NewBay Media

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LAME GAME

Martin Walther argues that a convoluted marketplace doesn't make things easy for stations. — Page 38

'ZoneCasting' Concept to Be Tested

Companies assess narrowly targeted broadcasting using FM booster network

BY RANDY J. STINE

PALM BEACH, FLA. — A proposed system called ZoneCasting would use a series of boosters to give FM radio stations the ability to divide their coverage areas into geographic zones and "geo-target" their advertising and programming. The system is being scrutinized by the FCC and others in the industry.

Geo-Broadcast Solutions says its ZoneCasting system uses GPS and mobile broadband technologies to slice up the FM signal but avoid interference via a single-frequency network made up of FM boosters.

To allow the system to work, the company has asked the commission to modify its current rule that prohibits booster stations from originating programming. A booster operates on the

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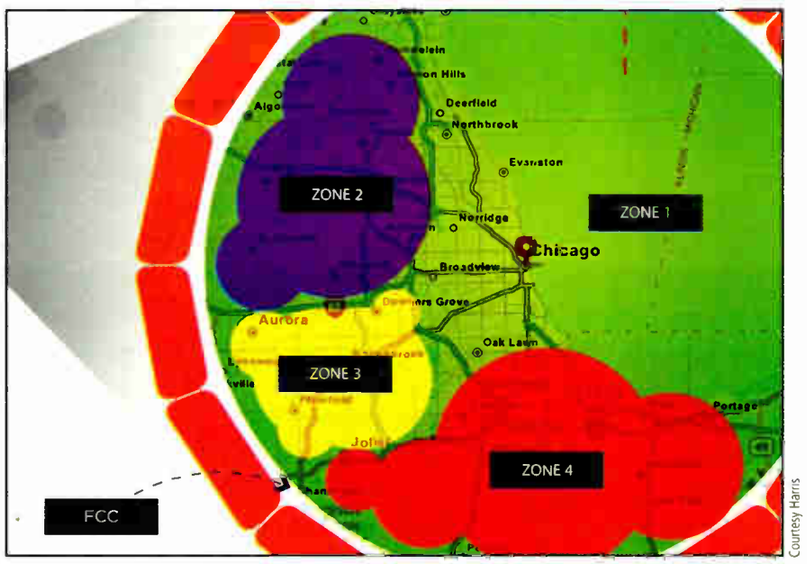

Courtesy Harris

The graphic shows a potential application of a ZoneCasting network architecture in Chicago. Zones show how coverage could be targeted to Chicago and the North Shore, the southwest suburbs and other areas. 'FCC' is the defined service contour. The map is a conceptual sample, not an actual case study.

An Early Experience With Artist Experience

How Greater Media Boston synched visuals with on-air audio on FM HD Radio stations

BY PAUL SHULINS

As HD Radio continues to improve, more and more features are added to the data set that is broadcast. In addition to HD1, HD2, Program Associated Data (artist, title and genre) and traffic services, a service called Artist Experience has been added by iBiquity Digital. It allows broadcasters to embed album art, station logos and other graphic content into the digital bit stream in real time for the purpose

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ZONECASTING

(continued from page 1)

same frequency as an FM station's main channel and is used to improve signal within the station's coverage contour.

The company and Harris are partnering on the first commercial test, which is expected to launch early next year at WRMF(FM) in Palm Beach, Fla.

Rich Redmond, vice president of product management and strategy, transmission systems for Harris Broadcast Communications, said WRMF will require experimental authority, which must be granted by the FCC.

Redmond said Harris believes the ZoneCasting initiative will open up advertising opportunities to many new companies. Geo-Broadcast Solutions has designated Harris as its supplier of choice for signal transmission equipment.

Limiting interference between a main channel signal and booster can be a challenge, broadcast engineers say. Geo-Broadcast Solutions said the purpose of the test at WRMF is to prove ZoneCasting will not cause excessive interference.

Dean Goodman, chief executive of WRMF owner Palm Beach Broadcasting, stated in a press release that localization of advertising to specific neighborhoods makes radio advertising both sensible and affordable for advertisers.

The company "is currently negotiating tower leases on behalf of WRMF," said Geo-Broadcast Solutions CEO Peter Handy. Construction of the booster network is expected to begin by the end of the year, with completion by the end of the first quarter of 2013.

The WRMF test project is expected to include 22 FM boosters in an effort to create a zone to geo-target much of Broward County, Handy said, which represents a zone of 25-plus miles.

"Typically, an application would include a half-dozen boosters to cover a zone of eight to 10 miles," according to Handy. "This is a very big and complicated network for WRMF. Using a series low-power transmitters and short sticks will provide for an almost seamless transition between zones and better signal strength on the fringes."

Though it hasn't done so yet, Handy is confident the commission will issue the experimental authorization needed to launch its ZoneCasting test.

Geo-Broadcast Solutions says it already tested ZoneCasting successfully at stations KNIV(FM) and KDUT (FM) in Salt Lake City, Utah, in March 2010, and at WWOJ(FM) in Sebring, Fla., in July 2011.

The company says the concept of geo-targeting content on FM radio will allow radio stations to make more money by selling advertising to new customers targeting specific geographical areas. In addition, the stations could serve the public interest by geo-targeting Amber Alerts and weather warnings.

'FAIRNESS'

Geo-Broadcast Solutions, based in Dallas, is an FM radio technology company that provides geographic targeting solutions, according to its website. Media Brokerage firm Star Media Group is part owner.

For the WRMF test project, Harris is deploying multiple corresponding Flexiva low-power FM transmitters within the network architecture, adding Intraplex SynchroCast simulcasting gear.

Both companies say the ZoneCasting system includes multiple transmission schemes for analog FM and HD Radio.

In its petition for rulemaking this year, Geo-Broadcast Solutions said it holds pending patents for the technology that enables the booster to avoid causing interference to the main channel and other boosters. A check of records with the United States Patent and Trademark Office indicates that the patents, the first of which was filed for in 2009, remained pending as of mid-October.

The FCC accepted public comments on the technology but had not taken further action on Geo-Broadcast Solutions' request for rulemaking as of mid-October.

Several advertisers wrote the commission in favor of the proposal, claiming that radio advertising is cost prohibitive for many smaller businesses.

The ZoneCasting concept "helps put fairness back into radio broadcasting and opens up a critical advertising outlet for small businesses which have been effectively closed out of the medium for the better part of 10 years," wrote Charles Moore, president of Dyna Wash, a prospective radio advertising client. Among the comments made during the filing period, none were opposed to the idea.

"We think our technology is very much in the public interest and we think the technology does not put anyone in harm's way. There isn't any new equipment the public needs to purchase to receive the programming," Handy said. He is hopeful the FCC will issue a Notice of Proposed Rulemaking in 2013 "and eventually green light it."

Summaries of Geo-Broadcast's pending patents describe an "equipment system and methodologies for segmentation of listening area into subareas enabling delivery of localized auxiliary information" and "equipment, system and methodologies for time synchronization between multiple RF frequencies, RF power and antenna selection for boosters in segmented listening area delivering localized auxiliary information."

According to the company, the system allows licensees to insert different hyper-local programming on each individual booster.

Several industry observers described ZoneCasting as an effort to marry the technology of the synchronous booster with marketing by increasing the commercial inventory that radio stations have to offer. That, coupled with the ability to target specific geographic areas within a primary facility's 60 dBu contour with advertisements, is unique; however, doing so could raise serious

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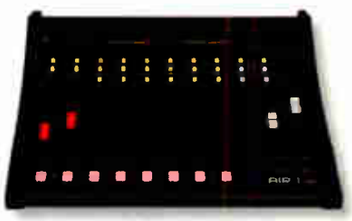

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World Radio History

Sandy Highlights Radio's Enduring Power

FROM THE EDITOR

Paul McLane

I purchased a GE Superadio for my mom and dad about 10 years ago because I wanted them to be able to listen to morning radio in their kitchen.

Mom's a lifelong WOR listener, a habit she inherited from her own parents while growing up in Brooklyn. So I wanted her to have a good AM receiver. As longtime readers will recall, the GE Superadio was considered among the elite.

My parents' safety was not part of my thinking when I bought the radio, but it could have been.

They live in northern New Jersey. Like millions of other people they were whacked by Sandy. They were not hurt, for which I am thankful, and their house lost only some shingles. Nevertheless, they had a scary time of it. They were plunged into nighttime darkness. They had no heat. They were cut off from Internet connectivity and TV. They had cell service only as long as their cell batteries lasted.

They steadfastly declined my offers to fetch them, preferring to be in their home and keep an eye on it. I monitored from a distance and worried about nighttime temperatures.

On Day 2, my mom mentioned that she and Dad felt so out of touch with what was going on in the world. "Why don't you listen to the radio," I asked. She replied that her radios didn't work without power. I reminded her of the one in the kitchen and suggested she put batteries in it.

Their power outage ultimately lasted a week. My folks were not entirely cut off from the world — they had landlines, newspapers and kind neighbors — but during this time, the GE Superadio was an important information pipeline. Were other people in the same situation? Were grocery stores open? Were gas stations open? What was the utility saying about when power would be back? Would the temperature go below freezing at night?

The radio also was an important source of comforting entertainment when TV was unavailable and darkness made reading more difficult.

My parents' experience is a ringing reminder to me that pronouncements from NAB and others about radio's role — as a "first informer" and listener friend in times of crisis — are not just PR talking points. They highlight a fundamental truth.

Jim Stagnitto, director of engineering for WNYC, sent this photo of the organization's AM site in Kearny, N.J., shortly after Sandy left the area. The walkway serves Tower No. 1.

'ONE MEDIUM THAT MATTERS'

Others noticed too. The National Journal, citing FCC data, reported that because of power outages and physical damage, as much as 25 percent of cell sites in the storm's path were flat-out not operating the morning after Sandy. A quarter of broadband, home phone or cable services experienced widespread outages.

Publication AdAge wrote: "Batteries are drained, Internet connections long-gone. For the nearly 5 million households muddling through a fourth day without power in the wake of Hurricane Sandy, there's really only one medium that matters, and that's radio."

Radio received many such reviews (though often with an unfortunate, lingering subtext: "Not bad for an otherwise outdated technology.")

Radio and its regulators would do well to consider the lesson.

As a reader noted on our website: "This is something we've known for years in the Gulf Coast region of Texas and Louisiana. No other medium has the solid-built infrastructure of TV and radio. When all the others fail such as satellite, Internet, cellphone and cable, over-the-air broadcasting is still on."

New Jersey Broadcasters Association President/CEO Paul Rotella was interviewed by Radio World's Emily Reigart after Sandy:

"You don't listen to Pandora to find out your weather, your emergency information, where to find food and shelter. Not only don't you go there, you probably can't go there, because we're so dependent on electricity and other infrastructure that's very weak in nature." He also reminded us that many in local radio have built particularly strong relationships with the National Guard, law enforcement, EMS and other first responders.

(If you missed it, find Rotella's interview at *radioworld.com/links*. He had particularly nice things to say about engineers.)

Simply put, a station's broadcast infrastructure is more robust than that of many media alternatives. Further, if a given station does goes off the air, others probably did not; we can tune to another station, whereas we can't just change cell or Internet provider in the middle of a hurricane.

So the next time you hear some industry bigwig hailing radio's role in emergencies, don't dismiss the statement as mere lobbying to influence a piece of legislation. It might be that, surely; but it also happens to be true.

To hold up our end of the bargain, radio stations must *plan* to stay on the air. That attitude needs to come from station management, who must explicitly make continuity of operations a key goal.

Are your engineers or operations managers given that mandate? Do they have authority to carry it out? Have you considered where the "failure points" in your air chain lie? Have you built your facility with redundancy in mind? Do you own generators? Do you exercise them regularly? Is there sufficient fuel for extended operations? Have you created an emergency staff contact list? These are familiar questions to Radio World readers.

(Programmers bear an equal responsibility. At news stations, this is obvious. Music stations: If your community is hit by a crisis but your jocks or automation system are happily doing exactly what they always do, with little or no reference to the situation in which your listeners find themselves, you are not only wasting an opportunity, but you are not upholding your license.)

So. Well done, radio. For myself, I'll be thinking about my mother's radio. And I'll be grateful for it.

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ZONECASTING

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interference issues, according to some observers.

An informal survey of numerous RF specialists and consulting engineers by RW found a variety of opinions on the eventual technical success of ZoneCasting.

OPINIONS VARY

"At first glance, I'm a bit skeptical about such a system," said Mario Hieb, a consulting engineer who has multi-FM translator management experience and is an occasional RW contributor.

"Boosters, which operate co-channel to the primary station, have been around for quite a while. Even in areas like Salt Lake City where there is significant terrain shielding between the valleys that make up the metro area, there are still interference zones where the primary and the booster have less than 15 dB of difference in signal."

With synchronization, antenna selection and power control, one can somewhat control the interference zones, but they don't go away entirely, according to Hieb, who added, "Because of enhanced error correction, HD Radio might work better where boosters are involved, but conventional FM would theoretically still suffer."

Others queried about ZoneCasting see obstacles at the FCC and in the field before a successful commercial launch.

Jim Stanley, owner of Stanley Broadcast Engineering, said the commission's stated mandate "is to protect broadcast licensees from receiving co-channel or adjacent-channel interference from other facilities, [but] since in this case it would be self-inflicted interference, they might grant such a request."

However, limiting or eliminating interference within the geographical area where the primary and booster overlap would be challenging, Stanley said.

"Theoretically, where the primary and booster coverage contours are of equal amplitude, the analog FM stereo signal is unusable. This is caused when two equal amplitude signals of the same frequency are present in the IF of the receiver. Under this condition, the receiver discriminator cannot lock onto one signal and produces an unusable demodulated audio output," Stanley wrote in an e-mail. "Propagation delay can be introduced into one or the other audio path to gain some control over the contour overlap regions."

Stan Salek, senior engineer with Hammett & Edison Consulting Engineers, said analog compatibility would be a primary issue in running separate programming on the main and

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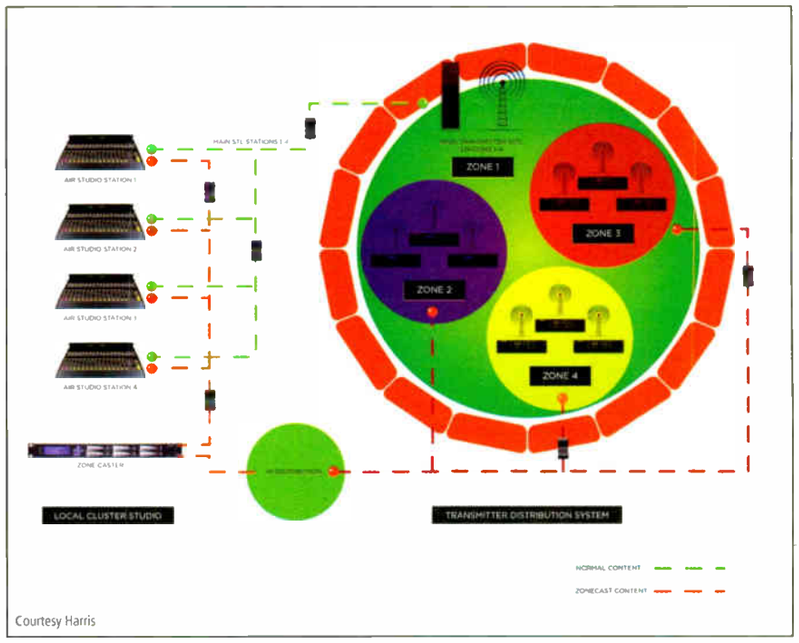
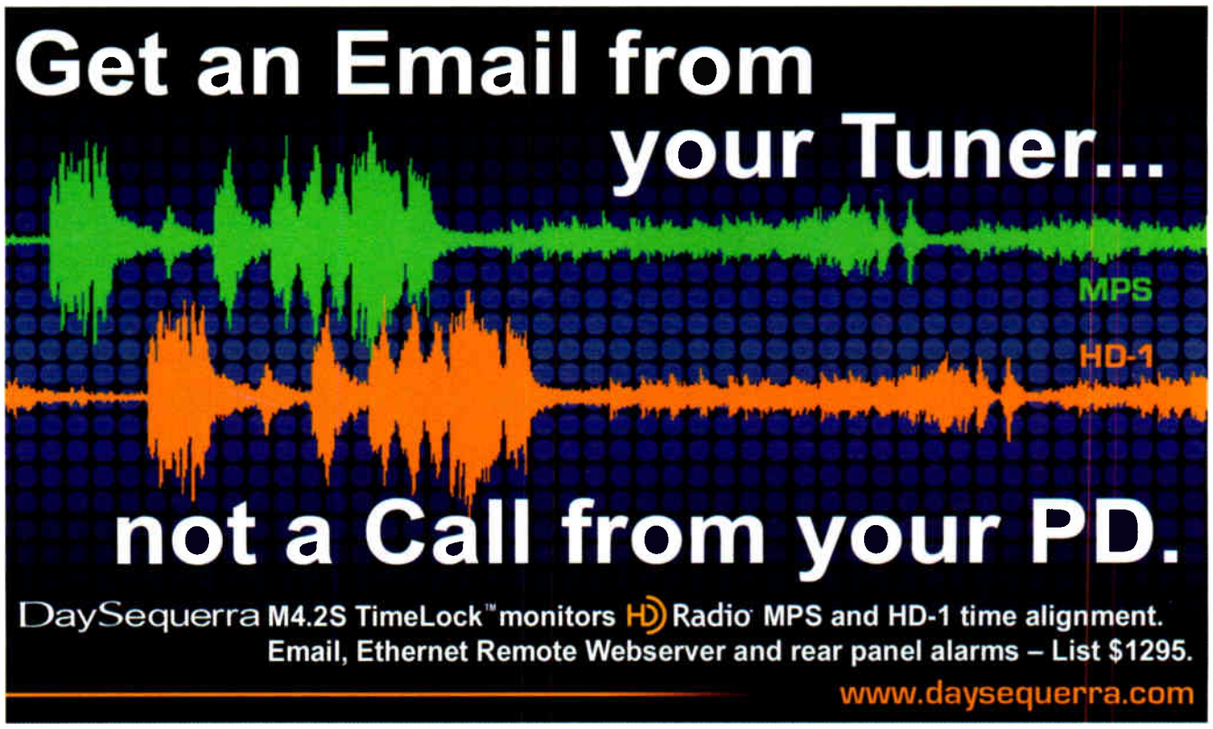


Courtesy Harris

GeoBroadcast states that these zone maps are conceptual samples. 'Actual zones in a real situation will depend on the broadcaster's service contour, demographics, tower availability, terrain and propagation factors, and other considerations.'



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ARTIST EXPERIENCE

(continued from page 1)

of being displayed on compatible receivers.

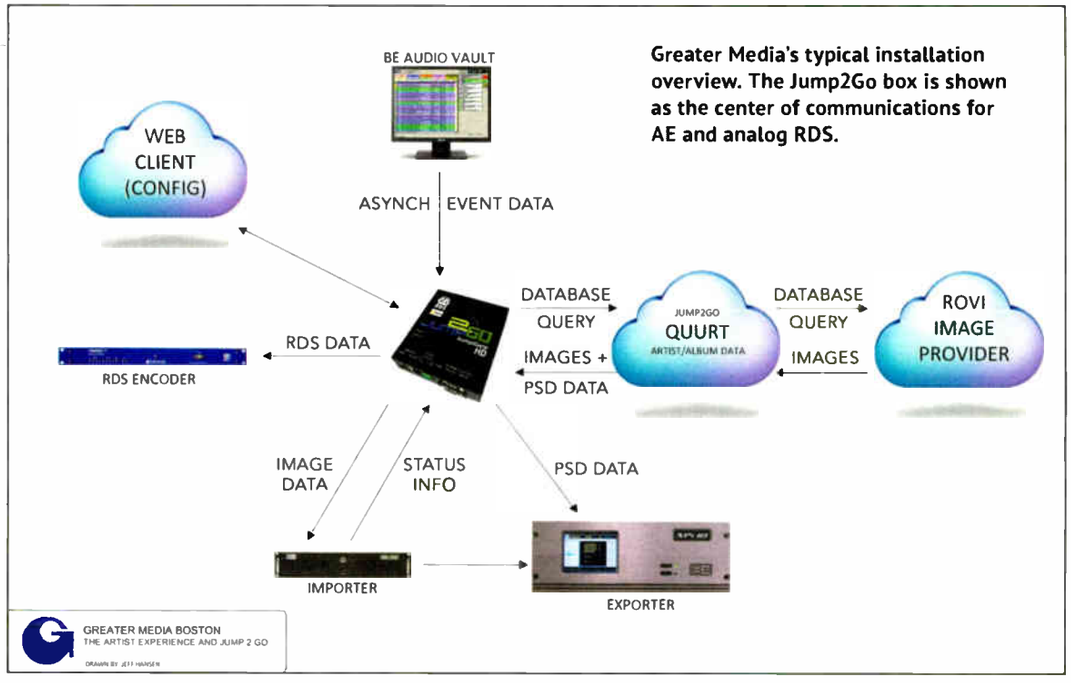
There are now several receiver manufacturers that sell AE-capable units, including JVC and Insignia, with more to come this year. This article describes some of my efforts to implement AE in Boston at Greater Media's cluster of five FM stations.

The road to implement AE was long, and for us started in December of 2011, but once we learned how to do one station, the others were fairly easy. One of our stations is fully automated. We decided to implement AE on WBOS because this presented the most stable testing platform, with no concern of the event queue being disturbed by DJs moving elements around.

Eventually we implemented AE on our live stations, and finally on two of our stations that are Broadcast Traffic Consortium stations. BTS has specific guidelines that need to be respected when running AE concurrently; these are not difficult to implement.

Today there are two paths to take. Allen Hartle's company Jump2Go offers a solution, as does Emmis Interactive's TagStation product. They both work well; I would hesitate to recommend one over the other. The biggest difference in my opinion is that Jump2Go relies on external hardware, consisting of small interface boxes called jump gates, to communicate with outside servers, while TagStation relies on and requires Broadcast Electronics' "The Radio Experience" software to interface to their servers.

For the time being, Greater Media in Boston is using the Jump Gate approach, so I will concentrate on discussing that. Greater Media was already doing business with Allen Hartle for iTunes Tagging, so implementing AE was a natural extension using common hardware already in place.



Greater Media's typical installation overview. The Jump2Go box is shown as the center of communications for AE and analog RDS.

The Artist Experience begins with the digital playout system, and in our case that is the BE AudioVault. Additionally I am aware that ENCO Systems, Wide Orbit and RCS Master Control are supported for non-delayed art, meaning the image shows up on the receiver immediately when the event starts. As of this writing, there are some other systems that are supported with delayed art, and they include iMediaTouch, Maestro, Dalet, Dial Global and Jelli. These automation systems will work with AE, but cannot pre-buffer the image, so the picture shows up a few seconds after the song starts.

The illustration shows a typical configuration using the Jump2Go approach.

The automation system sends information to the interface box, which is the Jump Gate in our case. The Jump Gate reaches out to a few different servers for information about the music, and the actual album

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World Radio History

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

1876: Alexander Graham Bell's commercially viable telephone.

1900: Phones become fixtures in more well-to-do and steam-punk homes.

1920: Every home is working toward having a telephone!

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

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

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

2004: IP Telephones begin to become the staple of modern business.

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ARTIST EXPERIENCE

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art image. This information is retrieved and sent to the importer, which accepts image data for HD1 and HD2, as well as Program-Associated Data for HD2. Pad data for HD1 is sent to the exporter. The interface also sends radio text to the RDS encoder in real time, and can feed a Web client for a more complete online experience.

This description is a highly simplified explanation of what happens with the JumpGateHD, which services analog RDS as well as HD.

There is actually quite a bit of behind-the-scenes data transfer going on to buffer and retrieve the images, as well as to send special lot IDs to the receiver at the correct time to actually display the album art on the receiver in sync with the start of the audio. This is done by way of the iBiquity Java Multiport Synchronous/Asynchronous Client. The JMSAC acts as a transaction server and manages the queue structure. It also is responsible for broadcasting an identifier call Lot ID that is associated with each event to cause the receiver to display the correct image at the correct time. The Lot ID is a marker that is sent with each image to match up with that image; the marker allows the image to be displayed on the receiver in sync with the audio.

The systems from Jump2Go and Emmis Interactive both provide nice Web interfaces to allow you to configure, monitor and troubleshoot the data flow. IBiquity also has some specific hardware and software tools that were made available to us for initial debugging. Obviously one of the best tools you can have is a receiver capable of displaying the album art. In our case we used a variety of receivers; our best unit was the JVC car radio model KW-NT3HDT.

JVC car radio displays station logo during a commercial airing on WMJX.

As a side note, the radio's firmware needed to be updated to the latest version to allow AE images to be displayed. However this can be easily done in the field using an SD card.

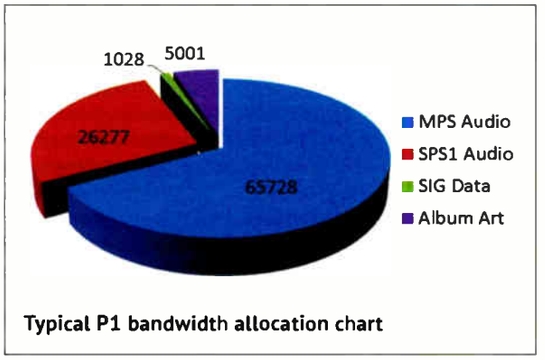
BEFORE IMPLEMENTATION

There are important prerequisites to implementing AE. First of all, be prepared to upgrade your importers and exporters. The importers must be using Ibiquity software version v4.3.1P1 or later, and the exciters/exporters need to be running ver. 4.3.2 or later.

With regard to the importer, this upgrade requires a clean installation. However this is made easier by the fact that the version 3 database can be restored into the new system.

Following the restoration, the bandwidth allocation is specified, and this is where you have the opportunity to choose between mode P1 and P3 of the iBiquity system. If you choose to use the extended hybrid mode (P3) you will have a total of 151 kilobits-per-second throughput available, as opposed to mode P1 that is limited to 100 kbps. However the extended hybrid mode requires about 0.8 dB more transmitter power headroom and also is not compatible with higher order (96 kHz) analog subcarriers. Of course running in the extended hybrid mode does allow more bandwidth for audio services, and this can be important if you are running an HD2 or HD3 program channel.

The chart shows a typical bandwidth allocation scheme for a radio station running in MP1 mode with HD1, HD2 programs, as well as AE. As you can see there is not a lot of extra room for other services, with in this case the SPS1 Audio service already limited to 32 kbps. The images that are broadcast need to conform to fairly specific specifications. They need to be 24 bit JPG files with a maximum of 200x200 pixels. The maximum file size should be limited to 12 kilobytes.



Typical P1 bandwidth allocation chart

During commercials, it is possible to broadcast images from sponsors, for example show the Coke logo during a Coke spot, and sell this as a value-added service. Additionally between songs or during public service shows, the radio station logo can be shown. There is a way to transmit this logo to the radio asynchronously to be held in non-volatile ram for immediate and frequent display when needed.

Custom messaging is also possible to do though the use of the PSDGENTX, a software developer kit published by iBiquity. Using this I have successfully broadcast images of our FM talk personalities during the times they were on the air since there is no album art to broadcast on a talk station. Other information such as weather and financial data can be sent as well.

LESSONS LEARNED

Some of the biggest problems we ran into were image lookup failures. Either the images provided were too large, or not the most appropriate one, such as the best of the 1960s compilation as opposed to the original artist. In some cases even profane or indecent images that were not appropriate for broadcast were returned. These obviously needed to be weeded out and handled on a case-by-case basis.

Also, getting the timing correct was a bit touchy. Some of our stations run profanity delays in addition to the inherent HD Radio transmission delay, so those delays need to be compensated for to make the images appear on the radio in concert with the song.

HD Radio offers a whole range of new options for broadcasters, and some of those options have not even been thought of yet. As we strive to compete more effectively with other digital media, AE is just another tool we have available to us to provide a more rich experience to our listeners.

IN HINDSIGHT

It took us about six weeks to implement Artist Experience on WBOS. That's because we were one of the first stations to do so, and we had challenges getting Jump2Go to learn how to communicate with our AudioVault. We were also trying to bring iBiquity, Hartle and BE on the same page with respect to AE implementation. Coordination and cooperation with all three proved to be time-consuming.

We eventually solved all those problems and now there is a clear path. We benefited from this process when implementing AE on our other stations in Boston and other Greater Media Markets.

Comment on this or any article. Email to radioworld@nbmedia.com *with "Letter to the Editor" in the subject field.*

ZONECASTING

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booster signals.

Hammett & Edison "has encountered two types of analog FM booster designs. The first is where the area to be served by the booster is severely terrain-shadowed from the main station transmitter. In that case, the booster almost operates as an independent station, anyway, so separating the audio programming at times would likely be unnoticed by the listener," according to Salek.

"The other case is where the booster service area is not completely shielded from the main transmitter service area. In such cases, a great deal of engineering effort goes into synchronizing the carrier frequencies, stereo pilot frequencies and modulating signals of the main/booster transmitters," Salek said. "So in reception areas where that synchronization is needed, separating the audio programs would seemingly result in an unusable situation until the programming is once again the same."

In general, Salek concluded, it has been his experience that nearby co-channel analog FM facilities cannot just be implemented without the benefit of terrain shielding. Synchronization can help, but generally only in a relatively small area between the transmitters.

Meanwhile, Jeff Gehman, a principal with Kessler and Gehman Associates Inc., reviewed Geo-Broadcast's proposed rulemaking and believes the system should work provided the company can convince the FCC to allow FM boosters to transmit programming different from the main station.

"Geo states that self-interference issues are minimized using an electronic synchronization technique they developed," Gehman said.

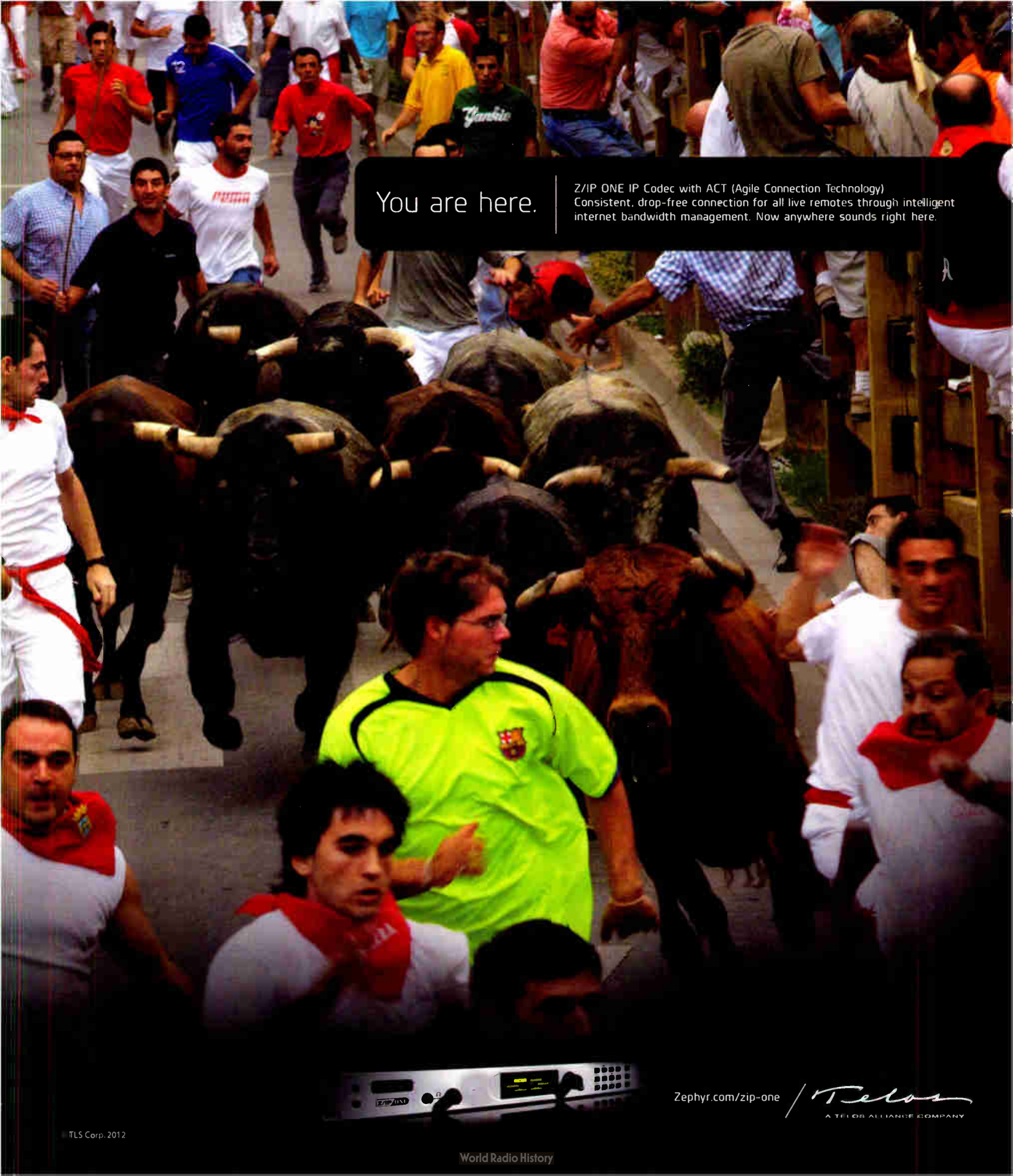
Geo-Broadcast said Harris Intraplex Synchrocast technology allows for "synchronous delivery of content across the defined zones."

Other observers believe the patents held by Geo-Broadcast hold the key to making the system work in total.

"It looks like these patents are the key since the Harris Intraplex Synchrocast system is decades old," said Mark Fehlig, a consulting RF engineer.

A Harris spokesman said Synchrocast was introduced in the late 1990s and has migrated to IP in the last several years. "It's also important to note that with the introduction of the Flexiva transmitter, Harris brought technology from its Digital TV and DAB digital radio experience, like integrated GPS, that isn't available in other systems," the Harris spokesman said.

World Radio History



TLS Corp. 2012

World Radio History

How Not to Lock Yourself Out

Plus: Use O-rings to keep pop filters from slipping

Last issue I told you about a fun panel discussion at the Wisconsin Broadcaster's Clinic called "What Is It?"

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

Cumulus Rockford CE John Huntley offers *Workbench* readers a chance to weigh in. Take a look at Fig. 1. What is it? Can you sleuth this out? Read on for the answer!

Fig. 1: What is it?

Brian Urban is the chief operator for KUT(FM) at the University of Texas at Austin. Brian writes that sites with multiple tenants often are secured by chains with padlocks looped together, so each tenant has its own lock. It's a great system — until someone puts locks around your lock and you have no access. (Enter the bolt cutters!)

I've seen engineers use a common combination lock; but then you have no control over who gets the combination.

Brian uses a device we featured about 10 years ago that lets everyone use his or her own lock, with no chance of locking anyone out. It's called the Stymielock and is made by a company in North Carolina. You can find more information at the Radio World links page, *radioworld.com/links*.

And the tips for the tower site just keep on comin'.

This next idea is from projects engineer and consultant Len Watson. When replacing a Lapp-type AM base insulator, toss a couple of Styrofoam packing peanuts in the bottom.

Don't pack it tightly; use just a couple. Here's why: If the weep hole does clog and you don't catch it, at least freezing water will compress the peanuts, instead of shattering the insulator. (Len also warns not to use the salted variety of peanuts!)

Consultants' websites contain lots of good information; Len's site is no exception. Visit *www.scopefocus.com*. Len Watson can be reached at *len@scopefocus.com*.

Several engineers and I recently discussed how to secure items like loose power supplies or utility boxes to remote gear.

Most everyone uses hook-and-loop fastening such as Velcro, mostly because the strips are easy to cut and place, and they usually hold well. However, after a remote season, your fastener may be losing its grip. Heat in particular may cause adhesive to deteriorate. The next thing you know, whatever was supposed to be fastened isn't.

Robin Cross of KCUR(FM) asked if I'd tried Power-Grip, used in the music industry to hold foot pedals for musicians. Power-Grip comes in strips measuring one inch wide by one meter long. It, too, uses a self-attachment scheme, mating to itself so you don't need a male and a female strip. But the secret is in the adhesive.

Fig.2: These O-rings work great for securing the VAC pop filter; find them at *www.grainger.com*.

Fig. 3: Slip the O-rings over the frame to keep the pop filter secure.

Fig. 4: A secure pop filter.

Application is simple, but first you need to use a rag and a solvent like lighter fluid — outdoors, in a well-ventilated space — to remove any prior adhesive. Once you've got clean metal, apply the Power-Grip strips. It takes 24 hours for the adhesive to cure; after that, those utility boxes will stay put.

Head to *radioworld.com/links* for a great informational video and ordering information.

Robin also offers a suggestion for engineers using VAC-RE20 microphone pop filters (*www.popfilter.com*). These can become loose over time. To cure that, Robin orders the O-rings pictured in Fig. 2, from Grainger. Slip the rings over the frame, as seen in Fig. 3, for a finished product and a pop filter

(continued on page 12)

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 equipment. The CAP-DEC1 is CAP 1.2 compliant and requires only one unit of rack space. Trust the experts with over 35+ years experience in the emergency alerting industry to help you meet your broadcasting needs. Visit our website or contact us today for more information about the Gorman-Redlich CAP-DEC1. We continue to support equipment we made 35 years ago.

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World Radio History

College Radio, By Way of Peachtree Street

Correspondent gets a whirlwind tour of Atlanta's young, local radio scene

BY JENNIFER WAITS

College Broadcasters Inc. held its first solo conference in Atlanta in late October. Although the organization has partnered with other organizations in the past for multi-day events focused on student media, this marked the debut of the CBI National Student Electronic Media Convention.

COLLEGERADIO

I attended CBI's combined event last year in Orlando and looked forward to this year's broadcast-focused conference. Having never visited Atlanta, I also had an excuse to see more college radio stations.

Attendees included students and advisers from high school and college radio stations, student television stations and online operations. Held at the Sheraton downtown — which concurrently hosted a Vampire Diaries celebrity autograph convention — the event contained three days of sessions. Tour opportunities were peppered throughout the schedule, including trips to Cartoon Network, WREK(FM) at Georgia Tech and CNN.

I managed to see lots of sessions (from roundtable discussions with music directors and station managers to Q&A sessions with lawyers and FCC experts). I got to visit four college stations and even see a bit of the city.

SOUL, METAL, JAZZ, HIP-HOP AND MORE

My station visits kicked everything off the first morning as I headed over to WRAS(FM) at Georgia State University.

After a short walk from the hotel, I was greeting by General Manager Anastasia Zimitravich. The station is in the University Center building, which also contains the campus TV station, career services as well as other offices. With a 100,000 watt signal, WRAS is unusual in its broad reach into all of Atlanta and large base of off-campus listeners.

I was surprised to hear that WRAS does not officially broadcast online, although TuneIn does make the stream available to listeners.

With an indie music orientation, the station dubbed "Album 88" asks its DJs with rotation shows to play pre-programmed music from WRAS's automation system. DJs with specialty shows (those that focus on soul, underground metal, jazz, hip-hop and local music) are allowed to break from that format and select their own music, which is typically played off of laptops or iPods.

After my tour of WRAS, I was able to catch the tail end of a CBI session about social media, which offered helpful tips on the nuances of posting on Facebook vs. Twitter.

Next up was a station at Savannah College of Art and Design (SCAD-Atlanta). I lucked out and connected with the station's adviser at the conference and she arranged to have her co-adviser Millie DeChirico give me the grand tour. DeChirico graciously picked me up at the hotel (everyone kept telling me that Atlanta is really a "car town") and gave me a bit of the backstory about SCAD-Atlanta as we drove to the dorm where the station is housed.

Photos by Jennifer Waits

A.J. Britt hosts a metal show called 'We're Not Gonna Take It,' at WRAS(FM).

WRAS General Manager Anastasia Zimitravich holds a classic Sonic Youth album from the station's vinyl library.

Located in a converted retro motel, the dorm (called the Spring House) has a groovy 1970s vibe to it. The three-room, five-year-old, online-only station is funky and cozy and seems reflective of its art student DJs.

As with WRAS, rotation DJs play pre-selected music from automation and specialty music show DJs make their own music selections. While I was there, one of these specialty DJs was playing the music for his show "Psychedelic Dad," using online tools. He explained that he was playing music from the 1960s to 1980s, songs that you might find in a "dad's basement."

A small physical music library contains a collection of mostly CDs, while a digital library has many more selections. Album covers from the 1970s and 1980s lined the ceiling of the studio and I was told that the music director and general manager are particular fans of the smooth sounds of the "yacht rock" artists from that era.

INSIDE 'THE VAULT'

Following the SCAD-Atlanta trip, I headed to nearby Georgia Tech for a group tour of WREK. (It warmed my heart to be on a van full of 20 similarly interested people.)

Upon arrival, we were divided into two groups in order to get tours of the main studio, record library and engineering room. Since it's a technology-focused school, it wasn't surprising to hear that much of WREK's computer tools, including its online playlist functionality, are "home-brewed."

Although WREK has more of an experimental music focus than WRAS, they still require DJs to play music that has been selected for rotation. Specialty show hosts delve into a variety of genres and some of their music is housed in "The Vault": a room full of CDs and LPs that date back several decades. I even spotted a stray cassette tape in a section devoted to the metal show, as well as vintage vinyl used by the big band show, "The Desoto Hour."

The next day I participated in a CBI

(continued on page 14)

WORKBENCH

(continued from page 10)

that won't slip.

He adds that it is common for his microphone arm/boom hardware to loosen too. His solution is to find the least permanent thread-lock compound and use it on the ends of the bolts after securing the nuts. Robin Cross can be reached at *robin@kcur.org*.

Thoughts on Fig. 1?

Well, John says it was a very windy day. Some kind of cross-field polarized antenna? Better get a grip on that mount! What appears from the ground to be some odd kind of antenna mount is in fact an antenna bay; its mount has slipped, allowing it to sag toward the ground.

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

Author John Bisset has spent 43 years in the broadcasting industry and is still learning. He is SBE certified and is a recipient of the SBE's Educator of the Year Award. He works for Elenos USA.

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MEET AXIA'S NEW, SMALLER IP CONSOLES.

THEY'RE BIG WHERE IT COUNTS.

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

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

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

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World Radio History

ATLANTA

(continued from page 12)

panel discussion about promoting and protecting college radio stations, and observed a fascinating panel about block vs. freeform programming. Although I've personally DJ'd at stations that are more aligned with freeform, I wanted to hear more about how other stations handle programming.

Millie DeChirico, who had toured me around SCAD-Atlanta Radio the day before, shared some ideas that she'd gleaned from programming at SCAD-Atlanta as well as at Turner Classic Movies (TCM), where she programs TV schedules of classic films (including a night of cult underground films).

Although I watch TCM from time to time, I was completely unaware of the creative themes that they use when compiling a day full of movies. She explained that much like college radio, she finds that she's coming up with crafty ways to provide context for a range of programs.

Although they broadcast some standard themes (a day devoted to a director or an actress), they also group movies using unexpected themes. One day at TCM might include films with bicycles; another might feature movies that all contain a scene of spaghetti eating.

DeChirico explained that at SCAD they will try to group rock shows on one day and electronic shows on another in order to create some consistency in the air sound. DeChirico's fellow panelist Michael Taylor from WVVS(FM) at Valdosta State University explained that the station moved to a block format structure in order to incorporate large sections of both rock and urban programming.

He explained that they disperse two-hour blocks of urban or alternative rock throughout the weekly schedule. He said that by offering this mix, they are providing a "sense of unexpected reality," while at the same time providing a consistent sound within each block through the items selected for rotation and automation.

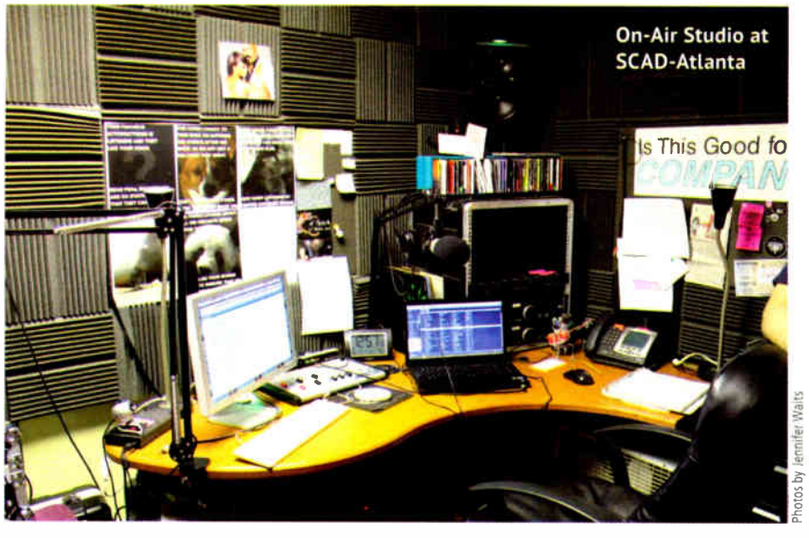
RADIO ON THE TV

I wrapped up the day with a trip to the Emory University radio station, about a 15-minute cab ride away. Station Manager Adam Valeiras met me at the front of campus and walked me to the station. It was a warm week in Atlanta and a pleasant stroll through campus.

Co-housed with student publications in the Dobbs University Center, WMRE is heard in the dorms on campus cable TV and low-power AM. Its studio takes up the majority of the small room in which it's housed.

DJs can play pretty much whatever they'd like on-air and are only asked to play two songs an hour from the station's eclectic library of digitized heavy rotation tracks. Since they broadcast over cable, a camera is pointed at the DJs 24/7. Valeiras told me that DJs can blur out the image if they'd like. Although most DJs play digital music, some DJs do play physical music and a CD player and turntable are available for their use.

Left: DJ at WMRE



Photos by Jennifer Waits

CBI Swag Swap: Sean Donnellan holds up a WQRI(FM) 'bro' shirt. Also pictured: General Manager Trevor Mackinnon (back to camera) and Program Director Austin Schofield (on the right).

While there are only a few old vinyl records stashed under a table, vintage 45s decorate the studio walls (including classic 7-inches by Tony Bennett and Starland Vocal Band as well as a novelty record from the Chipmunks).

WMRE is not only a radio station; it also publishes the music magazine Frequency and puts on twice-yearly music festivals. Past copies of Frequency (and its predecessor Listen) are framed and line the walls of the station.

Toward the end of the CBI conference, we listened to keynote presenter Carol Costello, who shared that she had been a college radio DJ and offered the students in attendance some tips for getting a job in broadcasting. Costello focused on social media, admitting that she reluctantly set up a Facebook page and a Twitter account on the behest of her boss.

While Costello said Twitter is still not her favorite forum, she acknowledged that it's great for breaking news like the impending "Frankenstorm" that was headed for the East Coast as she spoke. She said she loves Facebook and that her page's community is something that she takes "great comfort" in.

Costello explained that by sticking with a particular persona (in her case "down to earth and approachable") and maintaining a consistency in terms of the types of things that she posts ("newsy stories about political culture") she's been able to attract an engaged and intelligent community of fans.

After Costello concluded her speech, the CBI National Student Production Awards were announced. Student and station finalists and winners came from student television and radio stations from all over the country (and even from Singapore). As winners were announced, short clips of winning entries were played so that we could get a feel for the winning production. CNNRadio correspondent Pat St. Claire MC'd the ceremony.

The conference was a great three days of college radio immersion for me and it was another reminder that students are not only still interested in radio, but that student media are still thriving.

Jennifer Waits earned a master's degree in popular culture and pens the blog Spinning Indie. She is one of Radio Survivor's three co-founders and has been a college radio DJ at four stations. She has been on the air at KFJC(FM), at Foothill College in Los Altos Hills, Calif, since 1998.

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World Radio History

Avoid Hall of Shame: Don't Take Shortcuts

Got a master plan? Stick with it. No master plan? Create one.

BY MARK PERSONS

We have all seen examples of the "Shortcut Hall of Shame." And to some degree, we have contributed our own We take these shortcuts to save time — installing gear carelessly, running wires on a floor — but we end up facing liability or otherwise wishing we'd done the project right to begin with.

TECHTIPS

In this story, the names have been deleted to protect the guilty.

Consider the person who taped cables to a floor and routed them through a doorway. The wires included a 120 VAC extension cord. This is a fire hazard, to say the least. Who could condone such an act?

The State of Minnesota enacted a law requiring contractors and broadcast engineers to be licensed as low-voltage electricians; I wrote an article about this for the April 11, 2001, edition of Radio World. It was a hassle to become licensed and later renew my contractor's license at a cost of about $500 a year.

However, there is a bright side. In learning the National Electric Code, I came to appreciate fully the reasoning behind neat and safe wiring installations. Eight hours of required continuing education each year helped cement in my mind what is right and what is wrong. This includes code issues on which an electrical inspector might take a client station to task.

BAD FORM

Safety violations for exposed high-voltage (over 50 volts) wiring and lack of proper grounding should be taken seriously.

Remember your 120 VAC on-air light that gets its power from an audio console? Bad form!

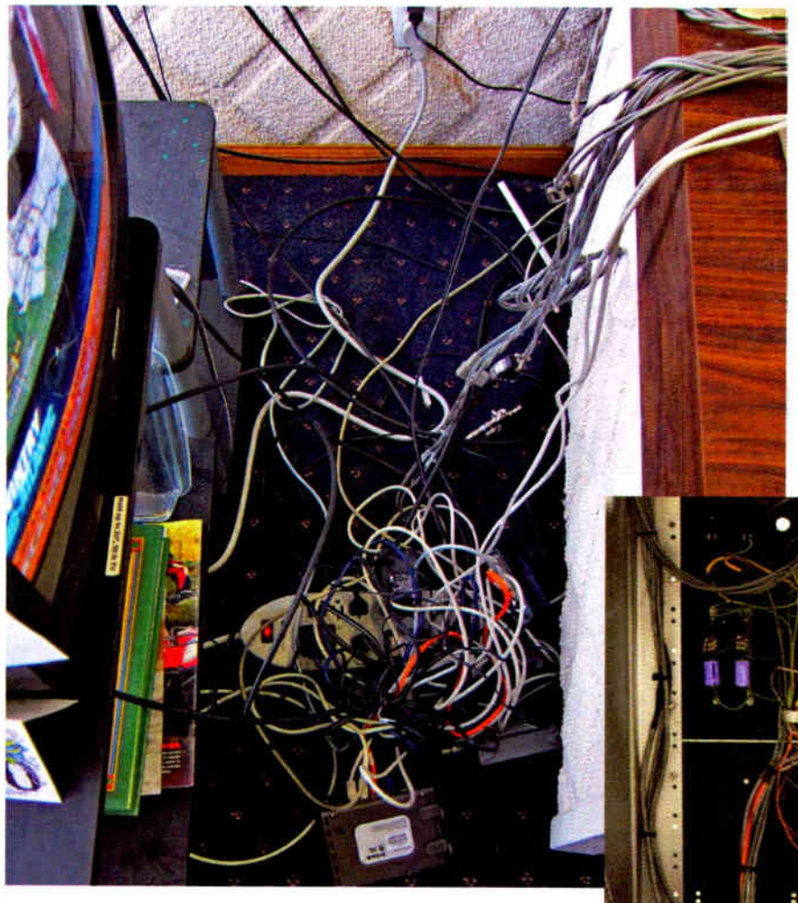
One of our photos shows nicely installed relays in an equipment rack, yet 240 VAC is exposed — a real shock hazard.

Yes, I always try to do neat work. Pride pushes me to that end. Fortunately I've always worked on a "time and material" basis so there was no incentive to cut corners.

Station budgets, or lack of budgets, make it more difficult than ever to do good engineering work nowadays. Still, that is no excuse for sloppy work.

True, there are various approaches to wiring equipment. Some engineers will take all circuits out to a wiring closet, while I might do point-to-point wiring in a studio. My cost to the client might be noticeably less, but at least everything is wired and marked neatly.

Make sure your satellite dish is in good shape.



What about serviceability? Who can troubleshoot or repair something that resembles a spider web? You shoot yourself in the foot, so to speak, when doing something like that. Your wiring should make perfect sense when you or anyone else comes in to make changes later.

The top photo here shows a satellite dish held up by a concrete block, a phone book and a block of wood — all because the alignment bolts on the dish were frozen. A few drops of penetrating oil on those bolts solved the problem within 24 hours — the right way.

The hard part is when you walk into in an existing installation that was done in a "gosh awful" manner. Where do you start? Do you continue using the same bad wiring techniques already on site?

No. I recommend that you make every change to a good engineering level, replacing old wiring one piece at a time. I know this is easier said than practiced; but it is the right thing to do. You need a "master plan" — and then you need to stick with it.

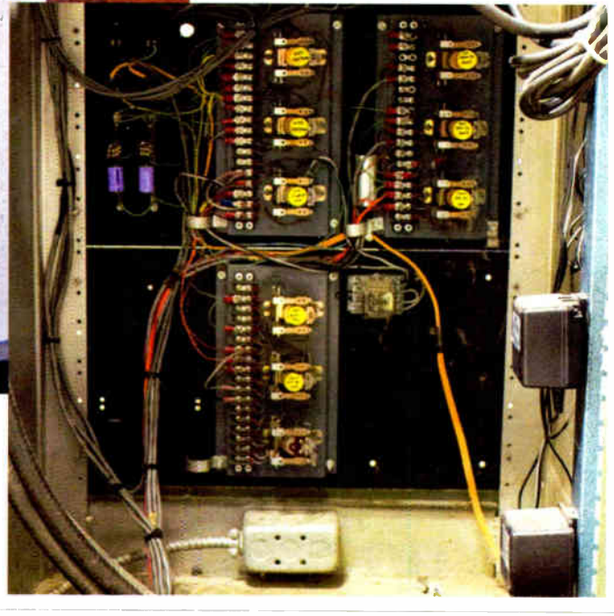
Some station personnel have referred to me as a MacGyver; but chewing gum and baling wire aren't my style. I just have the knack of carrying enough stock to repair many problems without the need to go out for parts. This really helps when working at a station, and reduces the temptation to take shortcuts. Learn more in my Dec. 1, 2010 RW article about a service van that can haul just about everything.

In the end, as you leave the studio or transmitter, you should feel that you have done your wiring neatly and responsibly. The station has received work of which you can stand back and be proud.

If not, it could come back to haunt you!

Find past Tech Tips articles under the News & Technology tab at radioworld.com.

Mark Persons WØMH is certified by the Society of Broadcast Engineers as a professional broadcast engineer and has more than 30 years of experience. His website is www.mwpersons.com.



Shown are more examples of some messy upkeep.

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The best digital recorder design is the one you already know.

In a world full of digital recorders, we still love the handheld microphone's intuitive design and familiarity. The iXm's ingenious, onboard LEA engine gives you perfect audio levels every time. Our dual power system uses rechargeable lithium ion and AA batteries and lets you choose your primary power source. Removable capsules give you cardioid, super-cardioid or omnidirectional pickup patterns.

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World Radio History

In the NBC Microphone Storage Room

ROOTS OF RADIO

BY JOHN SCHNEIDER

As a long-time collector of early microphones, I've always been intrigued by this image. It shows the microphone storage room at NBC in New York in 1929.

Operating engineer George McElrath is checking out the microphones that will be used for the live broadcast of President Herber Hoover's inaugural. The one-hour broadcast required hundreds of hours of advance preparation.

No recordings were allowed at NBC during these years, which meant that all audio originated from microphones. That fact would have made this an important and frequently used room in the RCA broadcast center at 711 Fifth Ave.

In the years before the development of the ribbon and dynamic microphone technologies, the only useful options were carbon or condenser microphones. Both systems required external DC power, typically provided by batteries. While offering better fidelity, condenser microphones were too fragile to be used outside the studio. So, the older carbon microphone technology was typically used for remote broadcasts.

In this storage room, we see dozens of Western Electric 600-A double button carbon microphones stored in the wooden box labeled "Mikes." McElrath is mounting them with suspension springs in both floor stands and the ubiquitous 1-B desktop enclosures.

The parts storage boxes on the shelves behind him are artfully labeled as "Rheostats and Potentiometers," "Sockets," "Signal Lights," "Screws," "Washers," "Mike Fittings" and various other categories.

The original print of this early NBC publicity photo comes from the collection of Bill Newbrough.

John Schneider is a lifelong radio history researcher. Write him at jschneid93@gmail.com. *This is one in a series of photo features from his collection. See past images under Columns/ Roots of Radio at* radioworld.com.

PEOPLENEWS

Jerrell Jimerson joined **Clear Channel Media and Entertainment** as senior vice president of Product for Digital. He will oversee the roadmap, product definition and design for **iHeartRadio**, as well as the company's network of 850 radio station and personality websites.

David Barrett, president and CEO of **Hearst Television Inc.** since 2001, will be honored by the **Broadcasters Foundation of America** with the 2013 Golden Mike Award on Feb. 25 in February in New York City.

India and New Jersey-based soft codec and audio processing software developer **ATC Labs** appointed **Harkesh Gupta** as chief technical advisor. Gupta was recently chairman and managing director of **Broadcast Engineering Consultants India**, an Indian government broadcast consultancy.

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

Federal Communications Commission Chairman **Julius Genachowski** switched press secretaries. **Neil Grace**, who held the role since 2011, became a senior communications advisor to the commission and **Justin Cole** took over as the chairman's press secretary.

World Radio History

NEWSROUNDUP

FM CHIP, APP: Emmis Communications is preparing to introduce a radio smartphone application for analog FM and HD Radio in 2013. The product builds on the company's TagStation software, the cloud-based engine that supplies data for the smartphone app and digital dashboards. Called NextRadio, the app is being marketed to the wireless industry as a way for consumers to listen to over-the-air radio without using their data plan for Internet streaming. NextRadio is in final beta testing in preparation for a launch on several smartphones and carrier networks.

HARRIS: Some 17 people were laid off at the Harris Broadcast Communications Division. Many of those affected worked in Quincy, Ill. Harris declined to comment on the exact number or positions involved. A spokesman said the layoffs are not related to the planned divestiture of the division and stressed that the Quincy plant will remain open. Harris recently received two new contracts for radio and television digital transmitters at the Quincy plant.

SANDY GRANTS: CPB okayed a $250,000 assistance grant to New York Public Radio WNYC(AM/FM) to support efforts to provide listeners in the New York and New Jersey metros with continued news and information about relief and recovery efforts following Hurricane Sandy. NYPR President/CEO Laura Walker estimates the costs for covering the storm at $300,000 to $500,000, and another $300,000 for repairing the AM transmitter.

PANDORA: After more than a year of negotiations, Pandora is suing ASCAP in an effort to lower its music royalty fees. Pandora is asking a federal court to set "reasonable" ASCAP licenses fees for the Internet audio service; which seeks a blanket licensing fee.

WHO'S BUYINGWHAT

MOUNTAIN BROADCASTING GOES WITH RBRX1 FROM SCMS

Mountain Broadcasting purchased a BW Broadcast RBRX1 receiver to serve approximately 80,000 people in Western Montana.

The sale was made through dealer SCMS. Station engineer Max Murphy told SCMS, "We have had issues receiving the main signal for rebroadcast of a radio station north of town because the frequency is so close to a high-power FM at the site of the translator."

He said the RBRX1 receiver allowed him to pick up 100.7 MHz under a tower with high-power KMSO at 102.5 MHz.

KQ103 CHOOSES OMNIA

WHKQ(FM) in Orlando, Fla., chose an Omnia.11 FM broadcast processor, according to the supplier.

The chief engineer is Bill Sullivan. Omnia said the station did "extensive, on-air comparisons of all processing options." It quoted Sullivan saying the station was most impressed with the "clarity" of the processor.

The Spanish CHR station airs on 103.1 MHz and is owned by TTB Media.

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 Vorsis 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
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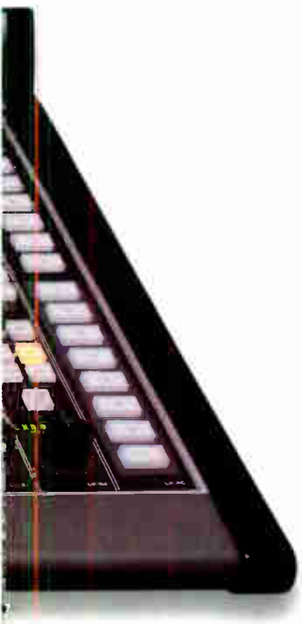
World Radio History

ENT NETWORK

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

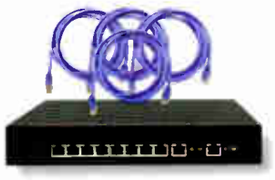
As an integral part of the WheatNet-IP Intelligent Network, BLADES interface, move, bend, shape, route and control everything you want to do with your audio. If it's audio, a BLADE will handle it – at lightning speed.

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

Wheatstone

World Radio History

NEW GEAR BLOSSOMS IN FALL

The following are new or recently introduced products and services that have been highlighted by suppliers at fall conventions and other events. More products were listed in the Nov. 7 issue of Radio World.

MERLIN FROM TIELINE PROMISES IP MAGIC

Tieline's Merlin is suitable for high-fidelity bidirectional IP audio and communications from the studio to a range of Tieline remote codecs, or smartphones using Report-IT.

Merlin promises stable IP audio over a range of public and private IP networks and is suitable for studio and remote truck installations. A user can create two mono connections to different Tieline IP codecs, or smartphones using the Report-IT.

Features include simple remote command and control; save and restore of codec configurations; intuitive SmartStream IP technology; dual Gigabit Ethernet ports; and dual redundant power supplies. It is IPv4/IPv6-ready.

Merlin includes SmartStream IP software, which maintains stable audio during remotes over unmanaged IP networks like the Internet or wireless cellphone data networks. The software adapts to variable network conditions to maintain stable connections over networks susceptible to packet loss over time.

Also from Tieline is Genie STL, a broadcast codec of choice for engineers who need multiple levels of power, audio and network redundancy for studio-to-transmitter links. Features include point-to-point 24 bit 96 kHz stereo audio sampling; dual Gigabit Ethernet ports; dual redundant power supplies; automated network alarms and backup; global network management; and free SmartStream IP software.

And in other news, Tieline said SBS of South Korea used its Report-IT Enterprise application as a wireless IP audio communications system for its sports news program "London Wide" during the games in London.

SBS created a broadcast booth on top of one of the city's familiar double-decker busses. The mobile studio was capable of broadcasting live audio and video from various locations. An SNG kit was used to transmit video and audio to the IBC; this was then fed to South Korea. The program ran for 3 hours 30 minutes live daily and required a high-quality, low-delay, full-duplex communications system between the bus and the SBS studio in South Korea. SBS used the Report-IT Enterprise app with an iPhone and a Tieline Mic Adapter.

Info: Email lackness@tieline.com or visit www.tieline.com

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World Radio History

CLEAR CHANNEL SATELLITE HIGHLIGHTS XTREMESAT MEDIA

Clear Channel Satellite announced deployment of the first XtremeSat Media satellite broadcast distribution platform. It is being used by broadcaster and network operator TeleSouth Communications Inc.

"TeleSouth purchased the system to deliver 10 high-quality audio channels to its affiliates and company-owned radio stations from its uplink located in Jackson, Miss.," the supplier announced. TeleSouth also entered into a multi-year agreement for satellite capacity for the distribution of programming.

Clear Channel Satellite President Mike Hagans stated that technology advancements "have made it much less expensive to operate your own multi-channel satellite network."

The XtremeSat Media platform is distributed by Clear Channel Satellite, which calls the system the first of its kind to provide large network functionality at a small- and medium-sized network price point. It will operate on C or Ku Band uplink systems and is capable of a single stereo audio channel or can be expanded to deliver 64 stereo channels in an MCPC configuration.

The Media Content Receiver, made in Germany by 2wcom, comes with one or two stereo analog and AES/EBU outputs with balanced audio on XLR connectors. The unit features eight audio-synchronized relays, expandable to 16, two AAC formats and several MPEG choices, and the ability to transition from SCPC (single channel) to MCPC (multiple channels).

Features include Smart Fallback to alternate RF carriers or Shoutcast Web stream, Web interface for settings and status, outbound IP audio stream for monitoring and FTP upload of receiver status reports and event logs. The 200 series MCR is capable of store and forward audio, copy-split and fall-back to receiver-stored content.

Info: clearchannelsatellite.com

ELENOS SIGNS BGS

Elenos signed up equipment dealer Broadcasters General Store as a sales channel to U.S. customers.

The announcement was made by Mary Ann Seidler, Elenos director of North American sales, and Dave Kerstin, president of BGS.

Broadcasters General Store has been in business since 1979; it represents some 400 manufacturers' products. Transmitter maker Elenos is 35 years old; it recently has expanded its U.S. presence.

Info: www.elenos.com **and** www.bgsfl.com

HENRY TALENT POD IS MIC/HEADPHONE CONTROLLER

Henry Engineering's new Talent Pod is a microphone and headphone audio controller, suitable for use in radio studios and especially for remote broadcasts.

"This new product solves the headphone-audio problems often encountered when doing sports remotes and other on-location broadcasts," the company says.

Talent Pod gives an announcer control of his or her mic and headphones. It lets the announcer turn the mic on and off and create a mix of local and return (IFB) audio in the headphones. Henry says its simplicity makes it easy for non-technical personnel to use.

For broadcasts with multiple announcers, several Talent Pods can be used so that announcers can control their individual mics and headphone audio mix. The units are linked using Cat-5 cables, eliminating the need for multiple power sources, DAs and complicated wiring.

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World Radio History

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Congratulations Brett on winning our competition, who is now the proud owner of our best selling Audio Processor, the DSPX. With it's easy to set up controls, unsurpassed reliability and great sound quality & loudness it is sure to be a hit with engineers and listeners alike!

Our 3 runners-up were; Errol R. Coker (KHCB), Jason Ornellas (WDHA-FM) , Van Craft (KENI), who each received Amazon gift cards.

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World Radio History

Radio Mitre Powered by GSelector

RCS used to turn Argentine broadcaster into a multiplatform 'Anycaster'

USERREPORT

BY GUILLERMO CHIALVO
CIO/CTO
Radio Mitre S.A.

BUENOS AIRES, ARGENTINA — With more than 85 years in the business, Radio Mitre is reinventing itself in hopes that Radio Mitre and La100 will become the most popular stations on the dial in Argentina.

The goal to grow from broadcast company to "Anycaster" will be achieved shortly. Our business model is based on the mission to provide seamless music distribution while taking into account our listeners' song preferences and recommendations. With the support of advertising sales, we are committed to keeping our radio channels free from subscription fees.

With RCS' GSelector's help, I know we'll achieve that goal.

USEFUL TOOL

Two million people listen to our daily broadcasts, and with the added option to listen online, that number can only grow. The strategic understanding of how the Internet can be used to garner significant listener data and user tastes drove us to create both musical and journalistic channels.

We call them "iRadios" and made a menu of 430 channels of programming. We have 250,000 unique visitors per month now and deliver more than 1,600 million minutes of usage per month.

With the demand for the best from our team, we knew we needed to provide the highest quality tools for our programmers. GSelector from RCS was our unanimous choice. It considers every song for every position, making hundreds of thousands of decisions in a typical scheduling session, which gives us a better log.

We needed an advanced and revolutionary new tool to program and control hundreds of stations on the Internet. GSelector was designed with our needs in mind.

Ruben Corda, our company president, and I came to the NAB Show in Las Vegas five years ago and were impressed with GSelector. When we changed formats, the resolve to make the move to GSelector was an easy decision based on our past experiences with RCS.

RCS Spanish-language technical support Adrian Guanipa and RCS Latin America Manager Horacio Gonzales did the installation and training for our GSelector installation in Buenos Aires. We ripped 100,000 songs from CDs and developed channels with GSelector driving all the formats. Our special programming is enhanced greatly by the schedules that come out of GSelector.

With a superb array of artists, songs and attributes already built into the music-scheduling program, GSelector saves us time. We have been GSelector fans for years and are always excited to see the innovations that come out of RCS.

For information, contact Horacio Gonzales in New York at (914) 428-4600 or visit www.rcsworks.com.

TECHUPDATE

SAM VIBE IS A CLOUD-BASED BROADCASTING APP

According to Spacial Audio Solutions, SAM Vibe is a new cloud-based broadcasting application that lets broadcasters upload their music library and stream music online. It is designed for standalone radio stations, specialized side-channels for terrestrial broadcasters and artists' or labels' online radio stations.

SAM Vibe was built to be user-friendly, Spacial says. Large fonts and color contrast options provide assistance to users who are visually impaired or color-blind. It is also compatible with screen readers for users who are legally blind.

For experienced broadcasters, SAM Vibe features robust radio automation features, cloud storage, a worldwide streaming platform, Web integration widgets and players — all of which are included in the package. The application lets users manage a library of any size.

The company continues that with SAM Vibe. Users can have a commercial-quality radio station up and running in 10 minutes with no infrastructure required. The process can be as simple as uploading content, setting the rotation rules, scheduling the station and then shutting down the computer. SAM Vibe can run 24/7, unattended.

SAM Vibe offers a copy function wherein content needs to be uploaded and organized once and then the user can create as multiple channels. The content can be shared among the channels while each channel can have its own particular rules and unique brand.

Contact Spacial Audio Solutions in California at (541) 587-6645 or visit www.samvibe.com.

World Radio History

ProStream Aids Jag Radio

College broadcaster finds the Telos ProStream easy to use and portable

USERREPORT

BY LOUIE GANNON
Chief Engineer
Jag Radio/U. South Alabama

Louie Gannon in 'The Bunker.' The Telos ProStream can be seen to the right in the rack.

MOBILE, ALA. — Jag Radio, the student-run radio station for the University of South Alabama, has been an Internet-only radio station since its start in October 2010. You can visit us at *www.jagradio.net*.

We started with a hand-me-down computer and a shelf in the radio edit lab at the University of South Alabama. Today, we have our own studio that we call "The Bunker." We have upgraded to a better secondhand computer, and have made some headway into better technological operations.

And we recently ordered the Telos Systems ProStream audio encoder. That has made a big difference.

CLARITY

It came with everything it said it would have — well, almost: a manual was not in the box. Thankfully, I had downloaded a copy beforehand to familiarize myself with the equipment. I placed a quick call to the support desk and had an official copy in my hands the next day.

The install went smoothly. From opening the box to putting it in the rack and getting booted up took a total of 15 minutes.

The setup took a little longer. That was mainly due to using the front panel for setup and having to dial each letter and number.

I tried using the LAN interface and had difficulty until I called Telos tech support and they walked me through it. (For those who don't have an IT department or IP sub-netting knowledge, download a copy of the Telos Z/IP ONE manual and look at Chapter 9, which gives you a quick tutorial.) Perhaps in later software versions, the USB port could be utilized for a method of initial setup.

The stream setup was flawless. I plugged in the cable to the Internet, restarted Shoutcast and boom! We were broadcasting. I was very happy with the results. Then I went to the Omnia Processing menu and was blown away.

The ProStream is worth the price just for the processing. I dialed through the settings to try the different presets. I picked a setting and applied it. My jaw dropped. The clarity was amazing. I tested some classic rock and was able to pick out each instrument. The bass was not overpowering and the processed sound was crystal clear with no artifacts.

Our listenership has increased more than 200 percent since we installed the ProStream. I have received a number of compliments on the quality of the sound that our stream is producing. The staff here at Jag Radio is blown away by the night-and-day difference in quality and uptime.

PORTABLE

The ProStream is also perfect for the road. We took the ProStream out of the studio and into the press box at the stadium for our rivalry game this football season.

The results were stellar. Before, we had to stream using my laptop. Connecting to the server was a nightmare; it usually took 20 minutes just to connect. This time, only 10 minutes elapsed between walking into the booth and broadcasting.

For the price, this is a box that no station — even small market or college radio stations — should be without. It is an investment, and the improvement in the quality of the sound, along with decreased strain on station computing resources, makes it well worth it.

For information, contact Clark Novak at Telos Systems in Ohio at (216) 241-7225 or visit www.telos-systems.com.

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"I am really impressed by the unique Elenos 10kW cooling system. There are no filters to change and no worries about moisture corroding components. That will save the station lots of money in maintenance."

"I was happily surprised because It took me almost no time to get the Elenos up and running. Due to the clean, logical layout of the systems and wiring. It's an easy install - Roll the transmitter into place, and lock the wheels."

- Jeff Rosenberg
WBOQ – Boston

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World Radio History

Single Aura 8-IP Handles Northeast Cluster

Multichannel processor takes the load for Neversink's group

USERREPORT

BUD WILLIAMSON
Owner/Operator
Neversink Media and Digital Radio Engineering

PORT JERVIS, N.Y. — Radio in 2012: Gone are the days of one simple audio path from console to processor to STL and transmitter.

Back then, your talent listened off-air and your concern was just keeping the one analog AM or FM signal on the air. With consolidation and the advent of digital transmission, your one analog AM or FM signal is now a group of five stations broadcasting an analog signal with up to three HD channels along with streams for the analog and HD channels. That can add up to 20 different pipes for content delivery.

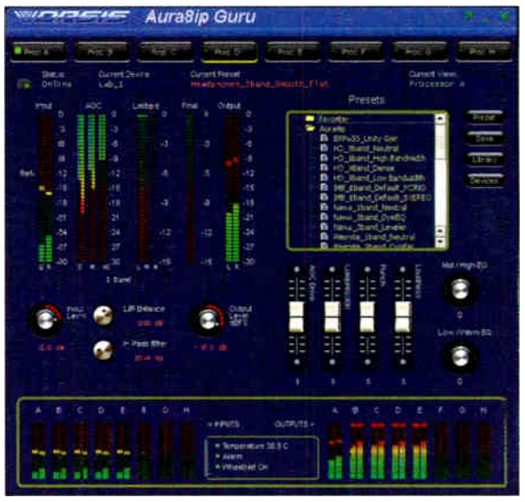
And then, of course, each of those needs processing, and the jocks need their own processing now since they can't monitor off the air because of the delay. Add in PPM encoders and decoders and your racks are suddenly overflowing with gear.

MULTICHANNEL

Neversink Media Group operates three FM and two AM signals out of our facilities in Port Jervis, N.Y. We are right at the confluence of New York, New Jersey and Pennsylvania (where the Catskills end and the Poconos begin … or vice versa!). Two of the FMs are translators for the AMs, and we have a full service FM that serves the Poconos down in Stroudsburg, Pa.

Each station needed STL protection as well as processing for streams. Rack space was tight so the thought of adding additional processing boxes to do the job was not something I was looking forward to. "Inexpensive" 1RU processing that could manage all of this started at $1,600 per box and I was looking at the need for at least six to eight processors. On the other side of the equation, using tired old analog processing from the '80s was not an alternative.

Neversink uses Audioarts consoles in the facility and



I happened across another product made by Wheatstone that grabbed my attention: the Aura8-IP. It was a 1RU unit that could process eight individual audio sources. At first, I thought it was too good to be true, and had to be severely stripped down. I was wrong.

It can be a standalone box or can be deployed as part of a full-blown AoIP WheatNet-IP system. The processing inside the Aura8-IP consists of a three-band AGC and compressor and a three-band limiter. I was using a Wheatstone processor on one of my FMs already and had been very pleased with the audio, so I decided to take a look at the Aura8-IP for my streaming and pre-processing needs.

The Aura8-IP was pretty simple to set up. I connected with the Aura GUI that came with it and was quickly familiar with the interface without having to look at the manual. There are six controls for each of the eight processors — AGC drive, compressor, density and loudness, as well as separate bass and treble controls. Factory presets include everything from gentle gain riding for STL protection to a very processed sound for talent headphones.

Presets are well organized by category and it's easy to pick what you want just based on the preset names. The six sound controls can quickly add or subtract from the factory preset and dialing in the sound is very easy from there. The GUI shows metering for each of the paths going through the device, and the different processors can be selected from the tabs along the top of the GUI. Inputs and outputs are a mix of analog and digital, and an analog input can feed a digital output … another pleasant surprise.

The audio has an analog texture without the harshness you get from some digital processors. I like the fact that the Aura8-IP uses lookahead limiting over clipping for streaming. The streaming audio has good artifact management even at lower bitrates and we've received many compliments about our streams.

The best part is that it is a part of the WheatNet-IP Blade system, so as we upgrade our facilities to an IP-based network the Aura8-IP will fit right in.

In conclusion, I'm very pleased with the audio quality of our signals and streams. Coupled with the time and rack space I've saved using the Aura8-IP, I feel this has been one of the best purchasing decisions I have made.

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

TECHUPDATE

ONSEEKER HAS TIERS FOR MOBILE APP

Onseeker has introduced tiered packages for its Mobile Radio App that the company says makes engagement with mobile audiences affordable for radio stations of all sizes. Furthermore, new customizable features and revenue generation opportunities extend the value proposition for mobile streaming.

The Onseeker Mobile Radio App is available in Basic ($1,000 annual license), Standard ($2,500) and Premium ($3,000) versions, each offering audio streaming, metadata and audience analytics among standard options. Other new enhancements for all tiers include rotating images and push notifications, each with associated scheduling options.

The pricing structures accommodate both iPhone and Android streams. Choosing one or the other cuts the cost in half. This flexibility stretches across each package in multiple ways, the company says. Radio stations can turn features on and off at will and can rearrange icons in order of significance.

Scheduling options ensure that radio stations can establish "start" and "end" times for rotating images, allowing radio stations to remain consistent with branding and promotions while reducing manual processes for app maintenance. Onseeker also gives its customers the ability to move rotating images in a "tap and slide" manner, linking content to upcoming events or notifications in other sections, for example.

Standard and Premium customers can explore new revenue opportunities through Quu Interactive technology. The Quu Interactive framework integrates interactive playlists with song, artist and other musical information along with quick links to coupons, featured products and sponsored events. This provides mobile listeners with instant program-related information while introducing new local advertising resources to stations.

Customers can also select bonus features for the first two tiers (two for Basic, five for Standard). The Premium model incorporates every available Onseeker feature, with new features automatically added upon availability.

For information, contact Roy Gonzalez at Onseeker in Texas at (281) 664-7953 or visit www.onseeker.com.

World Radio History

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ACCESS 2USB

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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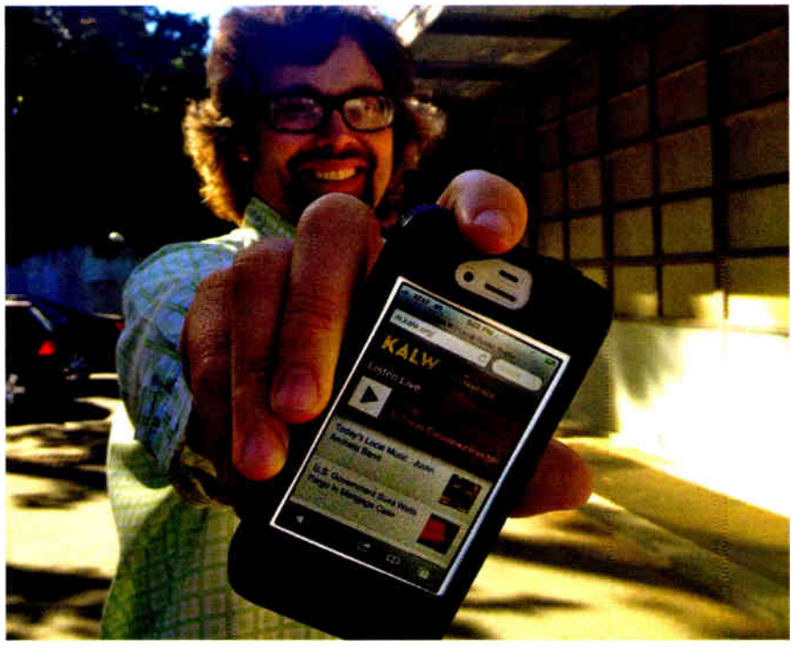
World Radio History

StreamGuys Bolsters Streaming for KALW

San Francisco station services thousands of on-line and mobile listeners

USERREPORT

BY MATT MARTIN
General Manager
KALW(FM)



SAN FRANCISCO — KALW(FM) is the oldest noncommercial FM station west of the Mississippi — and was the first FM station to hit the San Francisco airwaves in 1941.

We're a mixed-format NPR member station that serves the core of the Bay Area, though at 1,900 watts, we don't have the terrestrial power to reach the edges of the nation's No. 5 market.

The inability to reach a significant percentage of what Arbitron would assume is our audience has made streaming media a priority for KALW. That's true for many broadcasters, and extends beyond the desktop and laptop to mobile devices — especially in markets where most listeners carry smartphones. Making a commitment to streaming high-quality audio content, both online and to mobile devices, has paid off for our station.

LOCAL/NATIONAL

KALW launched its online stream several years ago with a much larger content delivery network. We switched to StreamGuys based on recommendations from public radio colleagues who shared positive experiences.

The company has since delivered a diverse streaming media platform that has been instrumental in growing our online audience, regionally and beyond. This includes financial support from new members across the country.

KALW prides itself in being local and global, mixing in popular locally produced programs like "Your Call," "Crosscurrents" and "99% Invisible" (a unique show about design that's been downloaded more than 2 million times on iTunes) with programming from the BBC, CBC and other international broadcasters. Strategically, it made sense to enhance our online platform, ensuring that more listeners can receive our diverse and innovative programming.

In addition to our live streams, StreamGuys also helped us build our "Local Music Player" for on-demand Flash streaming. Visitors can choose from 16 musically-oriented programs (including "Bluegrass Signal," "Africa Mix," "Music From Other Minds" and more) to access the most recent broadcast for each show. The shows are immediately uploaded to StreamGuys' cloud-based streaming architecture after the terrestrial broadcast and archived for on-demand play.

StreamGuys has also helped diversify our live streams, launching new MP3 and Windows Media services for multiplatform delivery. Listeners can access the streams on our website and a variety of mobile devices. iPhone (as well as iPad/iPod Touch) users can listen via the free Public Radio Player application available in the iTunes App Store. Android and BlackBerry users can access the stream via the free TuneIn mobile app.

Our online audience has increased more than tenfold since migrating to the StreamGuys platform. Today, our MP3 stream boasts between 10,000 and 12,000 unique listeners each week — up from 600 weekly listeners with our previous CDN. The on-demand Flash player continues to generate interest, with hundreds of weekly listeners. Meanwhile, StreamGuys remains flexible in pricing, building new and economical streaming packages when applicable to meet our evolving needs.

Listeners from Atlanta, Salt Lake City and Princeton, N.J., were among those who became members during our most recent membership drive. In addition to saying that they valued KALW's programming, many commented that KALW's online audio quality was superior to their local stations. This is a real testament to the importance of a robust and consistent streaming presence.

TECH SUPPORT

There is also strategic value in directing listeners to online radio for continuity. Many of our local listeners can receive our over-the-air signal at home but not at the office, or vice versa. The ability to offer our local programs on-demand allows listeners to quickly pick up where they left off.

Online streams also provide true audience measurement in comparison to the sampling methods of measuring terrestrial listeners. StreamGuys offers two tools to analyze audience numbers and trends. SGMon provides the most immediate value for KALW, with clear data that outline visitor numbers over any period of time. We often use this tool to study listening trends, and to connect how or why certain programs may hold or lose an audience from the previous program.

The second tool, SG Reports, provides richer data and statistics that identify unique IP addresses, geographic locations, listener devices and other statistics that offer a deeper view into audience patterns. We are still learning to use this tool to better effect, but both products offer the option to build custom reports. It is very powerful to look at a particular hour or show over a period of time, and learn from those results.

Technical support has also been exceptional, far exceeding the attentiveness of our previous CDN. StreamGuys is always quick to respond and help troubleshoot, even when attribute a streaming problem to an in-house network issue.

Last week, we had a network connection problem with our T1 line, and StreamGuys responded immediately to provide direction and walk us through the necessary fixes. They later followed up with reports to help us diagnose what happened. I was impressed that rather than say "it wasn't our fault" and focus only on their contractual obligation, they worked to make sure the stream as a whole was more stable. Our approach to technology is to be at the middle of the curve. We are a smaller station with a modest marketing budget, and cannot always be on the leading edge. But it's our responsibility to go where the listeners are in the digital space. StreamGuys has been instrumental in keeping costs manageable for us as we explore new ways to deliver our programming beyond the antenna.

For information, contact Jonathan Speaker at StreamGuys in California at (707) 667-9479 or visit www.streamguys.com.

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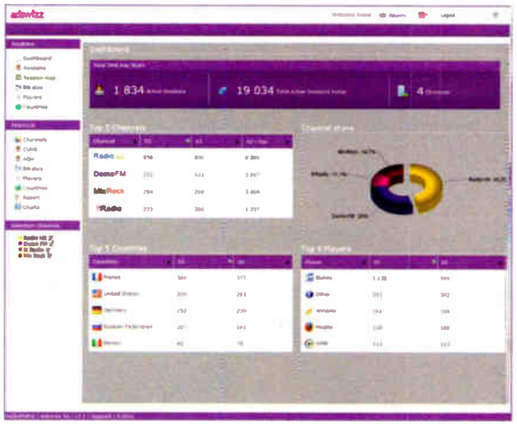
World Radio History

Kraze Is Crazy About AdsWizz

Canadian broadcaster finds ad insertion and replacement to be simple

USERREPORT

BY AMANDA GOULD
Station Manager
Kraze(FM)



RED DEER, ALBERTA — In 2011, those of us at Kraze 101.3, a contemporary radio station owned by L.A. Radio Group, were searching for a technology solution that would help increase and attract advertising interest from local businesses. We wanted to find a partner who could help us hyper-target audiences specifically residing near where our station is based.

In order to achieve this goal, we selected the AdsWizz Digital Audio Solutions, a technology platform that allows us to insert ads directly into each individual end-user's Internet stream to ensure our ads address every listener's interests.

One of the key benefits of working with AdsWizz is that their technology enables us to seamlessly take advantage of ad replacement revenue potential. In real-time, through the Targeted Ad Insertion feature built into AdsWizz Digital Audio Solutions, over-the-air ads are quickly and seamlessly replaced by local business advertisements and streamed on the Internet to end-listeners through the StreamOn content delivery network that we use.

AdsWizz's technology tools locate the right audiences based on their gender, demographic and current location. As a result, whether they're a restaurant or car dealership, our advertisers can rest assured that their ads are delivered to the right audience.

PLATFORM

We also appreciate that the platform allows us to serve different ad formats: video, audio, display and even a combination of all three. In addition, we can offer advertisers pre-roll and mid-roll capabilities and the ability to stream ads to almost any device, including iOS and Android.

The technology also runs on top of prevalent streaming servers including Icecast, Shoutcast, Wowza and Adobe Flash Media Server, and it supports popular audio encoding formats such as MP3, AAC/AAC+ and Ogg.

We have also taken advantage of AdsWizz's Advertising Analytics capabilities, which have leveled the playing field for us by giving a clear, holistic view of our listener-base. AdsWizz's real-time analytics reporting tools enable us to immediately analyze the audience response.

This is an incredible competitive advantage for us over other local stations when it comes to attracting advertisers. It guarantees they will be able to keep a pulse on how their campaigns are doing and whether there need to be any changes in their campaigns to make them more successful.

Our advertisers immediately learn what their ROI is for each station from their ad dollars they spend with us. Our advertisers are happy with what they are finding out.

AdsWizz's technology has been a great tool in attracting advertisers in different verticals, especially in the auto and home-building markets. Those that advertise with us are seeing their revenue increase with ad dollars they invest with Kraze.

Bottom line, if you are looking to monetize your radio streams through digital advertising, we suggest integrating AdsWizz Digital Audio Solutions into your business model.

For information, contact Alexis van de Wyer at AdsWizz in California at contact.us@adswizz.com or visit www.adswizz.com.

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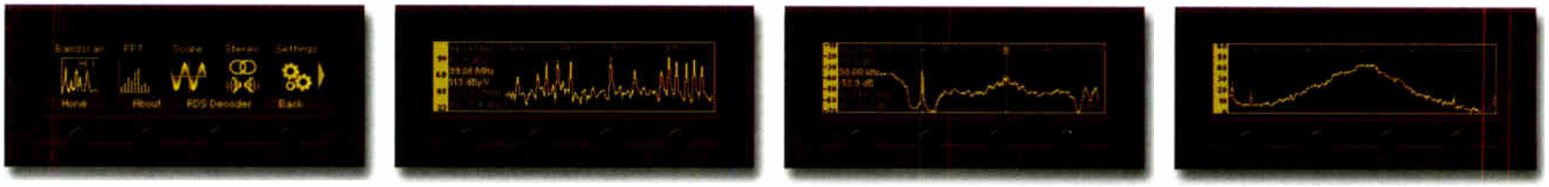

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World Radio History

Backbone Brings MLL to the Internet

Major League Lacrosse simulcasts TV audio via online radio station

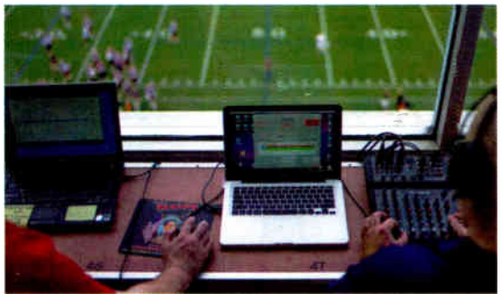
USERREPORT

BY CHRIS DAY
Director, Broadcast and Digital Media
Major League Lacrosse

BOSTON — Last summer, Major League Lacrosse was looking for a way to simulcast televised games via our new Internet radio station. We needed to take an audio feed from our television broadcast and get it to our radio station in a way that was both easy to use and economical.

Fortunately, we met Backbone Networks, whose Richard Cerny, Paul Kamp and George Capalbo impressed us at a meeting with what they had to offer. Their software seemed like it would meet our needs perfectly.

After completing our first season with Backbone, that first impression has proved to be true.



Backbone's software makes it easy to do live programming as well as load previously recorded programming, like podcasts, into their servers. Pre-recorded programming can be set to playback at a scheduled time or it can be set into a playlist as part of a rotation of programming.

LEARNING

Controlled by two pieces of Macintosh client software, Backbone Radio features cloud-based broadcasting and automation. Backbone Radio streams using Quicktime, HLS and Shoutcast and can be heard on computers as well as devices such as the iPhone, Android devices, iPad, Roku and more than 200 others.

Mobility was important to us, as we found that a majority of our audience listens to our station through a mobile app.

The guys at Backbone helped us set up their software on a Mac and taught us how to get up and running in a matter of days. The initial simulcasts went off without a hitch. To stream live, we simply had to hook two computers together through the mic and headphone jacks and broadcast the feed live through the Backbone software.

Once we had established that we could easily simulcast the television feeds, we wanted to explore broadcasting a game live to our station. With Backbone's help, we were able to put together a remote production kit that we could carry to press boxes and quickly set up for live broadcasting.

The kit consists of a Macintosh, an eight-channel Alesis MultiMix 8 USB mixer, a few Shure SM58 microphones and headphones. These all travel in a backpack and can be set up in about 20 minutes.

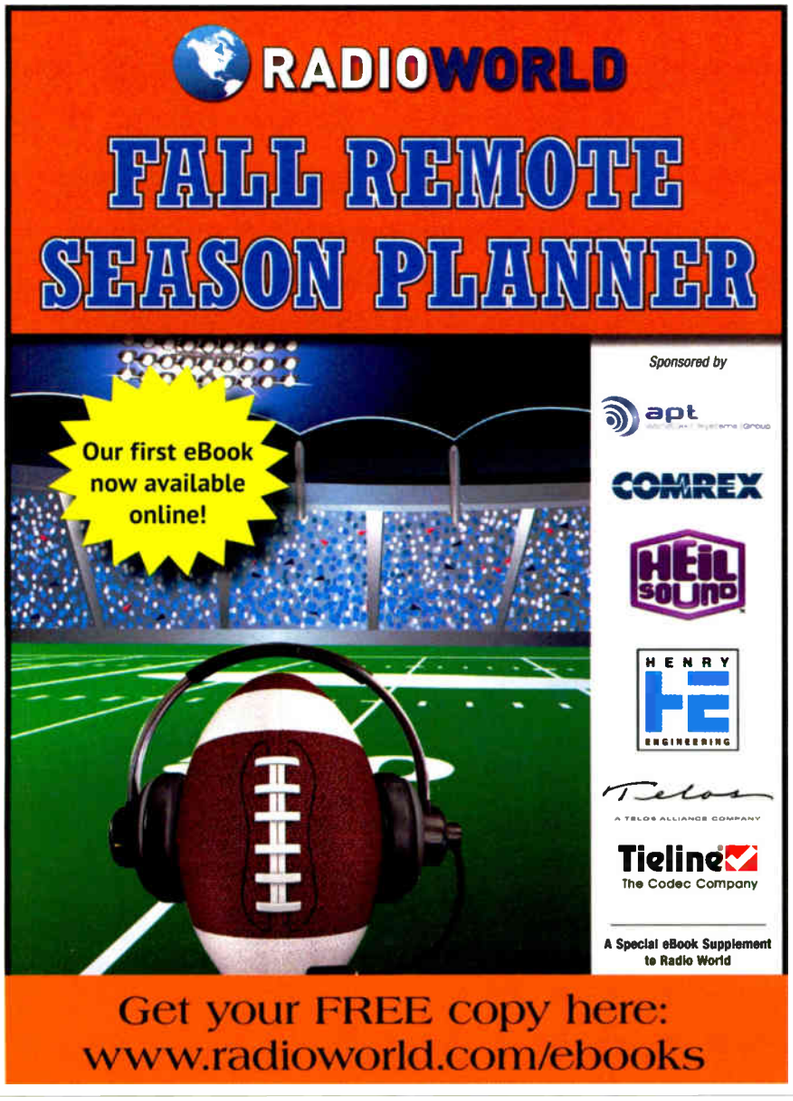
Because having a solid Internet connection is key, Backbone helped us determine the reliability of the signal and the upstream bandwidth and, once those were established, we were broadcasting games live with our engineer, producer and two announcers.

With the game broadcasts accomplished, we looked to add live support programming to our weekly schedule. Backbone once again had a solution. Using the equipment from our remote kit, we created a studio where we broadcast a live pregame show, a segment at halftime and a post-game report, as well as live, in-studio updates during the game.

The final piece of the puzzle for us was how to bring guests into our programs. We have players and teams scattered across the country, and we needed a solution that would allow us to incorporate them into our Boston-based studio shows. Backbone had been working on a system that would do just that, and we were able to test the beta version of the software towards the end of our season.

Our plan is to continue to grow MLL Radio, which is available through TuneIn, into a full time station during our season and hopefully even beyond that. Thanks to the help of Backbone, we feel confident that we can accomplish this.

For information, contact Paul Kamp at Backbone Networks in Massachusetts at (617) 848-1176 or visit www.backbone.com.



TECHUPDATE

BSI SIMIAN SIMPLIFIES WEB STREAMING

Broadcast Software International says that its Simian Pro and Simian Lite make streaming over the Internet easier than ever before.

Web-based stations can use their favorite stream encoding packages — Shoutcast, Icecast, Live365, SAMcast or others — to encode their station, while Simian simplifies the output of metadata with prebuilt templates so that listeners can see the artist and title information for currently-playing artists.

Simian Pro and Lite have an affidavit generator built in that analyzes the daily as-run logs, giving users a report suited for Sound Exchange. Simian 2.2 Pro also has optional remote clients for PC, iPad and iPhone, which allow your talent to connect to your studio and record voice tracks, create logs and more.

For stations that run a Web stream as a simulcast, Simian 2.2 Pro now has the ability to send software triggers to another Simian Pro 2.2 system via TCP/IP, so a secondary Simian system can replace terrestrial spots with Internet-only spots, perfect for generating extra revenue with Web spot packages for clients.

For information, contact Broadcast Software International in Oregon at (888) 274-8721 or visit www.bsiusa.com.

World Radio History

TECHUPDATES

SONNOX FRAUNHOFER PRO-CODEC ADDS iTUNES TOOLS

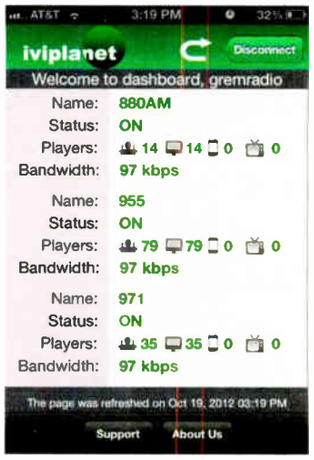
The Sonnox Fraunhofer Pro-Codec Plug-In enables mix and mastering engineers to audition up to five codecs in real time within a digital audio workstation environment, produce an optimized mix and encode to multiple formats simultaneously in real time.

Sonnox says that the Sonnox Fraunhofer Pro-Codec Plug-In Version 2 introduces the ability to master for iTunes and support the latest multichannel audio codecs. Engineers can now use Apple's iTunes Plus codec for real-time auditioning, making it a time-saving tool to efficiently mix directly for the "Mastered for iTunes" program. Sonnox added Apple's iTunes Plus codec to the Pro-Codec Plug-In to enable the exact clipping behavior of the iTunes encoding chain to be monitored and levels corrected if necessary.

The new version also integrates the latest MPEG Surround codec, along with AAC-LC multichannel and HE-AAC multichannel support, making the codecs conveniently available for producers of surround music. These codecs provide improved audio quality for surround sound mixing. They are used in surround broadcasting and streaming and are natively supported by a broad variety of devices and operating systems including Android 4.1.

For information, visit www.sonnoxplugins.com.

IVIPLANET DEVELOPS ADMIN APP FOR STREAMING SERVICE



Iviplanet has added several new features and developments to its streaming platform.

The newly available app for iPhone, iPad and Android (pictured) is free-of-charge for Iviplanet clients and allows instant access to streaming service whenever and wherever desired. Clients can check the status of the station, live feed, as well as number of simultaneous users by mobile devices, computers and set top boxes like Roku and Netgear.

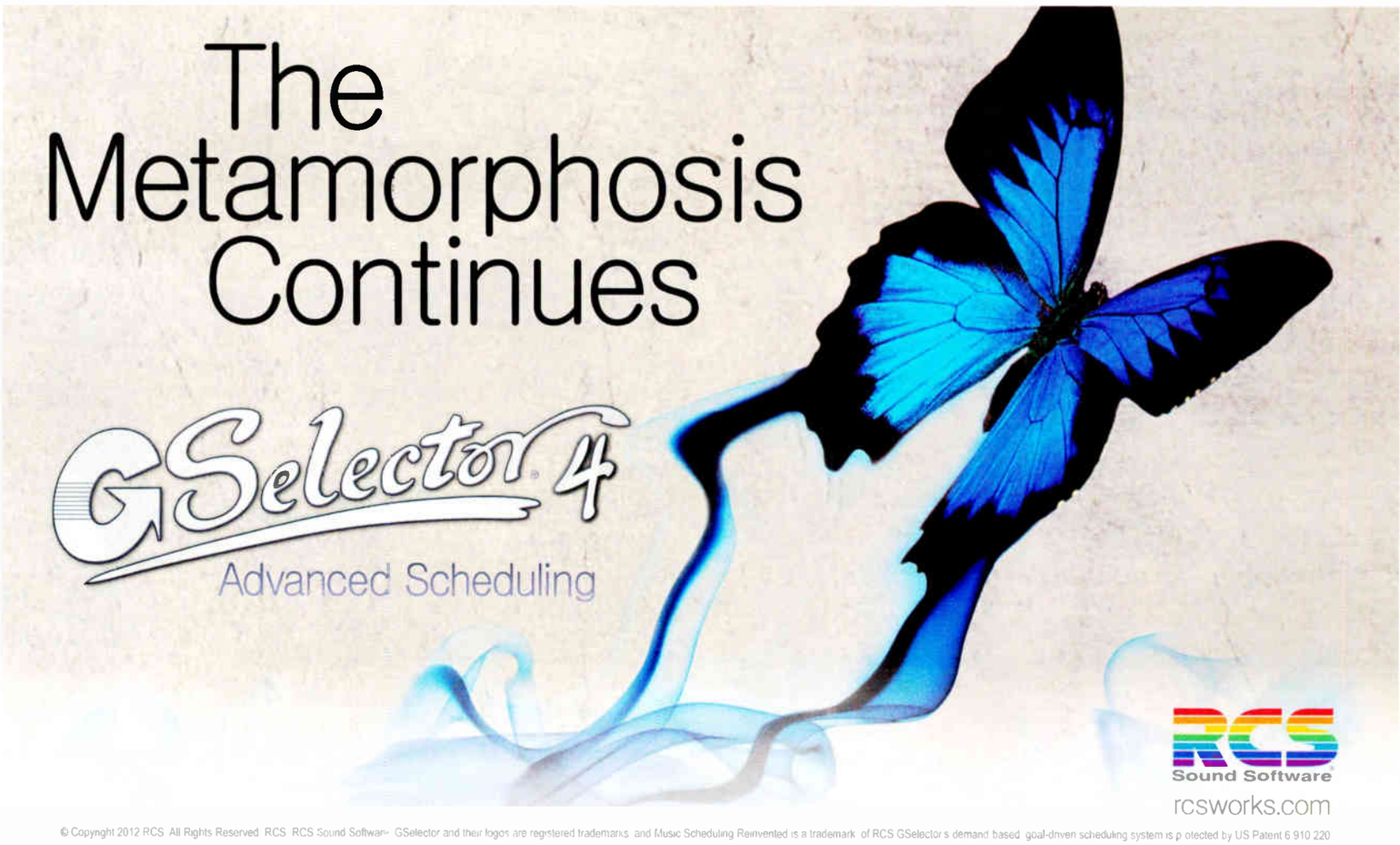
A new option at the administration level found in the Iviplanet interface is the "group" feature, which allows radio or TV networks with multiple stations to share user traffic between all stations. Data like current users, bandwidth and transfer is available in the dashboard's administration interface.

Also new is "ITVPlayout" TV automation software. The company says that this is a complete playout suite that allows the radio broadcasters to convert the radio into TV-radio. It includes the software to create the schedule playlist, software to capture the live feed and trimmer software for video cuts and a feature that generates a virtual audio and video device that is detected by the Flash Media Live Encoder for easy streaming integration.

The company also says that with the recent addition of a data center in Miami (on top of already existing facilities in New York, Atlanta, Texas and California), there has been an expansion of the Iviplanet CDN, making it easier to withstand increases in the amount of users and traffic.

This will facilitate increased redundancy, efficient distribution of the streaming service and a better user experience for end users.

For information, contact iviplanet in Florida at (866) 706-6247 or visit www.iviplanet.com.



World Radio History

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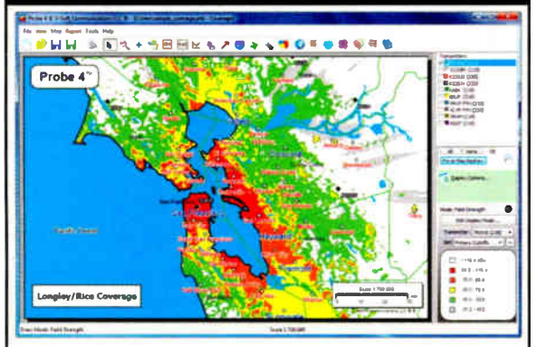

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2" plastic "spot" reels 6.5 or 8" diameter, as used for quad video. Wayne, Audio Village, 760-320-0728 or audiovlg@gte.net.

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

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

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

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

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World Radio History

READER'SFORUM

ON SPEAKER WIRE, SAVE YOUR DOUGH

I read the article about speaker cables ("You'll Get Caught Up in This Cable," Sept. 12) with a knowing grin. Barbed wire, classic!

For almost 20 years, I, too, have heard those who "know" high-end audio insist that there is a huge difference, and that cable must be oxygen-free, twisted, gold-plated, braided and so on. And as an installer of high-end audio/video, I even sold a bunch of the pricey cable.

But the truth is, if it will carry the signal, it will work; 18 AWG lamp cord sounds the same as any high-end cable when listened to with human ears. When working on the TIA-570 standard for residential audio cabling, all I required was that the cable be fire-rated for the application and recommended a minimum of 16 AWG.

If you need a signal generator and an o-scope to show the value of your wire, then you don't have a leg to stand on. Listeners who spend a tiny amount of money on decent-quality sturdy speaker wire, and the rest on room treatments or better hardware, get a much higher return on their investment.

John L. Seger, RCDD
Owner
ConnectionBridge LLC
Brier, Wash.

HAMS DOING PUBLIC SERVICE? PLEASE.

The following is in response to Radio World coverage of the Hamvention ("Amateur Event Continues to Pack 'Em In," Aug. 1) and Dan Thomas's enthusiastic letter to the editor ("Kahn Helped Young Engineers," Sept. 26).

I am an extra class ham operator with 52 years on the air. While a very small percentage of hams are like what Dan says, the vast majority do nothing for public service or little to advance the state of the art.

The day of hams being an asset has long ago disappeared except for some rare instances. Hams are appliance operators and sit in their shacks and cackle endlessly about minutia. They run "contests" where they lie about signal reports and pass useless data.

The tests are laughable: My daughter passed her exam for the "Tech Plus" when she was eight years old, so how hard could it be? All the questions and answers are published.

The only skill that was required was Morse Code, and that has been eliminated.

Add to this they put up antennas that blight the neighborhood in the name of something they rarely do — public service. This "right of blight" is protected by the FCC (PRB-1 decision).

As a teacher, I could not even give away thousands of dollars of donated ham equipment because I merely required the students to use it on the air for 100 contacts or more.

If you doubt me, listen on the air, and if you can stand it for more than 30 minutes and are not dead asleep, you are a better person than most.

Burt Fisher K1OIK
Chief Engineer
WCCT(FM)
Sandwich, Mass.

COMMERCIAL RADIO GETS A BAD RAP

I feel compelled to respond to Pete Simon's "commentary" ("CPB Should Boost Small Stations," Oct. 10).

Someone complaining throughout an entire article about my and other commercial radio interests, and about tax money not being spent on public radio stations the way he wants it to be, is at the very least disconcerting.

We — commercial radio interests — do not have someone handing us tax money every year to stay in business. We have to work for it.

I have friends in the public broadcasting engineering community and have no animosity towards them. They have been hired to do a job and they are doing it. My animosity is towards the attitude that "this type of programming is not available in the commercial sector. We want it and cannot make it commercially viable, so we have to make everyone pay federal taxes to support it."

If an individual state wants to set this type of system up, with the blessing of the voters, that is just fine and bless them in the effort. Just do not compel the entire country to subsidize a segment of broadcasting that is in competition with unsubsidized, taxpaying broadcasters.

The entitlement attitude of this "commentary" disgusts me. This article would have been better left in-house in the public broadcasting community, but I am glad that Radio World published it so that everyone could see this type of mindset at work.

Rod Zeigler
Director of Engineering
Nebraska Rural Radio Association
KRVN(AM), KTIC(AM/FM), KNEB(AM)
Lexington, Neb.

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World Radio History

AM Station Owner Has Hope for Band's Future

By programming current pop hits, small Tennessee station finds life

COMMENTARY

BY SCOTT BAILEY

I would to comment on Tom King's Article, "Owners Are Investing In The Future of AM" (Aug. 15).

As an owner of a small AM station, I have jumped right in there, and for the past seven years, I have been playing a music format called "hot adult contemporary." It's all of "today's best hits." And I have found that this format works for us.

I have enjoyed the success of some listeners coming back to AM when they find us — people in the highly coveted age demographic of 19–45.

I am the one of the few "AM owners" noted in the article who dares to be different. During the morning commute, we still have a live DJ, traffic reports, two and a half minutes of local news each hour … but we are playing a music that most people consider to be FM-format only.

A survey we completed found that "local & national news/talk/sports" formats are going out the door on AM, moving to FM in our area.

I feel that AM does not have to take a back seat and gear itself toward stereo-

typical content for age 60 and up. (For example, filling broadcast time with total back-to-back religious programs, boring talk formats or nostalgic music/oldies.) We found we can play the current popular hits for young and middle-aged adults, and it can sound good.

Artists like Katy Perry sound just as good on AM as she does on FM, if the owner/operator uses the latest technology, solid-state transmitters, up-to-date processing and wide-band antenna systems, like the folded unipole we use on a large, self supporting tower.

I have concluded that we don't need an FM translator to make this suburban, 1,000 watt AM station work. With a population of 30,000 people and growing, we are competing with Nashville's FM stations in our suburban area and surviving.

Programmers, programming consultants and technology of the '80s and '90s — not listeners — killed the quality of AM and made it sound like a CB Radio. Today, they talk like the AM band is dead, yet this is totally untrue.

I would like to thank Tom King of Kintronics for giving us owners of AM stations a positive outlook for the future.

And AM will be here to entertain with today's most contemporary music, and still keep listeners informed on what is going on that is most important to them in this 24/7 world we now live in.

Scott Bailey is president and general manager of WMRO(AM) in Gallatin, Tenn. The station, Magic 1560, is a Cumulus Media affiliate station.

OPINION

Owners Are Investing in the Future of AM

COMMENTARY

BY TOM F. KING

'Broadcasters do not invest this kind of money in AM radio stations unless they project a long term return on their investment,' Tom King writes. Shown is a recently constructed dual 50 kW directional antenna facility for Bell Media in Vancouver, B.C., Canada, including the transmitter building and two tower self-supported tower array, and an open panel and shelf phasing and matching system for the second five-tower directional array.

Radio World Talkback

Comments shown were posted by readers to stories that appear at radioworld.com.

"When all the others fail such as satellite, Internet, cellphone and cable, over-the-air broadcasting is still on. Makes you wonder why government favors these less robust systems versus OTA. The most recent spectrum grab comes to mind."

— on "After Storm NAB Pushes FM Chip"

iStockphoto/Andrii Gatash

Even during Sandy, radio broadcast continued for the most part.

"Broadcasting has changed so much that the experiences Linda [Baun] describes are long gone. I can't understand why anyone would want to get into broadcast engineering these days. I still love broadcasting, but it stopped loving me a long time ago!"

— on "Engineers Bring Energy, Passion to the Job"

"Moving off of Santa Catalina Island makes sense. I have seen the KBRT(AM) site on the island, with its dense, dry vegetation. I followed the story on how sparks from a contractor's chainsaw exhaust caused a brush fire that destroyed the site and put the chief engineer in the hospital. The new site looks as if there will be no issues like those on the island. Cheers!"

— on "Big California AM RF Project Is on Schedule"

Share your side at radioworld.com

World Radio History

OPINION

We Need Better Tech Solutions

It's easy to blame stations; but we're working in a convoluted marketplace

COMMENTARY

BY MARVIN WALTHER

Radio World's coverage of the fall Radio Show in the Oct. 24 issue touched on complaints about HD Radio.

I might add another: The HD signal sounds like so much pink noise on the analog dial as to make stations unlistenable.

I was attempting to listen to WABC(AM) in New York one Friday evening while driving here in northern Michigan, but the digital signatures of WBBM(AM) and WJR(AM) were making it nigh to impossible. If it wasn't one digital signature drifting in, it was the other or both, mixing on the main analog carrier of WABC and wiping out the analog audio.

IBOC is no solution as long as the band remains analog. Either go 100 percent digital on a different portion of the dial, or remain analog. Don't try to do both. It's ruining the power that can be dedicated to digital and diminishing the audio quality of AM modulation on the analog portion, producing very poor frequency response and coverage area.

'BUGS AND ALL'

Radio World's coverage also mentioned a call for broadcasters to step up their RDS ability in order for Detroit automakers to take radio seriously. Really?

A lot of stations don't do RBDS because setting it up is a nightmare. STL manufacturers share blame for their secret information about how to wire the serial cables for STLs to make it work. And how about software? As soon as a developer moves on to a new version of automation software, older software solutions go ignored — bugs and all.

Who has an all-inclusive solution for RBDS? You have to piece it together from your automation provider, STL manufacturer, RBDS box manufacturer, all with sparse information, because no one knows how the other guy's box or software will work with their code, RDS text or any number of hardware or software variables.

We were one of the first stations in Northeast Michigan to implement RDS from a "song title," "artist" and "commercial name, slogan and phone number info" perspective. We had to do it with flawed software that couldn't run campaigns without commandeering the RDS output entirely, even though the software writers promised it would. The software stops unexpectedly and needs to be restarted often.

Satellite program providers, too, either are not supporting RBDS wholeheartedly or are flat-out refusing to do it altogether. So how can we have an integrated RBDS product on the air when the only source for RBDS data is what comes out of our automation system?

Now radio makers are complaining that radio isn't doing enough?

Until an integrated approach is brought to bear on processor makers, exciter manufacturers and even those who manufacture RDS boxes, how can radio manufacturers and automakers demand anything of the radio market?

We in radio are trying to implement this stuff; we really are. But it's tough to do it with everything so convoluted. The market needs solutions for the broadcaster before anyone can accuse us of not "stepping up" to do our part.

Considering what we have to work with, we're doing a pretty damned good job.

Marvin Walther is chief engineer at Carroll Broadcasting in Tawas City, Mich.

READER'SFORUM

O, HD WHERE ART THOU?

The one thing that immediately hits home about digital radio is how few HD Radio receivers are available. The ones that are available are rather pricey and not really portable. (I have yet to see a HD radio in a car.) However, if you want a radio that does Internet radio, iPod or the like, the field is wide open, with all manner of price.

Now, granted, there is very little HD Radio in the wilds of Idaho; but one would think that someone would offer such a beast. Even online, the pickings are slim and carry a really hefty price tag. Stores like Best Buy and Wal-Mart say they have HD Radios. Not in my neighborhood.

I do work for a public radio network, and they run HD, but they are talking about turning it off, as there is only a handful of people using it. There just doesn't seem to be any interest in what is being offered.

I have read some interesting comments regarding HD Radio, especially since the passing of Leonard Kahn. There is a real buzz, especially when DRM is brought up, as it applies to AM and shortwave broadcasting.

We must search onward for the answers that will keep radio broadcasting viable and healthy. It can be done.

Mike Payne
Contract Engineer
Townsquare Media
Twin Falls, Idaho

RADIOWORLD

Vol. 36, No. 29 November 21, 2012

Next Issue of RADIO WORLD December 5, 2012
Next Issue of ENGINEERING EXTRA December 12, 2012

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Radio World Founded by Stevan B. Dana

Radio World (ISSN: 0274-8541) is published bi-weekly with additional issues in February, April, June, August, October and December by NewBay Media, LLC, 28 East 28th Street, 12th Floor, New York, NY 10016. Phone: (703) 852-4600, Fax: (703) 852-4582. Periodicals postage rates are paid at New York, NY 10079 and additional mailing offices. POSTMASTER: Send address changes to Radio World, P.O. Box 282, Lowell, MA 01853.

For custom reprints & eprints please contact our reprints coordinator at Wright's Media: 877-652-5295 or NewBay@wrightsmedia.com

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World Radio History

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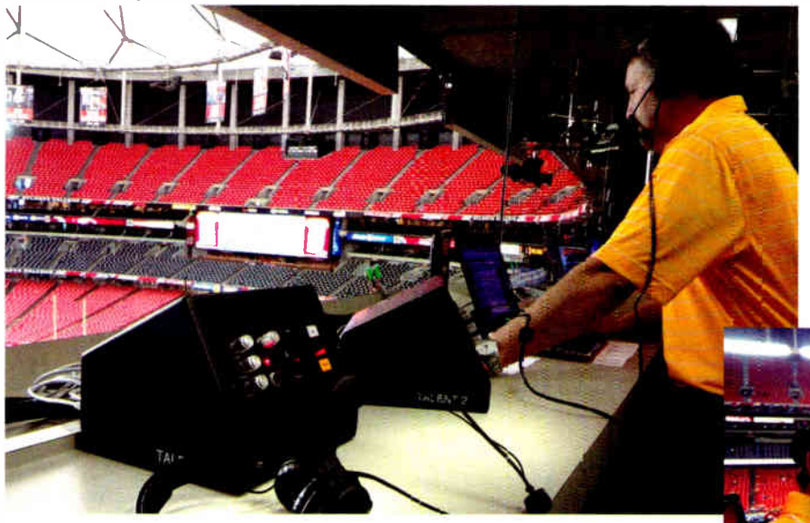

Yellow Shirt, Alan Roach (left)
White Shirt, Ed McCaffrey (right)

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"The functionality is amazing. I'm really happy that the engineer won't have to worry about setting up a talkback system thru the mixer anymore!"

Erik Hood, Station Engineer

This is 850 KOA's 43rd consecutive season broadcasting Denver Broncos football as it's flagship station, with 61 affiliates on their network.

Alan Roach is the Broncos Radio Network pregame host and Sideline Reporter for the away games. At home, he is the Broncos' Stadium Public Address Announcer. He is widely known for being the voice of the NFL during the Super Bowl and NFL Draft.

Ed McCaffrey is a former wide receiver for the Broncos. Ed had a 13 year career in the NFL with the Giants, 49ers, and then the last nine years with the Broncos. He's a 3-time Super Bowl champion and 1-time Pro Bowl player in 1998. This is his first year doing color for the Broncos' Radio Network.

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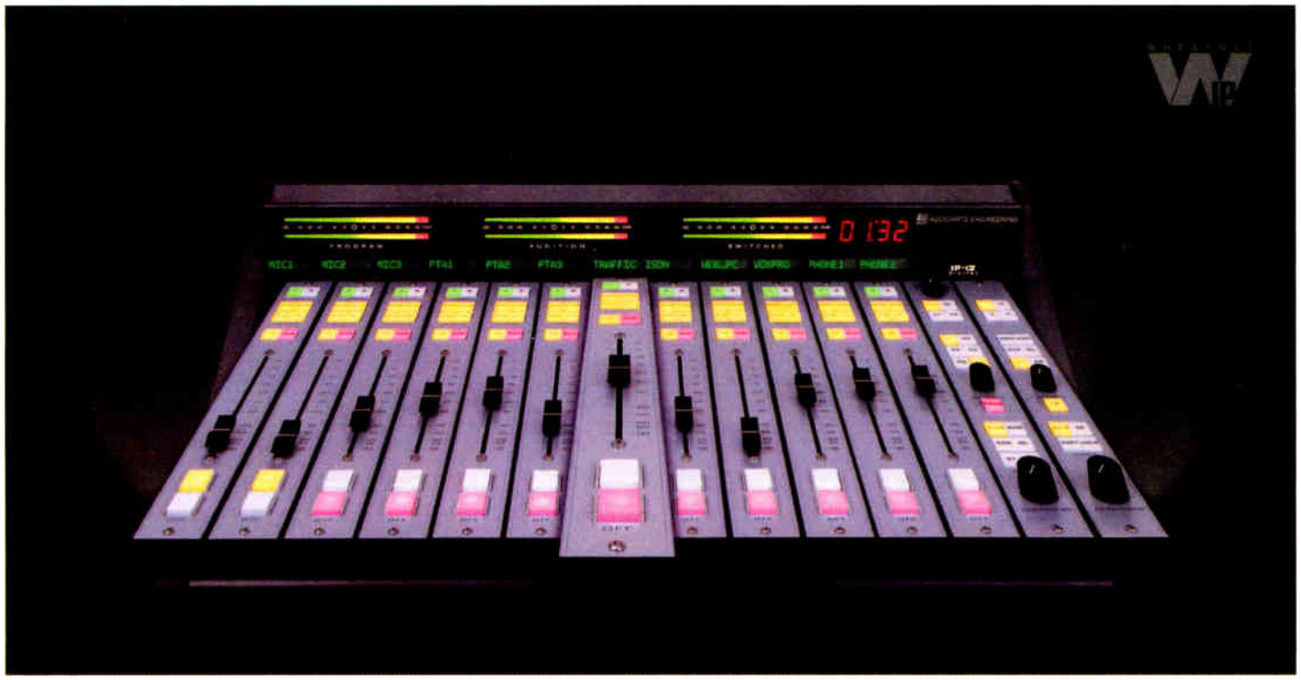

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