive opportunities in TV and radio transmission now and moving forward.”

Norway is the only country that has set a hard date for radio platform switch-over from FM to Digital Audio Broadcasting (DAB), according to several websites and blogs including follothewmedia.com.

“When first announced by the Culture Ministry in February 2011, the plan was for all national radio channels to vacate the FM band in 2017,” according to the latter site. “Those commercial channels with licenses up for renewal before that date could only retain FM transmission through 2017 on agreement to take on DAB transmission.”

Norway, which selected DAB and the Eureka-147 family of standards that also includes DAB+, will begin shutting down analog FM in 2017 “pending reaching their country-wide coverage targets by 2015, which they are on track to do,” Redmond said.

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Four Show Profiles for instant recall of console configurations. Try that on a PA mixer.

Event timer has manual and auto-reset options.

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."

Available in the U.S. from BGS: (352) 622-7700

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Of Parts, Parallax and Power Supplies

Including how to use pill bottles to help organize your small parts

Our Radio World colleague Buc Fitch had a problem. A specialized German transformer had burned in a Grass Valley power supply (see Fig. 1).

WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

Finding a direct replacement was going to take time and be costly. Buc's solution was to purchase a couple of Radio Shack transformers, brace them with customized mounting brackets as seen in Fig. 2, and return the supply to service.

It's not the prettiest solution, but it worked until a replacement supply arrived.



Fig. 1: What to do when a specialized transformer burns?

Charles S. Fitch, P.E., can be reached at fitchpe@comcast.net.

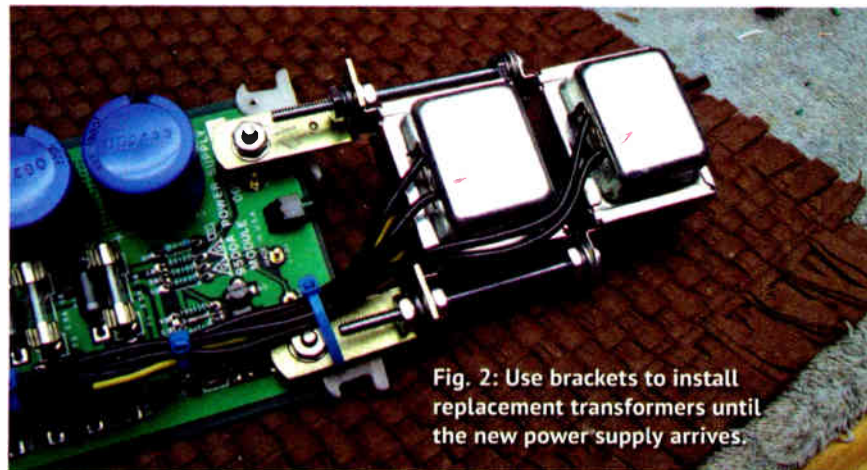


Fig. 2: Use brackets to install replacement transformers until the new power supply arrives.

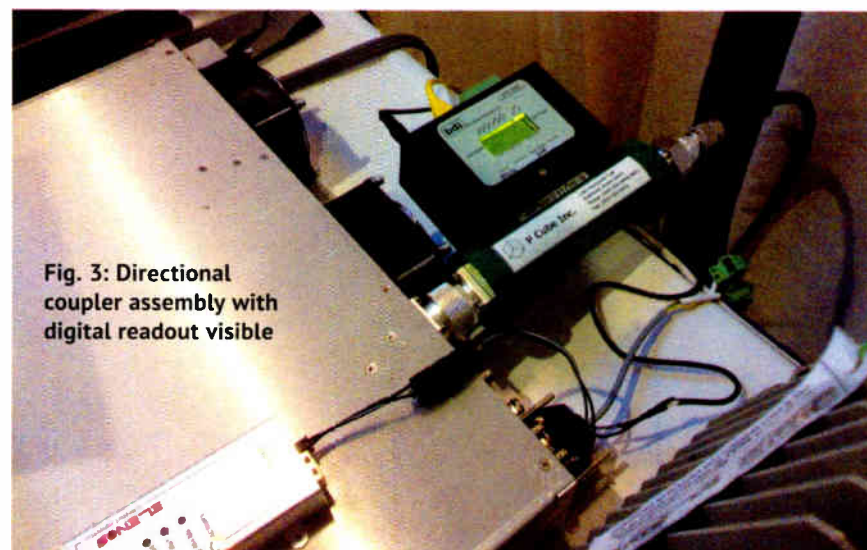


Fig. 3: Directional coupler assembly with digital readout visible

GR

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The CAP-DEC1, Gorman-Redlich is a stand-alone CAP-to-EAS converter for use with your existing emergency alerting equipment. This cost-effective device allows broadcasters to easily meet Common Alerting Protocol (CAP) compliance requirements mandated by the FCC without requiring the purchase of an additional encoder/decoder system or other costly

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- Software can be updated via LAN or USB
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- Polling 3 URL's currently with room for future expansion
- FEMA independent lab affirms CAP 1.2 compliance
- Built-in email server to send log information

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Phone: 740-593-3150

Broadcast engineer Marc Mann was reminded of his high school electronics teacher when he saw our article "Read That Mirrored Scale Correctly" in the June 6 issue.

His instructor taught him many things (including a cute way to remember the resistor color code) but one of the more memorable was proper use of the mirror scale on meters.

Marc writes that his instructor accepted only one answer on this subject for the weekly test. The question: "What is the phenomenon that causes a technician to misread a voltmeter?"

The answer? Parallax, which our friends at Wikipedia define as "a displacement or difference in the apparent position of an object viewed along two different lines of sight ... measured by the angle or semi-angle of inclination

between those two lines."

The mirrored scale effectively eliminates parallax, which is why we find such scales on precision instrument meters like FM power meters and AM RF current meters.

With the advent of the digital meter, however, parallax issues are becoming a thing of the past.

Let me tell you about a recent experience. At the fall Radio Show, my employer demonstrated transmitters operating into a dummy load. We were loaned a Broadcast Devices directional coupler and remote meter panel. The coupler assembly can be seen in Fig. 3.

At one time or another, I think we've all been somewhat suspicious of digitally displayed power metering. I know I was. But imagine my surprise when I turned on the transmitter and the digital front-panel power meter on the transmitter showed *exactly* what the BDI meter indicated: 500 W right on the nose. Today's accuracy is amazing.

I know a lot of engineers use these
(continued on page 12)

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The Internet Makes Strange Stream Fellows

In the new fight to 'save' Internet radio, competitors join streaming forces

NEWS ANALYSIS

BY MATTHEW LASAR

It is once more unto the breach for Pandora.

The nation's premiere online streaming music service has launched another website with a crusading banner over the top. "Take action," declares the home page. "Stop discrimination against Internet radio."

Pandora says it gets a raw deal when it comes to paying performance royalties, compared to other radio services.

Thanks to "legislative and legal strong-arming" by the Recording Industry Association of America, "Internet radio is subject to its own, very discriminatory standard." Pandora founder Tim Westergren declared in a recent blog post.

The resulting bias is "staggering," the commentary continues.

"To give you an idea, last year Pandora paid about half of all its revenue in performance fees alone." Citing a SiriusXM royalty bill of 7.5 percent, the company says that, "no radio service anywhere in the world pays more than 15 percent of its revenue in such royalties."

On Capitol Hill, offering a potential reprieve for Pandora and other streaming services, Reps. Jason Chaffetz (R-Utah) and Jared Polis (D-Colo.) in the House, and Ron Wyden (D-Ore.) in the Senate have sponsored Internet Radio Fairness Acts in their respective chambers. These laws would put online "pureplay" services on a performance royalty par with satellite and cable radio

Pandora pushed hard for supporters to contact their representatives to back the Internet Radio Fairness Act.

outlets. That could dramatically lower net radio royalty charges.

A LOT HAS CHANGED SINCE 2009

SoundExchange, the non-profit that distributes royalties to artists and labels, is panning the idea.

In a response statement published on its official blog page, the operation claimed that Pandora "wants the law to be changed so that the rate could be set at less than fair market value, potentially much less." SoundExchange asserted that this change would be unjust, because music is "the main content of a

digital radio service."

Pandora now has an unexpected ally in this fight: the National Association of Broadcasters. NAB Vice President Dennis Wharton sent Radio World a statement that it "appreciates the leadership of Reps. Chaffetz and Polis and Sen. Wyden and strongly supports legislative efforts to establish fair webcast streaming rates." The trade group plans to work with the bill's sponsors.

Fortunately for Pandora, this is not 2009 anymore. That was a tough year for streaming music copyright policy. In those days, the company — then the

solitary symbol of Internet radio for most consumers — all but got on its knees begging for performance royalty relief.

Meanwhile, the big labels and Web streamers bitterly fought broadcasters over the Performance Rights Act, a perennially stillborn law that would require the latter industry to pay performance royalties just like digital streamers.

Complicating matters for Westergren is that now Pandora has lots of company in its niche. The most likely reason NAB is sympathetic to the Internet Radio Fairness Act is because, increasingly, traditional broadcasters are getting into the Internet radio business.

The most important of these entrants is iHeartRadio progenitor Clear Channel of San Antonio, Texas. Chaffetz lists Clear Channel as a supporter of his law. Other endorsers include the influential Consumer Electronics Association.

Pandora has more allies now, but more competition too. Even Apple might join the party, making noises about a Pandora-esque addition to iTunes. It's worth looking at the Internet Radio Fairness War from its beginning to get a sense of how the pureplay streaming field has grown.

FIXED FEES VS. PERCENTAGES

The question of how to compensate online streams goes back to the 1998 Digital Millennium Copyright Act. That law put gave oversight over rates to the U.S. Copyright Office and a Copyright Arbitration Royalty Panel.

These regulators almost instantly began to quarrel over royalty rates. Congress wound up pinch hitting. And so in 2004, Capitol Hill replaced the system with a three-judge Copyright Royalty Board, which set to work and in March 2007 released performance tithes through 2010.

That's when the digital yogurt really hit the fan.

For the uninitiated, CRB announce-

(continued on page 14)

WORKBENCH

(continued from page 10)

meters. The unique design of eliminating slugs and placing the digital readout right on the directional coupling assembly, as seen in the photo, is probably one of the reasons the company is a past recipient of the Radio World "Cool Stuff" Award.

BDI has expanded its offerings, and you can find out more by heading to radioworld.com/links.

I had the honor of serving as a judge at this year's Wisconsin Broadcasters Clinic, with my Elenos associate Mary Ann Seidler as well as Bob Surette of Shively Labs.

The session was titled "What Is It?" and included fun pictures of broadcast equipment and situations. If you've never attended the Wisconsin Broadcasters

Clinic, make plans to do so next year. There were more than 30 speakers covering a variety of topics for both radio and television.

The next clinic will be held Oct. 8–10, 2013, at the Madison Marriott West Hotel, so mark your calendar. Find more information at www.wi-broadcasters.org.

After our session, Art Reis, the chief engineer for Chicago operations at Crawford Broadcasting, made mention of our Styrofoam cup tip in the Oct. 24 issue. You'll recall the cup can be used as a repository for small screws, nuts and washers when disassembling equipment to keep the hardware from getting lost.

A great idea, but improved upon by Art. He takes those plastic pill bottles with the screw-on caps, and screws the cap into the over-bridge of his workbench. Most pill bottles these days have a reversible cap. One side is child-proof — flip it over and it just screws

onto the bottle.

By affixing the bottles this way, the pill bottles can be unscrewed to hold various sizes of hardware as needed. Where Art's idea differs from the Styrofoam cup is that many broadcasters' workbench projects drag on for days or longer. A Styrofoam cup filled with hardware can get knocked over, defeating its purpose. Using the securely-fastened bottles ensures that the parts are out of the way, yet nothing gets lost.

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

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. He works for FM transmitter company Elenos USA.

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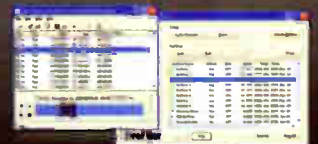
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AUDIO LOGGING



PC Software for archiving and logging all of your stations audio.

World Radio History

FAIRNESS ACT

(continued from page 12)

ments are a blizzard of eye-glazing figures — tables filled with lines like “0.0019 per song performance.” But for webcasters circa 2004, those numbers represented only half the problem. Particularly the smaller outfits wanted schedules that billed them via a percentage of their revenue, not on a song-by-song basis.

In response, CRB judges released a rising schedule of annual rates that webcasters insisted were established to please the RIAA. At this point, the Internet radio industry, led by Pandora, “went to the mattresses.”

“The RIAA has effectively convinced this federal committee to establish rates that make online radio a non-viable business,” Westergren declared in a March 6, 2007 blog post.

Streamers also launched a public relations campaign that culminated in a National Day of Silence for Internet radio, paralleled by a blitz of Congress. Once again, the House and Senate came through, passing the Webcaster Settlement Act.

The WSA gave SoundExchange authority to circumvent the CRB and cut alternative royalty fee deals with Internet radio outfits. The agency did just that on July 7, 2009 — offering revenue-based schedules for most services.

Westergren declared victory. “For more than two years now I have been eagerly anticipating the day when I could finally write these words: the royalty crisis is over!” he told followers in a July 9 statement.

Well, not exactly. Pandora tacked on a 99 cent fee to users who accessed the service for more than 40 hours a month, prompting Westergren to add that he felt the “system as it stands today remains fundamentally unfair.”

MEET THE NEW PLAYERS

Despite the gripes, the Pureplay Settlement of 2009 offered Internet radio breathing room, and the industry grew. Pandora went public, reporting an astounding 80 million registered users and more than \$90 million in revenue by October 2011.

A veritable battalion of “pureplayers” either joined the fray or expanded their presence there. These included British streamer Last.fm, acquired by

CBS Interactive in 2007; Rdio, created by the progenitors of Skype; Spotify, which allows users to create web interfaces of their playlists; Soma.fm, which offers listener supported channels; and Turntable.fm, a service that lets deejays create “decks” they can play hits to “rooms” of followers.

iHeartRadio came along in April 2008, representing a hybrid online model, allowing subscribers to access the company’s 800 radio stations or use the service as a Pandora-like streamer of recommended music.

The success of that venture became apparent when, in December of 2011, Clear Channel and Cumulus Media joined forces. The latter gave the former access to its “daily deal” SweetJack advertising service. In return, Clear Channel began airing Cumulus’ then-570 stations on iHeartRadio.

At around the same time, another Texas-based outfit upped the ante on Internet broadcasting. Decade-old online AM/FM station aggregator TuneIn radio added a song search feature that made it easier for mobile users to find both streaming and over-the-air stations. A tune query might land you on a neighborhood FM station or a Soma.fm channel.

By late 2011, pureplay radio was no longer the terrain of online mavericks; it was merging with over-the-air radio. The good old boys were getting into the act and winning market share.

FAIR BURDEN OF PROOF

But this season of sprinting still hasn’t been easy for Internet radio. Growth is one thing; profit, another. Although Pandora scored record revenue gains in late 2011, it still lost money overall — about \$17 million over the last two years. Many of these companies struggle with tricky models that combine advertising with pay subscriptions for mobile users. There isn’t much room for error, which

means that performance royalty rates can make or break a pureplay business. That’s why Pandora and pals still go hat-in-hand before Congress.

Ron Wyden’s version of the Internet Radio Fairness Act is a complex affair. The gist of the law is that in any performance royalty setting proceeding, royalty seekers will have to demonstrate that payments “do not exceed the fees to which most copyright owners and users would agree under competitive market circumstances.” Copyright Royalty Board market benchmarks must mirror rates “that have been agreed under competitive market circumstances by most copyright users.” The idea is to tether royalties to the lower rates paid by satellite and cable streamers.

What are the chances of this legislation getting to a president’s desk? *Govtrack.us* gives the bill odds of about 3 percent, which is actually better than the prospects for most legislation in these hyper-partisan times. Nothing is going to happen with this proposed law until Congress holds hearings on it, of course. Wyden’s bill is housed in the Senate Judiciary Committee at this writing.

Incidentally, we asked for a comment from Public Knowledge, one of the most influential beltway think tanks when it comes to copyright policy. A spokesperson told us that they were still reviewing a draft. But even if this particular initiative sputters for a while, support for it hints at a growing consensus in favor of a kinder system for streamers of all sizes and business models.

Postscript: On Oct. 25, several organizations including Clear Channel and Pandora together launched the “Internet Radio Fairness Coalition” to urge Congress to support The Internet Radio Fairness Act of 2012.

*Matthew Lasar teaches history and technology history at the University of California at Santa Cruz. His writings on media technology appear in *Ars Technica*, *Radio Survivor* and *Radio World*.*

HOPPE

(continued from page 4)

that the current interstate taxation system has a “loophole” that needs to be closed? I would say that such a statement is tantamount to saying that anyone who voices his or her opinion in the free press is simply using a loophole in the First Amendment that needs to be closed.

For further reference also see the Supreme Court 1992 decision in *Quill Corp. vs. North Dakota*. [The URL is posted at radioworld.com/links.]

What impact would the change have on radio stations that buy from you and other vendors?

Obviously it would add to the cost that the customer pays in that customers would now be required to pay the local sales tax to the vendors. Whatever the local tax rate is where the sale originates would be the added cost to the customer.

What else should readers know about this issue?

Some may argue that customers are shopping at out-of-state e-tailers in order to avoid paying the sales tax. I disagree. I think that the main reason customers shop online rather than at brick-and mortar-stores are twofold.

First, with the current exorbitantly high costs of gasoline, it is cheaper to “let your fingers do the walking,” so to speak. Second, customers can find a much greater variety of options to choose from online.

Have you ever driven to your local retailer to look for a specific product only to find that they didn’t have what you were looking for, or they were out of stock? This is especially true for niche broadcast equipment sellers like Progressive Concepts. How many broadcast equipment dealers are located in your neighborhood? So I don’t feel that customers are shopping online solely for the purpose of avoiding sales tax.

Comment on this or any story. Write to radioworld@nbmedia.com.

PEOPLENEWS

Antenna and transmission support equipment manufacturer **Electronics Research Inc.** has appointed **Anand Kurup** as director of sales for Asia Pacific.

The Associated Press has promoted **Fergus Bell** to the newly created position of social media and user-generated content editor, internationals.

Neil Grace has been promoted to senior communications advisor to the FCC, and **Justin Cole** has also joined the commission as press secretary.

Cumulus Media appointed **Ann McManus** as regional vice president for Cumulus markets in the Northeast.

NPR named two new editors to its leadership team:

Madhulika Sikka, current producer of “Morning Edition,” will become executive editor in January, and **Neil Carruth** will serve as senior business editor, beginning in December.

The National Association of Broadcasters announced that **Rick Kaplan** has been hired as executive vice president of strategic planning.

Clear Channel Media and Entertainment San Antonio has named **Breeanna Malik** as market manager for its seven area stations.



Ann McManus



Rick Kaplan



ROC YOUR WORLD

The new ROC console from Logitek



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

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.

Available in multiples of 6 faders (up to 24), the ROC is housed in an attractive table-top 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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NEW GEAR BLOSSOMS IN FALL

The following are new or recently introduced products and services that have been highlighted by suppliers at the fall Radio Show in Dallas and other autumn broadcast events. Look for more in the next issue.



Photos © NAB

MOSELEY PROMOTES RINCON, DTV LINK-A AT FALL EXPOS

Moseley Broadcast demonstrated radio and television digital STL products in three cities this fall. Travels included the Radio Show in Dallas, the Ohio Association of Broadcasters Expo in Columbus and the Wisconsin Broadcasters Clinic in Madison.

Moseley says the Rincon Digital Audio Transporter is the first audio transport device of its kind to offer multi-channel audio over different types of transport networks simultaneously. The user can send four stereo programs over a mixture of IP networks of various bandwidths or T1 networks. Coupled with the Starlink, it says, Rincon creates the first eight-channel digital STL in the 950 MHz band.

DTV Link-A STL/TSL delivers multiple DVB-ASI Streams together with Ethernet to and from an HDTV transmitter site.

Moseley offers a line of economically priced digital television STLs for the 2-23 MHz bands.

Shown at right at the Ohio Association of Broadcasters Engineering Expo in Columbus, Ohio, are, from left, Greg Savoldi, regional director of engineering for Clear Channel Communications; Shannon Nichols, BSW sales manager; and Bill Gould, Moseley broadcast sales engineer.

Info: www.moseleysb.com





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What will you do with all the extra rack space?

EXCLUSIVE "UNDO" TECHNOLOGY
Restores peaks and dynamic range to poorly mastered source material.

MULTIBAND STEREO ENHANCER
Dynamically widens or controls stereo sound field, providing a consistent stereo image.

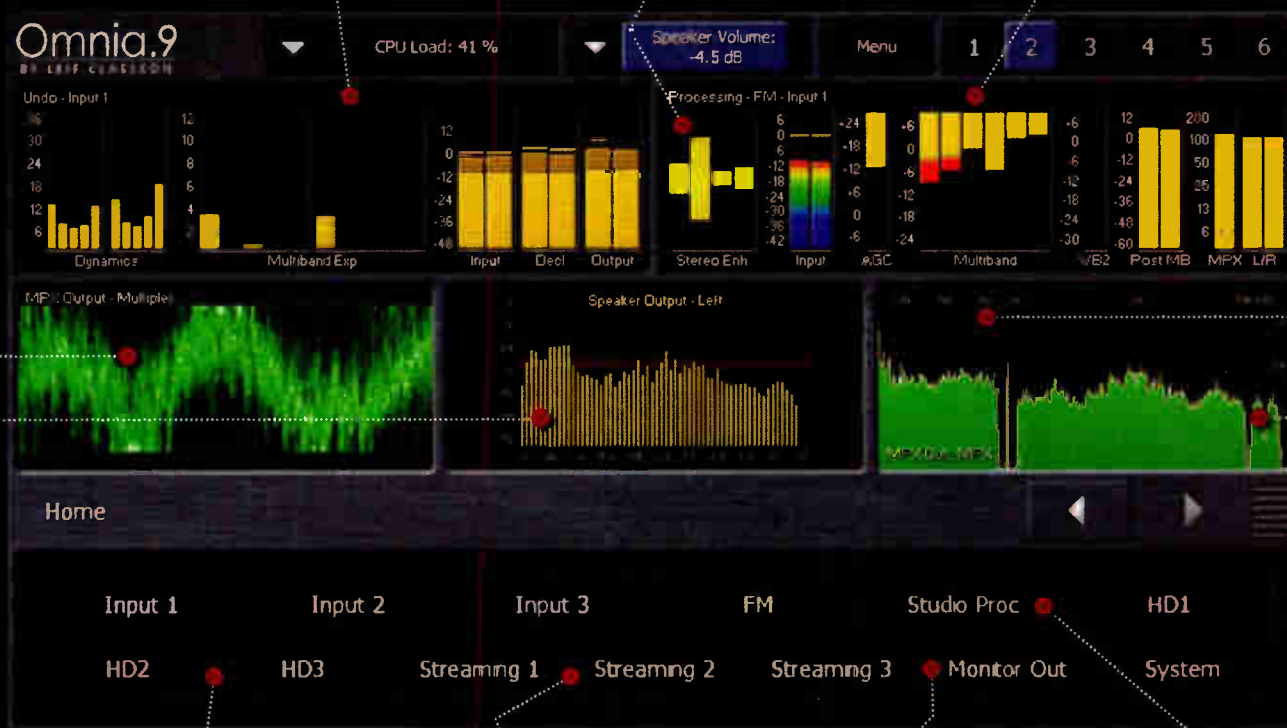
VERSATILE DYNAMICS PROCESSING
Input AGC, up to three wideband AGCs, and up to 7 bands of multiband compression and limiting.

DISTORTION MASKING COMPOSITE EMBEDDER
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)

ON BOARD DIAGNOSTIC AND ANALYSIS TOOLS
A built-in digital oscilloscope, FFT spectrum analyzer, and RTA provide a visual reference so you can see what you hear.

SPEAKER CALIBRATION
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
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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.

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ETG5000 IS 5 KW TRANSMITTER BY ELENOS

Elenos emphasizes the energy-saving benefits of its 5 kW solid state transmitter, with 74 percent AC-to-RF efficiency, offering both electric bill and cooling cost savings in a compact package that occupies four rack units. The company offers to prepare a free energy survey to demonstrate what the user will save.

The transmitter can operate with two of its three power supplies disabled. It includes both RF open or short protection, and its RF Power Mosfets are readily available from Digikey and Mouser.

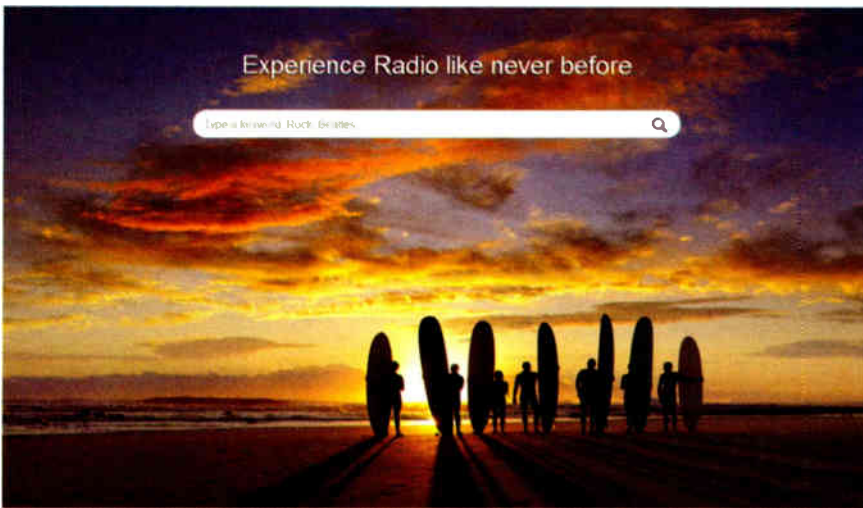
A video shows a stress test on the transmitter; see it the website, or call the company for a free demo.

Info: www.elenos.com

RADIONOMY COMES TO U.S.

Radionomy, based in Belgium, has opened a San Francisco office as its U.S. base of operations. The service enables users to create personalized online radio stations or discover stations created by others.

[radionomy](http://www.radionomy.com) Music genres Top 26 Suggestions Create Sign in Sign up



Company Vice President of Business Development Thierry Ascarez told Radio World that Radionomy content and music choices are created not by an algorithm but by real people. He sought to differentiate his company's service from Pandora or Spotify.

Radionomy manages online broadcasting, live functions, author/content licensing and scheduling. It also provides a content library of 80,000 songs and other items, audience reporting metrics and storage for programmers who want to provide their own songs.

Radionomy is free and Web-based; consumers use a dashboard to manage stations. It also offers consumers a way to monetize their stations; creators of the most popular stations are able to earn up to the equivalent of \$5,000 a month through paid advertising, according to Thierry.

It says consumers have used the platform to create 6,000 online radio stations, which has attracted 13 million unique listeners.

Info: www.radionomy.com

APT OSLO GETS SMALL

A new version of the APT Oslo codec, occupying only one rack space, was on display at the fall Radio Show in Dallas. APT cites its "unprecedented channel density," supporting 16 channels of audio within 1 RU. It is suitable for studio-to-studio and studio-to-transmitter links.



The Oslo platform is an established part of the company's lineup. The codec is now available in a new form factor and with a new Audio over IP module.

Features include DSP-based design, dual power supplies and hot-swappable modules. The 1U Oslo is modular, with the ability to add up to four AoIP modules. Each module is equivalent to a standalone stereo duplex audio codec combining audio, dual IP transport and auxiliary data.

Simplex, quad-channel modules will be available by the end of the year.

An advantage of the AoIP module is its ability to deliver independently-clocked IP audio streams, eliminating issues of clock drift that APT says are associated with streaming multiple channels over IP to a single decoder. "The card can therefore decode any channel, in any audio format, from anywhere. The AoIP module can also generate many more streams per stereo or mono signal using multiple unicast or multicast technology." It also supports APT's SureStream technology, which enables broadcast-quality audio over public Internet links.

Info: www.worldcastsystems.com

BSI ROLLS OUT SIMIAN 2.2 PRO

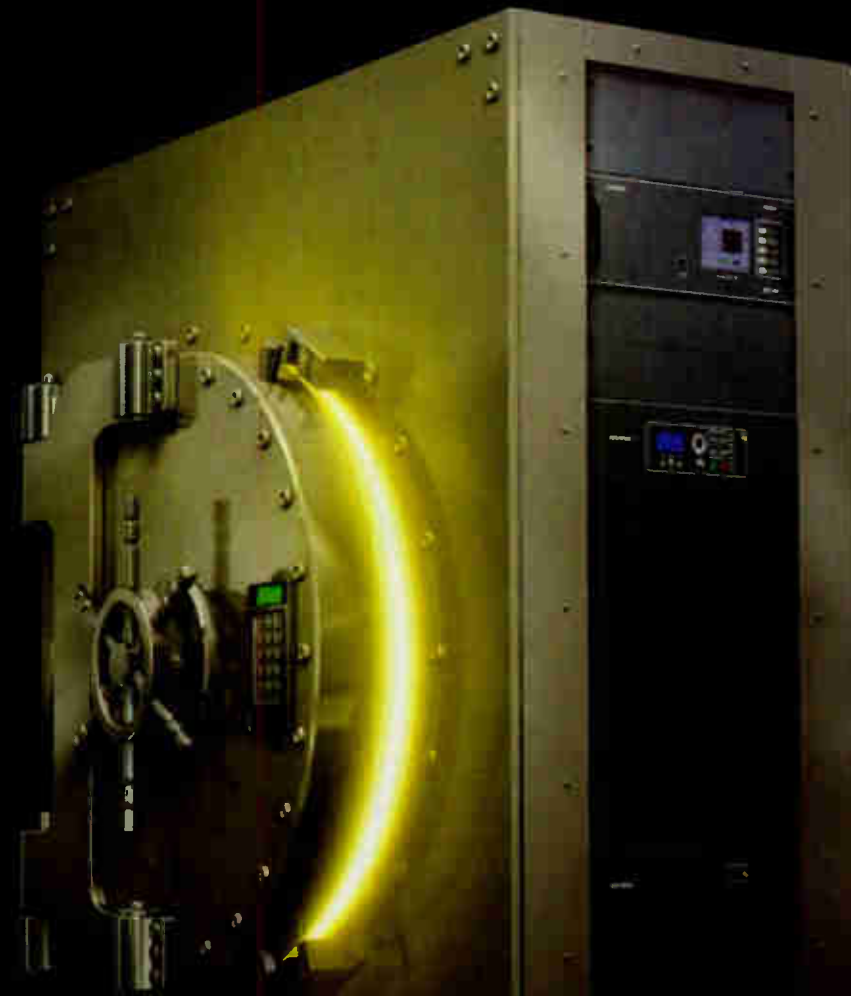
Broadcast Software International released the new version of its Simian Pro automation software, version 2.2.

In conjunction is the release of the Simian Gateway application and Simian Remote clients for iPad, iPhone and PC. The Simian Gateway manages a portal to the Simian 2.2 Pro automation system to facilitate connections by the new Simian Remote clients. The Simian Remote clients allow real-time control of the Simian 2.2 Pro automation system: Start/Stop audio playback, browse the station's audio library, edit the program log and adjust mixers, play "Hot Key" audio. In addition to the real-time control, the Simian Remote clients allow users to record Voice Tracks remotely.

BSI is developer and provider of software including Op-X Automation, SkimmerPlus, WaveCart Pro and Stinger.

Info: www.bsiusa.com





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Where Great Radio Begins — broadcast.harris.com/Radio

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World Radio History

this simple setup runs rings around any other AoIP network - at any



Meet the LX-24...Wheatstone's flagship, multi-award-winning advanced modular networkable console control surface

The design initiative behind the LX-24 was to create the world's finest control surface. The result is a console that redefines the entire genre. The LX-24 is an intelligent surface that can store and recall all your settings. Its totally modular design lets you configure it exactly as you like - you can even hot-swap modules at any time without having to reconfigure.

Assign any source of any type anywhere on your network to any fader. Each input channel can be assigned to four stereo busses, plus four pre/post-selectable aux sends, a stereo CUE bus, four mix-minuses and the panel's own bus-minus. Full Voris EQ and Dynamics let you sculpt and control your sound with the quality of the finest dedicated outboard

processors. The visually-stunning meter bridge features up to four sets of bright, high resolution LED meters, as well as circular LED displays for auxiliary send levels and pan control. A digital count-up/count-down timer is also included.

The LX-24 is advanced in ways that can make a HUGE difference in your capabilities. But it's also immediately familiar to anyone who has ever sat behind a board at a radio station. Use it to make your programming the best it can be. Just plug it into your WheatNet-IP Intelligent Network - with it, and the BLADES across the page, you can, dare we say it, rule the world.

THE LX-24 CONSOLE CONTROL SURFACE FEATURES

Low-profile table-top design - no cutout required

Meter bridge with up to four bright, high-res LED meter sets

Control room and headphone outputs with level control and source selection

Two independent studio outputs

Stereo cue speakers and amplifier, built-into meter bridge

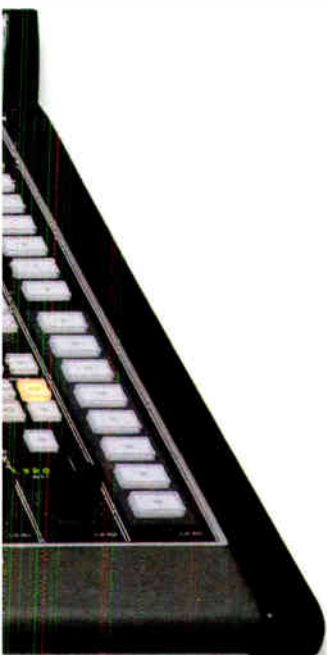
Onboard VGA and USB-Mouse connectors

Event storage (snapshots) and recall

Each input channel features:

- Four stereo bus assigns
- Four pre/post-fader aux sends
- Four mix-minuses
- Bus-Minus®
- Source name display
- A/B source selector
- 2 programmable buttons
- Voris EQ and Dynamics including 4-band parametric EQ, High- and Low-Pass filters, Compressor and Expander/Noise gate

price. it's called The WheatNet-IP Intelligent Network, and it rules.



Our BLADES carry out your orders network-wide at Gigabit Ethernet speeds - no bottlenecks

As an integral part of the WheatNet-IP Intelligent Network, BLADES interface, move, bend, shape, route and control everything you want to do with your audio. If it's audio, a BLADE will handle it - at lightning speed.

Use them organically with our control surfaces, run them from our Glass-E software wherever you have internet access, or control them from the front panels. BLADES make your life incredibly easy and secure.

As you need more functionality, just plug in more BLADES - they come in configurations to handle whatever you need (analog, digital, a/d, mic, MADI). Each BLADE is self-configuring and has the DNA of the entire self-healing network.

With BLADES, you can do everything from a simple (or complex, if you like) snake to STL-over-IP to full-on multi-studio/facility networking - even processing. And because of Wheatstone's partnership with the top suppliers of automation and remote gear, you'll have control over your entire system right from WheatNet-IP. Ruling the world has never been easier.

And this is ALL the extra stuff you need to wire-up the Intelligent Network:

Four CAT-6 cables and a low-cost switch that handles the gigabit speed WheatNet-IP runs at.

Let's do the math - plug in eight connectors, power up a console and three BLADES, add your audio and you are ready to rock, roll and rule the radio world. Brilliant, you ask? Nah - just really, really intelligent.



Want to know more?

WheatNet-IP outperforms the other AoIP systems exponentially and is, by far, the most reliable network you can get. Log onto wheatip.com. There is a world of *real* information there. Or, give us a call. There's nothing we like better than talking about this stuff.



EVERY BLADE FEATURES

Two 8x2 stereo virtual Utility Mixers that can be used for a wide range of applications; for example, using Wheatstone's ACI Automation Control Interface, your automation system can control the mix for satellite or local insertion switching

Front panel bar graph meters switchable to display source input level or destination output level after gain-trim

Front panel routing control - any system source to any destination on that BLADE

Front panel headphone jack with source select and level control - monitor any system source

Flexible GPI logic - 12 universal logic ports, programmable as inputs or outputs, routable throughout the entire system

Built-in web server so you can configure and control locally or remotely without having to run dedicated software

SNMP messaging for alerts

Silence detection on each output that can trigger alarms or make a routing change

Silent - no fans - can safely be located in a studio with live mics



FALL PRODUCTS

V-SOFT RELEASES NEW DATA SET

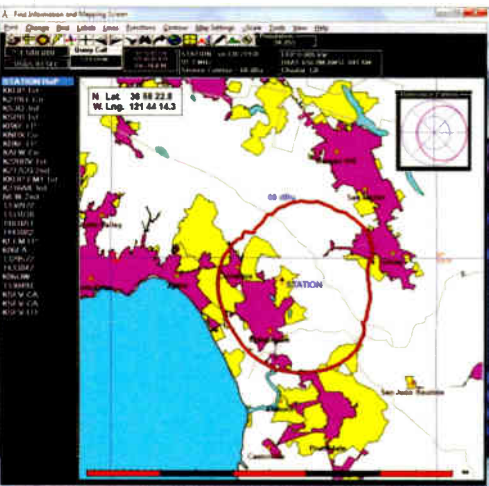
V-Soft Communications released its new 2010 TIGER Boundary data set used by its propagation mapping program, Probe 4 and FMCommander, the company's frequency search allocations program.

The FCC requires radio and TV stations to serve minimum percentages of the area of their principal cities of license. The 2010 census TIGER boundaries data set, included in the new V-Soft boundaries package, shows a significant expansion of many of the city boundaries in the U.S. The same expansion is seen in the included V-Soft Urban Boundaries set, which defines certain geographic markets and which is used for determining the extent of market areas when upgrading and moving stations.

The new TIGER data also includes the full data set of updated county lines and county names and, for Probe 4 users, the latest 2010 Consolidated Boundaries and Metropolitan Statistical Areas.

The graphic shown at left is an FMCommander map screen-capture showing the new urban areas in purple and the new cities boundaries in yellow.

Info: www.v-soft.com



ERI: A HIGHER-POWER ANALOG/IBOC DIPLEXER

Following the launch of the 788 Series All-Pass Diplexer in the spring, Electronics Research Inc. this fall showed a higher-power version of this high-level diplexer, capable of 49 kW analog and 7 kW digital input power.

The 788 Series combines analog and digital (HD Radio) with greater efficiency and better performance than other techniques, the company states.

"The All-Pass Diplexer system does not have the high insertion loss of 10 dB hybrid injectors, which waste significant amounts of analog and digital transmitter power. The All Pass analog insertion loss is -0.35 dB or less and the digital loss is -1.4 dB or less."

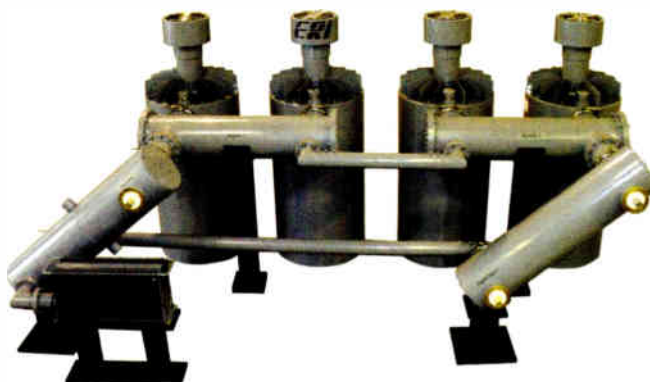
Also, ERI says that group delay performance is superior to alternative high-level combining methods and is correctable by currently available FM transmitters. It says group delay of the analog signal is less than 350 nanoseconds and the digital delay is less than 600 nanoseconds.

The All-Pass Diplexer gives FM radio stations that are operating a -20 dBc IBOC power level with a 10 dB hybrid injector the opportunity to increase digital power without having to invest in a new transmitter.

The base model is convection cooling, 3-1/8 inch 50 ohm analog input (22 kW), 1-5/8 inch 50 ohm digital input (3 kW). The "A" version is forced air cooling, 3-1/8 inch 50 ohm analog input (36 kW), 1-5/8 inch 50 ohm digital input (5 kW). The "B" model is forced air cooling, 6-1/8 inch 50 ohm analog input (49 kW), 3-1/8 inch 50 ohm digital input (7 kW).

For system planning, a loss calculator is available at the ERI website; find the link at radioworld.com/links.

Info: www.eriinc.com



MYAT 211- SERIES IS ALUMINUM

Myat Inc. is promoting its 211-Series of 1-5/8-inch aluminum transmission lines and components.



The company highlights these components for excellent VSWR response and low loss, as well as weight that is one-third less than traditional copper/brass components. "The aluminum components and lines provide a cost savings when compared to copper/brass equivalents, and cost of ownership is further reduced with savings on shipping and handling expenses," it states.

The outer conductors are machined and drawn from high-conductivity aluminum alloys; inner conductors are constructed from copper tubing and silver plated brass.

The line is suitable for inside use for broadcast applications such as FM and AM radio, and VHF and UHF TV.

Elbow 211-026 incorporates inner and outer conductor "coupling-type" connectors into each leg, so no additional components are required for an unflanged connection. Myat says this design saves cost and space, as well as installation time.

Info: www.myat.com

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Why does Axia outsell every other IP console? We've got connections.

Did you know that there are over 2,500 Axia consoles on the air? That's more than all other AoIP consoles – combined. Is it because our ads are so irresistible? Our marketing guys think so... but, no. It's because broadcasters know that a network's value increases with the number of devices that talk to it. And nobody connects to more IP-Audio devices than Axia.

With this huge installed base of broadcast studios around the world, we've attracted dozens of partner companies, all offering Livewire™-compatible products. A device with a Livewire port is instantly available to any other device on the network. So, if you're shopping for IP consoles, be sure you ask: "How many partners do you have?" Because a network that only plays with itself isn't very well-connected... is it?



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AXIA OFFERINGS EXTEND AOIP NETWORKS AFFORDABLY

Axia's new RAQ and DESQ compact consoles are suitable for broadcasters looking to extend their AoIP networks affordably into even smaller studios.

RAQ is a 4RU rackmount, six-channel IP mixer with two stereo program busses and a Preview bus for newscasts or news assembly. It's suitable for any rack- or turret-mounted mixer application, including remote kits. DESQ offers the same features in a desktop package that occupies 18 inches of desk space.

The consoles have OLED meter and channel ID displays, automatic mix-minus for every fader, Show Profile console "snapshots" and machined aluminum work surfaces. Three-band onboard EQ can be applied to voice and codec inputs, and input gain trim, phase correction and pan/balance settings can be quickly applied.

RAQ and DESQ work with the fanless Axia QOR.16 integrated console engine, which connects to the consoles with a single cable.

Each QOR.16 engine has a zero-configuration Ethernet switch with six Livewire 100Base-T ports with PoE (Power over Ethernet), and two Gigabit ports for studio interconnection. There are four GPIO logic ports, two microphone inputs with switchable Phantom power, eight analog inputs and four analog outputs, one AES/EBU input and one AES/EBU output. Each QOR.16 can power two RAQ or DESQ consoles (or one of each) for cost-effective deployment of multiple small consoles in news rooms, dubbing workstations and ingest areas.

Info: axiaaudio.com

**CHRISTIAN FM IS 'WARM AND COMPELLING'**

Christian FM is a new 24/7 contemporary Christian format from Christian FM Networks.

The supplier promises broadcasters "a compelling alternative to generic, national-sounding satellite services or stale voice tracking." It promises compelling hosts who talk like locals, thanks in part to a delivery technology that allows the station to direct the content of the announcers' breaks.

Christian FM uses Dial Global's STORQ network technology. "The music and imaging resides locally on your own STORQ hard drive automation system (i.e., it's not being streamed). Music updates download automatically each day. The only things we deliver minute-by-minute over satellite are the freshly cut voice tracks and elements from our announcers."

Announcer voice tracks are created in virtual real time and appear minutes before they air. A Web interface allows the station to provide local copy points for the network announcers.

Christian FM personalities voice your station's community events, promotions and branding. Stations remain in control of their inventory and can add extra local spots at the last minute.

Info: email bmazzarella@christianfm.net

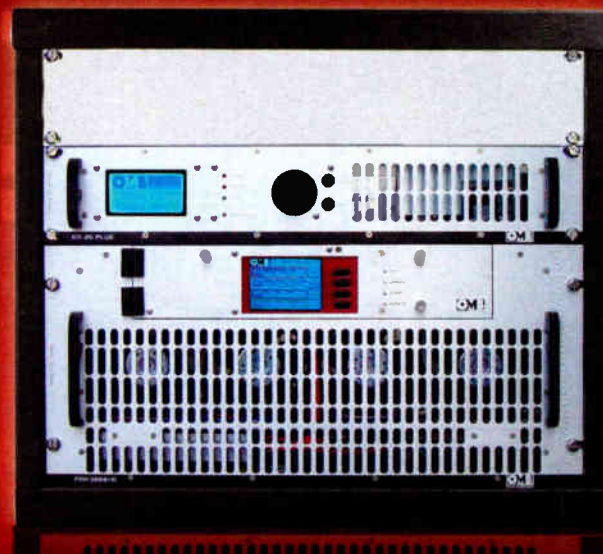
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Simian Gateway

Remote Control for Simian 2.2 **PRO** Radio Automation

Broadcast Software International



Simian Remote is available for PC, iPhone, and iPad

Simian Gateway opens a portal into your Simian 2.2 **PRO** Radio Automation, enabling real-time remote control and advanced Remote Voice Track creation over the internet.

Live Remote Control

The Simian Gateway offers a TCP/IP portal into your Simian 2.2 Pro automation system so that Simian Remote for PC and Simian Remote for iPad can connect to your automation system. The Simian Gateway manages up to ten connections from Simian Remote clients to a single Simian 2.2 Pro On-Air or Production installation over your local area network or across the internet. Each person in a multi-talent program can have their own interface!

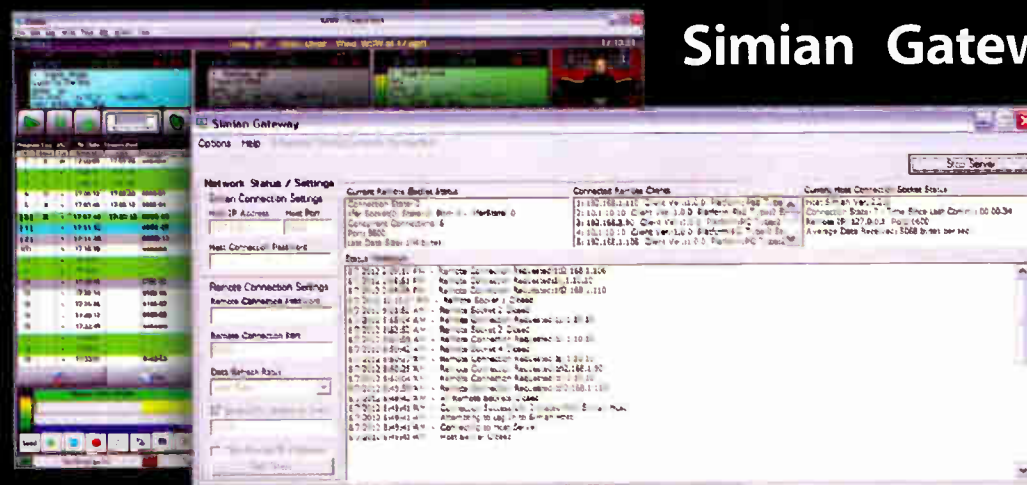
Full Featured Remote Voice Tracking

With Simian Gateway and Simian Remote clients, you now have the ability to create and insert voice tracks remotely! We aren't talking a simple insertion of a recorded audio file. Simian Remote's advanced voice track editor can download into and segue cuts that the Simian Gateway creates for the songs surrounding your voice track so that you can fully preview and set cross-over points for your voice track!

Cost Effective

Simian Gateway comes at a very affordable add-on price to Simian 2.2 Pro. Contact BSI Sales for pricing information.

Simian Remote clients are completely free. All you need is the Simian Gateway and you can install and run a Simian Remote client on as many devices as you wish. There are Simian Remote client versions for both Windows PC and iPad.

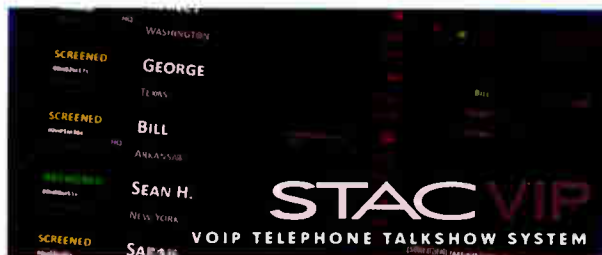


Simian Gateway runs alongside Simian 2.2 **PRO** to manage TCP/IP communications between Simian Remote clients & Simian 2.2 **PRO**.

For More Information Call: 1-888-BSI-USA-1 ~ Email: sales@bsiusa.com ~ Web: www.bsiusa.com

COMREX STAC VIP SYSTEM SHIPS

Comrex said the STAC VIP VoIP Call Management System has completed its "beta" test mode and is shipping. "Configuration of VoIP lines is relatively simple, the widespread voice modes sound great and the ability to send and receive Skype calls is very cool," the company stated in a newsletter.



Also from Comrex, the new VIP QC (Quick Connect) app for iPhone and Android is available for \$20 from the Apple App Store and the Google Play Store. Designed for use with STAC VIP, the VIP QC makes connection from the field — such as from reporters or expert guests — simple. The user downloads the app on a smartphone, selects his or her station and connects; the process is simplified because hardcoding is done in the background by Comrex.

Compatibility with Access and BRIC-Link codecs is expected in early 2013.

And the company said its new LiveShot Video IP Codec is in its beta test phase, with units being tested at several locations. "LiveShot is being put through its paces on 3G, 4G and WiFi circuits. In our tests, we are seeing very low delay on 4G, as low as 200 ms. We've had very good results on dual 3G modems as well, with delay as low as 1 second."

Info: www.comrex.com

NAUTEL HIGHLIGHTS NV^{LT} LINE

Nautel demonstrated its "Cool Stuff" Award-winning NV^{LT} FM transmitters this fall.

Based on the company's NV Series architecture, NV^{LT} analog-only transmitters promise a robust design with 72 percent efficiency, integrated direct-to-digital exciter(s) and a full size form factor that eases access to removable parallel power modules and switching power supplies.

The NV^{LT} Series includes instrumentation, audio I/O backup, Livewire, optional Orban Inside audio processing and Nautel's Advanced User Interface (AUI). It is available in 3.5, 5, 7.5 and 10 kW outputs.

Info: www.nautel.com

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BE OFFERS A COMMOTION

Broadcast Electronics and Commotion displayed new features for AudioVault Flex and the Commotion Suite at the fall Radio Show.

Commotion continues to add social media and mobile monetization features to its portfolio of tools. Commotion embeds dynamic ads in the "Activity Stream" where BE says real-time engagement with listeners occurs. Subscription based Push Notification tools also enhance a station's ability to monetize its mobile efforts.

New to AudioVault Flex 10.2 is an enhanced UI configurator for personalized workspaces, a new segue editor for programming control and unique screen sharing for multi-talent shows.

BE also displayed the new STX LP II, its second-generation STX LP with new integrated digital exciter, dual exciter options, easy migration path to HD and additional features.

Info: www.bdcast.com

**WHEATSTONE HIGHLIGHTS LX-24**

Several vendors at fall conferences demonstrated Wheatstone's LX-24 control surface, part of the AoIP WheatNet-IP system. The company emphasizes the one-module-per-fader design. "This totally modular design lets you configure it exactly as you like — you can even hot-swap modules at any time without having to reconfigure or without disrupting console serviceability elsewhere."

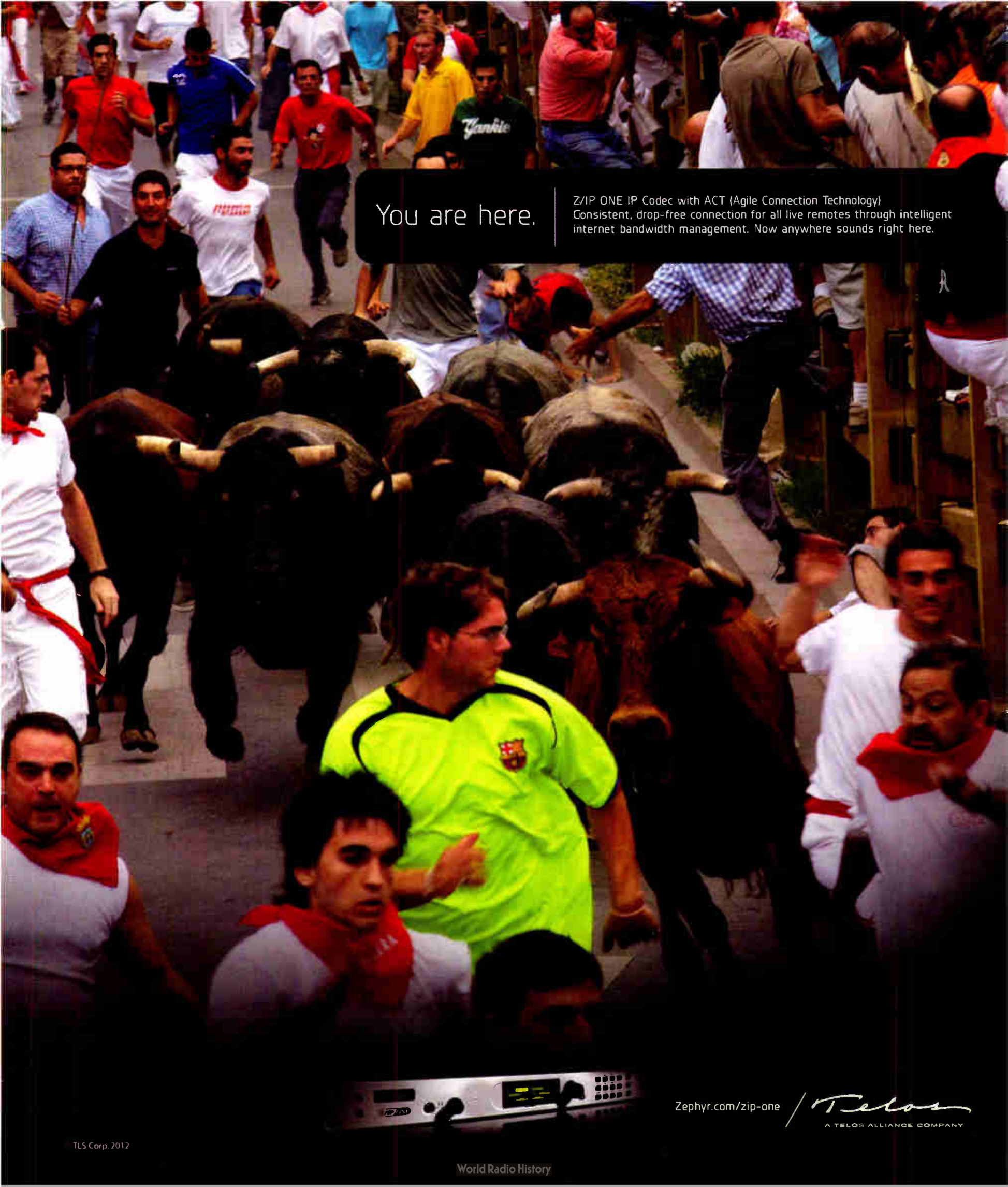
Each input channel can be assigned four stereo busses, plus four pre/post-selectable aux sends, a stereo Cue bus, four mix-minuses and the panel's own bus-minus. Optional EQ and dynamic processing are available.



The company promoted Wheatstone audio-over-IP networks, combining logic control and transport for control of the broadcast studio. Features include true IP communication between components as well as utility mixers and logic at access points distributed across the network. The company calls it the only AoIP system with control surfaces that have an Ethernet interface, and the only system to include utility mixers in its access units, or Blades, for managing audio.

And Wheatstone highlighted AirAura, its 31-band spectral audio processor, with a new virtual subwoofer in the 40 Hz–90 Hz range. The Version 2.0 upgrade promises more natural-sounding speech due to the spectral audio processor's Speech Smart technology, a way for managing the multiband AGC and compressor to keep speech sounding clean and natural without a "scooped-out," missing-presence sound.

Info: www.wheatstone.com



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Z/IP ONE IP Codec with ACT (Agile Connection Technology)
Consistent, drop-free connection for all live remotes through intelligent internet bandwidth management. Now anywhere sounds right here.



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WIDEORBIT ENHANCES WO AUTOMATION FOR RADIO

WideOrbit emphasizes the ease of use and operational efficiencies of WO Automation for Radio v3.

Features include search and voice tracking, multi-station and multicasting capabilities, advanced interfaces to music schedulers, EAS equipment, audio consoles and routers. It integrates with WO Traffic, the sales, traffic and billing



system, to provide live log editing, streamlined dubbing of commercials and real-time reconciliation and notifications.

Feature enhancements to WO Automation for Radio v3 include automated content ingest from trusted Web or email sources, 64-bit operating system compatibility, powerful user-profile security, automated time scaling features to time entire segments and other improvements.

WideOrbit says some 800 radio stations use WideOrbit Traffic and 680 operate on WO Automation for Radio.

Info: www.wideorbit.com

RCS SELECTOR2GO PROMISES 'PERFECT ROTATIONS ANYWHERE'

The latest from RCS is Selector2Go. Tailored for the Web, it works on all contemporary browsers and across platforms and mobile devices. Benefits to radio programmers include powerful core scheduling and editing functionality, and rotation analysis details in the palm of a hand.

The manufacturer said the system is designed with a simple straightforward interface. "The data flow was designed to deliver fast performance, even on mobile networks like 3G."

From sister company Media Monitors: Local Internet ad service tracks online display advertising that ran on local websites targeting advertisers in each market.

"Media Monitors physically places data collection equipment in each city, so the service shows what ads were displayed for consumers in that specific market.

This in-market competitive intelligence helps sales departments find new opportunities." The Media Monitors Local Internet service is available in the Top 17 DMAs, with new markets being added each month.

Info: www.rcsworks.com and www.mediamonitors.com



HARRIS DEMOS PR&E ENHANCEMENTS

Harris Broadcast Communications introduced programmable button panels that enhance studio routing capabilities and protect signal destinations. "Smart" dynamic LCD button panels give operators and producers five programmable buttons to initiate audio routes or commands to and from any location.



Harris offers these programmable panels on PR&E RMXdigital consoles, the VMReact logic processing engine (shown) and other PR&E VistaMax audio networking systems.

The panels shield the air chain and other destinations from undesired audio. "This means that an on-air operator would need to approve a 'request' from another studio to introduce that audio to the program," Harris stated.

The buttons protect remote signal contributions as well, allowing operators to initiate mix-minus feeds on-air cleanly.

Operators also benefit from clarity regarding the "owner" of the audio source, with rich text and color screens offering that information visually. Harris called this a key differentiator with competing systems.

Also new, Harris enhanced the look and feel of its metering applications, with a standard design for meters, clocks and timers in its RMXdigital, NetWave and Oasis on-air/production consoles; it also introduced quad-meters for most RMXdigital consoles, allowing operators to monitor additional sources.

Info: www.broadcast.harris.com

ENCO AND AEQ TEAM UP

ENCO and AEQ announced a link between the ENCO DAD Automation platform and AEQ digital mixing consoles.

"ENCO developed an interface that allows bidirectional communication between AEQ Forum and Capitol mixing consoles and ENCO DAD via IP, giving customers maximum ease of operation," the companies stated. "The AEQ Forum and Capitol consoles incorporate USB audio devices, which can be connected directly to an ENCO DAD workstation, eliminating the need for a sound card."

The companies said they plan to offer "advantageous package deals" through their dealer and reseller networks. Popular versions of the ENCO DAD platforms are being bundled with configurations of the AEQ digital mixing consoles.

Info: www.enco.com and www.aeqbroadcast.com



POWERGOLD 'PLAYS IT SMART'

Powergold 12, according to the company, combines "the art and science of music scheduling."

A new priority-based Natural Rule system gives users more control. A rule can be "both unbreakable and flexible at the same time," the company says, because the user can set which part of the rule is unbreakable and let Powergold 12's scaling component "flex" the rest.

Natural Flow Clocks allow a user to set strategic positions on the clock; the system provides randomized yet categorized clocks. Workflow Manager handles daily workflows; the user can manage clocks, policies and scheduling workflow from one location. Once scheduling is complete, post-scheduling reports indicate if conflicts exist in a schedule, and if so, why those conflicts exist, helping create smarter schedules.

Info: www.powergold12.com





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COMPLETE REMOTE STUDIO **ON TWO WHEELS**



We are pretty sure this is a first – an open-air moving studio broadcast on two wheels (well, six, technically).



All audio was fed to a Comrex ACCESS Portable, complete with optional mixer, which Dan used to mix the live



on-air feed as the trio traversed the winding roads of Perth. How did it all work out? Absolutely flawlessly – the show went on without as much as a speed bump!

Dan Jackson, engineer for 92.9 FM in Perth, Australia was faced with a unique challenge. Breakfast hosts Paul Hogan and Lisa Fernandez would be cycling for hours in strong winds and pouring rain as part of the 92.9 Kids Appeal for Telethon.

The unique solution was to equip Dan's bike as a mobile production facility. The talent wore wireless mics AND in-the-ear monitors which communicated with receivers and transmitters in a rack bag on Dan's bike.



ACCESS Portable lets you send studio-quality live audio, real time over IP using 3G, 4G, Wi Fi, BGAN/VSAT, PSTN or DSL to make any remote broadcast really stand out. Connect with your audience from anywhere, live, with the easy to use, handheld ACCESS Portable!

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remotes.comrex.com

Don't Get Shut Down By 'Snowmageddon'

Ways you can grab listeners' attention during severe weather

PROMO POWER



Mark Lapidus

Weather is local. Radio is local. Let's get ready to take advantage of this natural synergy.

In colder parts of this country, the prediction this season is for more snow than usual. Are you ready to maximize your winter success with the proper plan? Pour yourself a hot beverage and plow through these thought starters to get ready for tons of the cold, damp white stuff.

Hire Extra Staff — When driving becomes even slightly risky, you should arrange for a driver who will be ready to pick up any needed on-air personnel in a vehicle with four-wheel drive. If you don't have the vehicle or driver, rent this service in advance from a limo or bus company.

Considering the extra staffing you may need to cover what's going on in your commu-



iStockphoto/Aurelian Gogonea

nity properly during a heavy snow day, assign one or two extra on-air people to help the morning and afternoon shows. Also station people at various points in your city to report back neighborhood by neighborhood.

Blast Your Listeners With Creative Content — Make no mistake. Reporting, reacting and engaging the audience during bad weather isn't just for an all-news station.

Sure, they probably do an excellent job, but even if that's not your format, so can you. On top of conveying basic facts, with some preparation you can be much more engaging about what's going on.

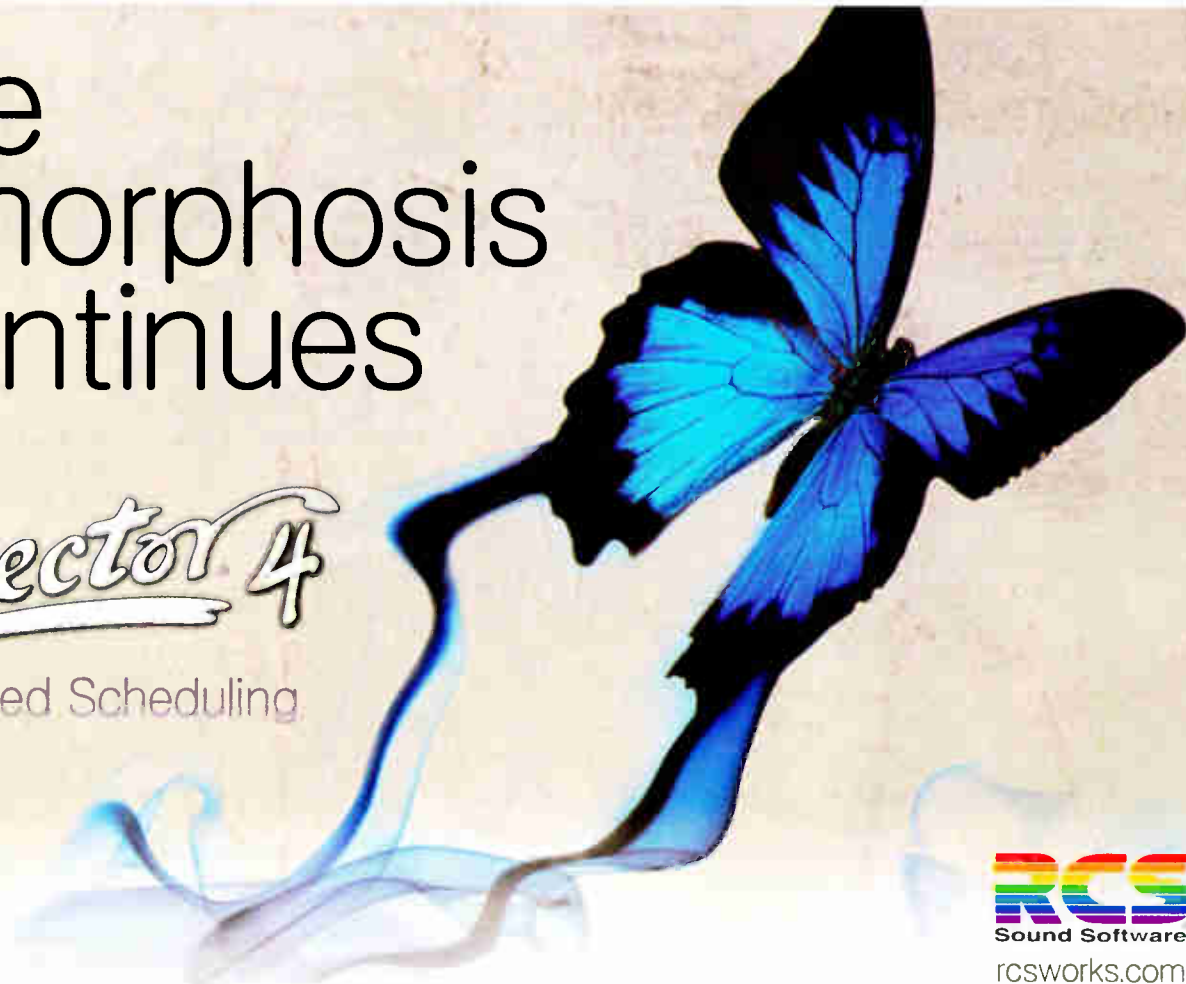
Start a list of severe weather-related topics you can cover and your staff can help you expand it. How's the milk and toilet paper supply holding up? Where's the biggest snow fight? Where are the coolest snow men? What are kids doing other than their homework because they are off school? Any movie theatres open? Best DVD rentals? How many babies will be born in nine months because of what's going on today?

See if you can get one of the local meteorologists to come in after her shift to talk

(continued on page 32)

The Metamorphosis Continues

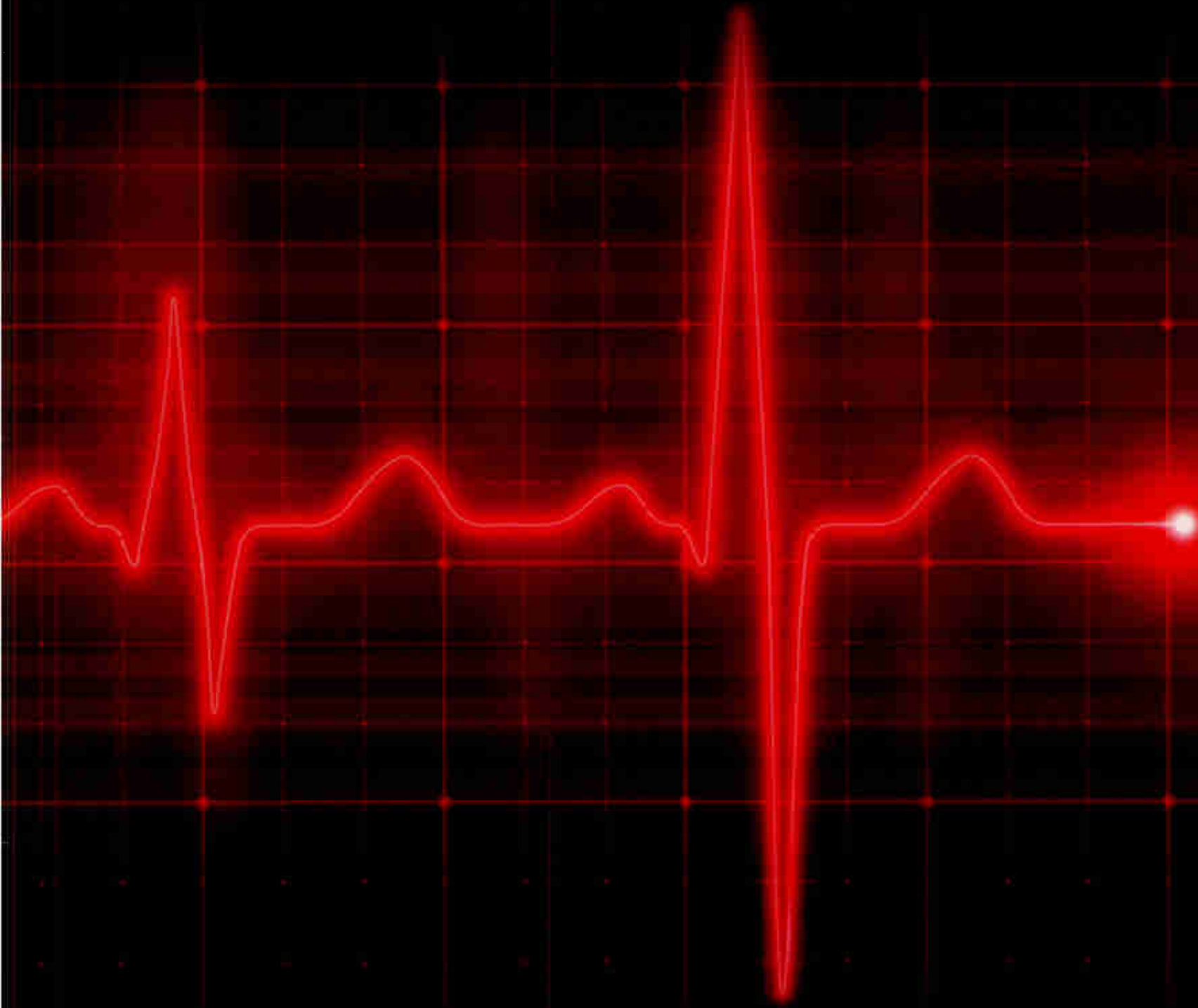
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SNOW*(continued from page 30)*

about what's going on behind the scenes and about what the weather service is really "saying." While none of this content has to be long, it should all be engaging.

The good news is that a lot of it can be recorded, quickly edited and then put on the air — if you are staffed properly.

Make It a Competition — People love to predict the amount of snowfall. So turn the snow day into a contest, in which the grand prize is a trip to a tropical destination far away from the wind and cold.

If you work far enough in advance, you may be able to get one of the tourist agencies or airlines

from a Caribbean nation to donate the trip — or at least the airfare — in exchange for promoting them. Secondary prizes could be ski equipment or passes to a ski resort. Naturally, the entire contest could also be pre-sold to a title sponsor.

Sell Relevant Ads — Speaking of sponsors, there are many who would love to get specific messages out to people on snowbound days. These must be sold in advance. Targets include companies that sell generators, insurance companies, hospitals, utilities and TV stations that want to promote their weather position.

Stay On! — Of course, all this advice is for naught if your station isn't able to remain on the air during a bad snowstorm. For shame if you don't have full-time or readily available engineering; but if this is the case,

you must have your contract team ready with a strategy and execution plan to keep you running. Either way, put your engineers to work on this problem now: give them the responsibility to review and anticipate the facilities' needs in event of a weather emergency. They love solving such problems.

Don't wait until your entire block loses power to realize that you could've been broadcasting remotely from another location if you'd thought about it in advance. If you're in an isolated area, ask if you have a method of communicating (other than by mobile phone) if, heaven forbid, cell towers went dead.

Also remember that you might need supplies — food, water, flashlights and snow shovels onsite. And oh yeah: Don't forget the toilet paper.

Mark Lapidus is president of Lapidus Media. Reach him at marklapidus@verizon.net.

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RemoteMix One: Simple, Durable, Versatile

JK Audio's handy tool helps Paul Kaminski complete his On-site reporting at the Brickyard 400

PRODUCT EVALUATION

BY PAUL KAMINSKI

If MacGyver were a radio reporter or field engineer, he'd feel right at home with the latest device Joe Klinger and JK Audio introduced at the 2012 NAB Show, the RemoteMix One. It is simply called a field interview tool.

A resourceful field reporter or engineer can solve a lot of problems with it. The RemoteMix One is not only versatile, it's simple for a reporter on deadline to use. That's probably the reason Radio World's judges gave this item a "Cool Stuff" Award.



Paul uses the JK Audio RemoteMix One at the Brickyard 400 press room.

When I was assigned to write the product evaluation, I had the perfect venue planned for the product evaluation: the Brickyard 400 NASCAR Sprint Cup Race at the Indianapolis Motor Speedway.

THE LINEUP

The RemoteMix One is a wired interface for a dynamic microphone (XLR) and 1/4-inch stereo headset. It works with both 2.5 mm headset jacks for non-smartphones and 3.5 mm four-conductor jacks for smartphones (iPhone and Android varieties) thanks to two supplied output cords. It takes one 9 Volt battery for power,

For this test, I used Audio-Technica's BPHS-1 broadcast mic and headphone combination. Any standard dynamic microphone and headphone (or earbud) with a 1/4-inch plug can be used. The BPHS-1 headphones lockout back-

ground noise effectively and its dynamic boom microphone helps isolate the voice. Both of these came in handy at the Brickyard when cars were on the track.

The wired interface allows the user to use Skype or other smartphone codec apps (e.g., the Comrex ARC Android Reporter Codec for example). Using those codec apps allows voice to pass through the phone with codec fidelity if on a robust 3G/4G cell network or on a Wi-Fi connection.

The Remote Mix One functions as a full-featured telephone headset when not using a smartphone app. If the reporter's phone is of the standard variety, the 2.5 mm standard cellphone headset jack can still be used, albeit with cellphone voice band audio fidelity. The studio producer will still like the fact that with the RemoteMix One, a wrap can be done in the field in real time, whether it's live or recorded for future use.

I used my Sprint EVO Shift Android phone and RemoteMix One to connect with CBS's Comrex Access codec in New York, and used the combination as a regular cellphone headset to verify those capabilities on Sprint's 3G and 4G networks.

The RemoteMixOne passes better-than-acceptable audio in codec apps and also in the standard mobile phone mode. When monitoring non-mobile audio in the headphones, it sounded as though the user was connected to a studio headphone amp and not a remote device.

Users can mix a 3.5 mm stereo line audio input with the XLR microphone input, which gives real-time wrap capability and allows the reporter or engineer to playback audio from a laptop, netbook or tablet.

The RemoteMix One's stereo line output is also a mix of microphone on the left channel and the return audio on the right channel. That means the

operator or reporter can patch the output into the line input of an audio recorder. (If the recorder has no line input, an attenuating patch cord could be used to lower the audio level to something more mic level friendly.)

Additionally, that output jack provides a field expedient in a situation where



audio from a host and caller must go on the air or be recorded or in the case that a classic telephone hybrid is unavailable or won't connect easily with the equipment that's available.

The dials are easy to use and have high-contrast white-on-black markings to indicate relative levels. A user could even use the RemoteMix One with a pair of gloves (although the thinner the better) in a cold setting. A clip LED light reminds the reporter or engineer to back down the levels. The power LED functions as a low-battery tally light, which will dim and eventually go out before the battery is exhausted. Battery life for the RemoteMix One is rated for 20 hours or better with an alkaline 9 Volt cell. Lithium cells will increase those operating hours at a bit higher cost. No tools are necessary to change batteries.

There's a momentary mic mute switch for coughs, cussing and other sounds you don't want going through the microphone channel. It's also useful if you breathe heavily while you're playing an actuality during a real time wrap. The headphone channel gives the user enough level to hear even low level cues when at a race track.

The RemoteMix One has an industrial-strength belt clip, which secures the device to a belt, pocket or backpack strap. With a metal case, it'll survive more of a fall than, perhaps, the telephone to which it is connected.

The only minus (albeit a small minus) might be a rotation of the battery door

PRODUCT CAPSULE

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Thumbs Down

- Reversal of battery door and trim pot access holes

Price: \$315

For information, contact Joe Klinger at JK Audio in Illinois at (815) 786-2929 or visit www.jkaudio.com.



and trim screws is, in my opinion, 180 degrees off. Not that it would ... but when wearing the unit, dust might blow into the small trim pot holes if in a dusty or snowy environment. Reversing the door to face the wind would keep the pots away from the wind.

At a suggested retail price of \$315, the RemoteMix One is an investment that can pay for itself in weeks if it's used for those quick last minute commercial remotes. It's a cost-effective spend for a news department if amortized over a typical product life cycle. Like all JK Audio products designed for field duty, the physical construction is robust. Unlike audio interface units that are designed to interface with only one style of phone, the RemoteMix One allows for a backup plan. It is reliable, functional and elegant, and a device that any field reporter and engineer would feel confident using when a situation demands mission-critical audio — whether on the phone or through a smartphone codec app.

Paul Kaminski is the news director for the Motor Sports Radio Network, a contributor and free-lance reporter for CBS News, Radio, and since 1997, a Radio World contributor and columnist. His email address is motorsportsradio@msrpk.com; follow him on Twitter @MSRnet.

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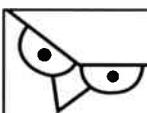
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Looking for a broadcast excerpt of a San Francisco Giant's taped off of KSFO radio from 1959, interviews with Willie Mays, Dusty Rhodes & some play by play excerpts, also features a homerun by

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.

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A Few Points About Channels 5 and 6

Broadcast Maximization Committee says digital can help all AMs make transition

The Broadcast Maximization Committee would like to respond to and clarify a couple of points raised in the recent Ben Downs interview ("AM Needs Technological Help," Sept. 12), with respect to BMC's Channels 5 and 6 expanded band ("EXB") proposal.

COMMENTARY

The subject of using TV Channels 5 and 6 for radio broadcast is being actively discussed in broadcast circles and was raised in a panel on "The State of Radio Policy" at the fall Radio Show in Dallas in September.

First, the BMC would like to thank Mr. Downs for his recognition of the effort put forth by the group to aid AM broadcasters in a re-energizing this service. It was largely for this reason that the EXB plan was first conceptualized.

The BMC proposal is the only viable plan that offers a long-range solution for all AM stations. All other plans require licensees to make a significant investment in their current facilities. The full BMC proposal can be found at www.broadmax.org.

In the Radio World article, Mr. Downs expressed concern that the proposal's specification of digital-only transmission would potentially have a negative impact on broadcasters' decision to embrace the proposal. In response to this concern, BMC would say the following.

First, it must be recognized that new receivers will be required to receive FM

broadcasts in the CH 5/6 spectrum. With today's technology, the question of whether the transmission mode is analog or digital doesn't change this reality.

Second, and more importantly, with digital transmission it is possible to accommodate all AM stations that wish to migrate to this new spectrum (using 100 kHz channel spacing vs. the current analog 200 kHz separation requirement).

Additionally, the BMC proposal does not require the involuntary relocation of the few remaining TV stations that remain on CH 5/6 after the DTV repacking scheme is finalized.

The original proposal did provide a substitute UHF channel for every current CH 5/6 full-service TV allotment, but it was also acknowledged that for those few CH 5/6 DTV stations that would desire to remain on their current channel, the proposed EXB scheme could work around these facilities.

Last, it should be noted that if the DTV repacking process places additional TV stations in the CH 5/6 spectrum, then the use of CH 5/6 for radio purposes may no longer be viable. For this and other reasons, healthy dialogue and further work are time-critical.

The Broadcast Maximization Committee is dedicated to promoting the use of Channels 5 and 6 to accommodate low-power FM, noncommercial and AM broadcasters. Read more at www.broadmax.org.

Comment on this or any story. Write to radioworld@nbmedia.com with "Letter to the Editor" in the subject field.

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OPINION

READER'S FORUM

BATTISON WAS A HIGH FLIER

Probably few knew that John Battison ("John Battison Dies, Was Father of SBE," Sept. 12) was a Royal Air Force Spitfire pilot in the Battle of Britain during World War II.

Those were the dark days of the war, when 966 Allied aircrew were killed or wounded during the summer and autumn of 1940 while saving England from a German invasion. This prompted British Prime Minister Winston Churchill to declare, "Never was so much owed by so many to so few."

Mark Persons
M.W. Persons & Associates
Brainerd, Minn.

The author is a regulator contributor to Radio World.

school as a weekend jock at the top 40 station. As long as my STA keeps getting renewed, there is hope that a financial solution will present itself.

There are plenty of options; 250 watts, non-directional is the best and cheapest. But even that is currently out of reach.

I know there are some who will say that people like me who struggle to survive should just quietly go dark and help clear the dial. And maybe they are right. I believe that the business will be greatly harmed when the little, local guy like me is gone. I hope to still be on the air, when that AM solution is finally found.

Bruce Merchant
Owner
KEZM(AM)
Sulphur/Lake Charles, La.

channels.

How about giving the AMs one FM HD channel? There are enough FM stations in my market to give every AM station an FM HD channel. Some FM stations are not using their HD channels.

In the old days, they use to call that "efficient use of the spectrum." It must be a transmission mode that allows transition. Those who think that it is a programming problem with AM need to come to Florida and try listening to 50 kW AMs during summer thunderstorms. You will tune out to FM or satellite so fast you will not be able to see your finger punch the radio button.

Try listening to AM next to a computer or in a building full of computers.

If it is a programming issue, why is the switch of talk stations to FM occurring? FM and TV were given digital improvements and free extra channels to generate more revenue. AM built this industry, and it deserves to be saved.

George Arroyo
Owner
WONQ(AM)
Orlando, Fla.

AM DESERVES TO BE SAVED

I no longer lose sleep over the proposals to save AM coming from the NAB. Some years ago, they embraced Eureka Digital Radio, then quickly dropped it. Then came the iBiquity Radio system that granted more channels to the FM's and a mediocre system to the AM. Now they are playing with all-digital on AM.

Can they tell me how I am going to keep my clients if I go all-digital on my AM and there are no radios to listen to it? I had an FM when FM was not cool, so believe me: I know how it is.

Why not support the proposal to expand the FM band into TV Channels 5 and 6?

There are 143 TV stations of all sorts on Channel 6. Can we sacrifice 4,754 AM stations and thousands of jobs for 143 TV stations? Why not relocate those stations on Channel 6 to the additional channels granted to TV? Some TV stations don't even use those

MAKING PLANS, OUT OF SIGHT

Just so I have this straight:

The NAB's got a special committee to chart the future of AM, but most AM broadcasters aren't privy to these plans, nor will they ever be until all constitutive choices are made ("Station Chosen for All-Digital AM Test," Oct. 10).

Also, HD will provide the vector for digitalization, which we should just accept because it is what it is. Most of this from unnamed sources.

Radio World, you can do better than this.

John Anderson
Assistant Professor and
Director of Broadcast Journalism
Department of TV and Radio
Brooklyn College
New York, N.Y.

AM FOR THE REST OF US

I have enjoyed the recent articles on how to save AM radio. The commentary from Saul Levine ("AM: Drop the Gloom and Doom," Sept. 26) got me to the keyboard.

I guess I am one of the rare people in our beloved business: a single owner of a single AM station. Last summer, I was evicted from my transmitter site for apartment construction.

Fifteen months later, not one shovel of dirt has been turned. Meanwhile, I struggle to hold onto what's left of my investment with a 125-watt STA. It covers my community adequately enough, but I can't license it. There have been some great ideas about how to save our medium. But for many like me, the costs are prohibitive.

Mr. Levine's suggestion to drop the doom and gloom is wonderful. I believe in AM, too. I like his idea of buying the best equipment to get the best sound possible with the strongest signal, too.

But most of us aren't in Los Angeles. That doesn't work for us. It is very hard to generate sales with a standalone AM in a very small market. (In my market, 12 of the 14 stations are owned by two corporations, which take most of the money.)

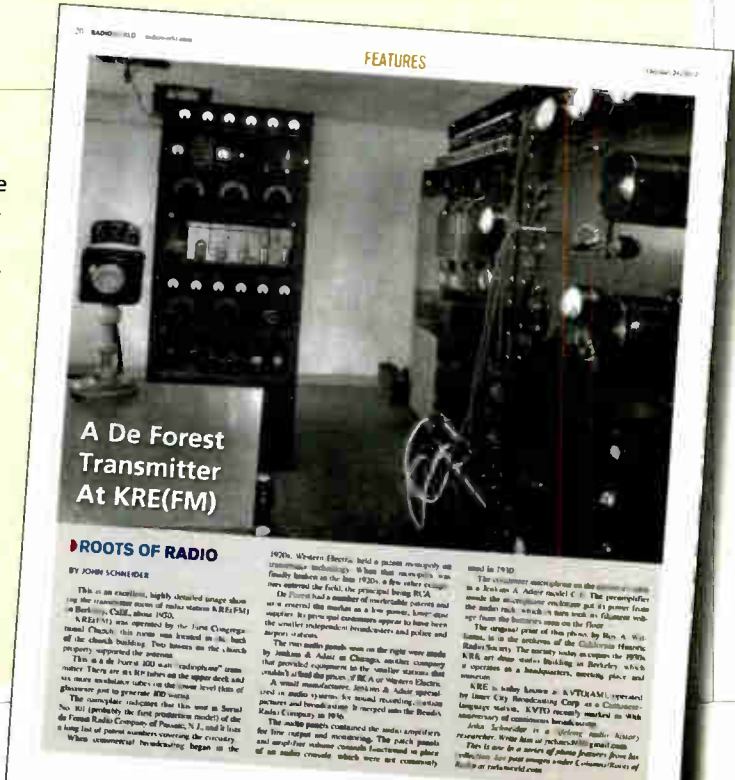
Having owned a station for nearly 15 years has been a dream come true for someone who started out in high

CORRECTION

OUCH! GET US A 'BAND' AID'

If you're gonna get a detail wrong, make it a doozie! How about a little "band" confusion?

Our article about the de Forest transmitter at California radio station KRE in the Oct. 24 issue mistakenly referred to it as an FM facility in both headline and text. This was an editing error, as readers familiar with radio circa 1930 no doubt noticed. Our regrets to them and author John Schneider, as well as any fans of the historic AM station KRE.



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'I'll Zephyr That to You' and Other Memories

Colleague remembers doing his 'most creative' marketing with the late Steve Church

COMMENTARY

BY NEIL GLASSMAN

We were in the conference room with a spectacular view of Lake Erie. Already months late delivering the new product, about a half-dozen of us was intently sorting out the nuances of the user interface.

This was to be the first commercial product to use what would years later become known as mp3. At the time, it was called MPEG-2 Audio Layer III — Layer III for short — licensed from Fraunhofer IIS in Germany. The product also incorporated a nascent, pre-IP telephony protocol named Integrated Services Digital Network (ISDN). Each box was to cost between \$4,000 and \$5,000.

Much to my dismay, Steve Church — the founder, oracle of insight and president of Telos Systems, the company developing this product — kept putting off my insistence that without a product name I couldn't get traction for the product launch marketing. Everyone around the table kept referring to the product as the Fraunhofer Layer III ISDN box — each time, stumbling a bit over his words.

"We need a name for this product, Steve," I interrupted.

"Not right now," Steve replied. "We've got to get it finished, first."

"Can we at least give it a code name? Every time someone says, 'Fraunhofer Layer III ISDN box' I want to scream."

"If I let you give this a code name, will it shut you up?"

"Sure."

"OK, then. What's the code name?"

I was frozen. I wasn't prepared for the conversation to go that way. I had to seize the opportunity, though, and blurted out my response without being conscious about what was coming out of my mouth.

"Zephyr."

"Zephyr," repeated Steve. "That's just the code name. I hate it. We'll use it as a code name, but understand that there is no way the product will ship with the name, 'Zephyr.'"

A few months later, when Zephyr was shown at the National Association of Broadcasters' convention, it was reviewed as the biggest technology

breakthrough for radio since Steve's Telos 10 powered the explosion of talk radio. And when Zephyr finally shipped a year later, it became the "go-to" product for radio remote broadcasts. Before long, it was common to hear someone in radio telling a colleague that he would Zephyr the audio to him.

That's how it was with Steve and me. One of us would tell the other how it was going to be. And, in most cases, it was one way or the other — our decisions were rarely attenuated by compromise.

Steve enabled me to do great market-

Bell Labs. We took down the Internet attempting a live stream of a George Clinton concert when 56 kbps modems were a big deal.

When I first started working with Steve, he slept on my couch when he was in D.C. on business. When I left his company, he was on his way to challenging and, in many ways, overtaking the biggest players in his industry.

Not to take anything away from the "bakers" that came after me, but I'm proud to have been a key ingredient in the "sourdough starter."

We didn't keep in touch much after I left Telos Systems. So, I was honored to be on the short list of people who got a call that Steve had succumbed to his long battle with cancer.

The last time I saw Steve was at



ing. Among the most creative I've ever done. In hindsight, one could label what we did as storytelling and content marketing. I applied viral and social techniques at a time when Mark Zuckerberg was still in grade school. We launched one of the first B2B websites. I learned how not to compete, but to make our competitors compete with us.

At first, our marketing left people with the impression we were 10 times the size of our little band. Then the sales caught up to the perception.

It was a great ride. I watched Steve configure a competitor's product at a radio station in Beijing. I packed a product so Steve could drive to the airport to catch the last FedEx pickup to take care of a customer who said his was fried by a lightning strike. We had trade show booths with designs based on the movies "Blade Runner" and "Brazil." We visited AT&T Labs, imagining it was still

an industry conference. He was part of the panel and I was in the audience. At one point, he made reference to what he — and many in the room — considered to a great idea.

"Do you know whose idea that was? That man, right over there," Steve said, pointing to me. "Neil Glassman came up that idea."

With all eyes on me, I waved shyly. The discussion moved on.

The idea wasn't mine at all. But I let it go.

That's how it was between Steve and me.

Neil Glassman is chief marketing officer of CMP.LY and founder of WhizBangPowWow, strategic marketing consultancy focusing on social media. This article originally appeared on www.whizbangpowwow.com.

NAIROBI, KENYA



Photo left:

Inooro FM Studios

Benjamin Wangari, News Presenter & Producer (left)
Jeremiah Kimani, Sports Presenter & Producer (right)

Photo right:

Sulwe FM Studios

Simaloi Dajom Otiemo, Group Radio Production Manager (left)
Petronilla Simwenyi, Presenter & Producer (right)

Photo bottom:

Ramogi FM Studios

Ruth Ochieng, Presenter & Producer



ROYAL MEDIA – KENYA’S RADIO STATIONS IN ANY LANGUAGE



“Our Radio Systems Consoles almost never break down! But even small problems render us great factory service all the way from the United States!”

Samuel Kamau Macharia
 Chairman: Royal Media Services

There are 46 official languages in Kenya. And if you speak one of the 14 most popular; Kiswahili, Kikuyu, Luo, Kamba, Kisii, Embu, Meru, Mijikenda, Kalenjin, Luhya, Bukusu, Maragoli, Maasai or English — Royal Media has a station for you! These Royal Media “Vernacular” radio stations each pride themselves on being market leaders in their respective regions, some commanding the almost fanatical following of over 80 percent of the total audience.

Owner and Chairman “SK” Macharia has used the power and flexibility of radio to target the populations of rural areas — and it has paid off, giving Royal Media Services this massive popularity countrywide. And, Radio Citizen, their flagship station which broadcasts in Kiswahili — has been repeatedly

ranked number 1 in audience numbers & loyalty — according to Media Research specialists, Ipsos Synovate.

Royals’ unmatched success is attributed to unrivalled on-air talent, relevant programming, the personal connection of a local language and reliable equipment — like Radio Systems Millennium Consoles — more than 25 of which are proudly and exclusively in use throughout the complex.

And in recent years, every new language station installed has been connected with Studio-Hub+ — making its technical integration that much easier and faster for Chief Engineer Moses Kaaranja and his team.

Royal Media’s vernacular radio stations:



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Speaking of modular design, the IP-12's construction is exactly that. Need to replace a channel? Two screws and a connector is all it takes. Got automation? IP-12 is hardware-ready. We offer a software driver that works seamlessly with the most popular automation platforms to give you control right from the console! And here's how easy it is to set up the new IP-12 console: Unbox it. Plug it in. You're ready to go. But don't let its simple setup fool you. It's one very powerful little console...

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