



# RADIO WORLD

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## 'We Can't Allow Ourselves to Be Out-Communicated by Our Enemies'

### At the BBG, a New Board Faces Familiar, Contentious Questions

BY RANDY J. STINE

WASHINGTON — The story of U.S. international broadcasting is getting something of a fresh start, or at least opening a new chapter.

### NEWS ANALYSIS

Eight new board members sit on the Broadcasting Board of Governors, which sets funding and gives direction to those efforts. The board will face a diverse set of challenges, observers say, thanks to geopolitical upheaval as well as the fast-changing influence of social media.

The BBG is the federal entity with oversight responsibilities for broadcasting activities of Voice of America, Radio Free Europe/Radio Liberty, Radio Free Asia, Radio/TV Martí and the Middle East Broadcast Networks, which includes Radio Sawa and Alhurrah TV.

Critics say the BBG wastes taxpayer money. For instance, they say, most

international audiences to communicate with America," it states in its annual report.

Its funding has grown since 2001 from \$425 million to nearly \$750 million for fiscal 2010. The BBG asked for more than \$760 million for FY2011. The president's request for FY2012 will go to Congress in February.

(The 2011 budget had not yet been acted upon by Congress as of early October. After the mid-term elections in November, lawmakers were expected to return to Washington and pass a continuing resolution to keep the government

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**What The Heck Is That Thing?**

John Ramsey and SBE Chapter 14 Decided to Check It Out

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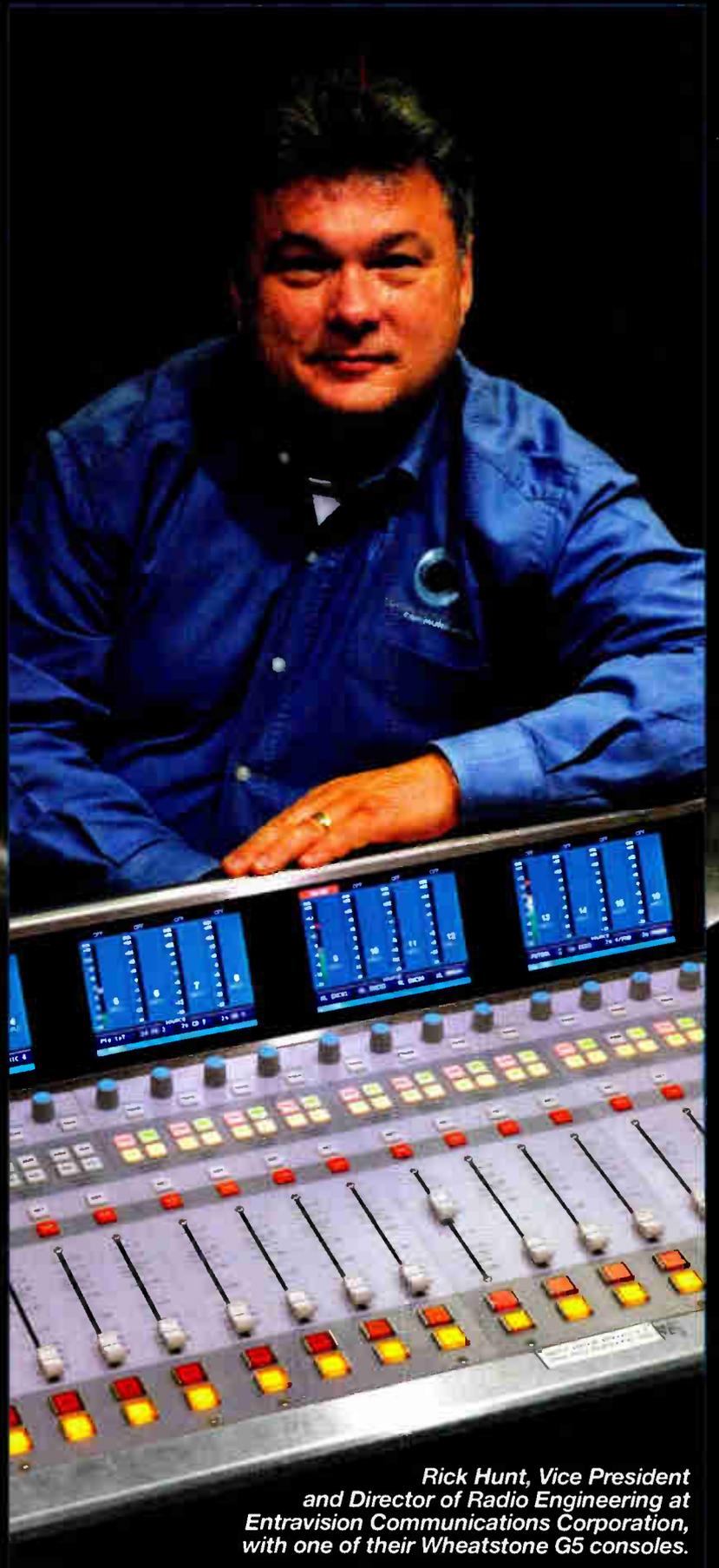
Entravision currently has Wheatstone TDM systems in 5 of their markets – including Los Angeles where 27 surfaces provide programming for their eight Los Angeles area transmitter sites and seven satellite uplink networks.

Rick Hunt, Vice President and Director of Radio Engineering at Entravision Communications Corporation knows that taking chances with unproven or ad-hoc technology simply isn't feasible – that the ultimate cost of using less than the best can be detrimental not only to day-to-day operations but to their overall success.

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*Rick Hunt, Vice President  
and Director of Radio Engineering at  
Entravision Communications Corporation,  
with one of their Wheatstone G5 consoles.*



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# RDS: Optimize Your PS Scroll

Though You May Have to Explain Why to Your PD or General Manager

BY ALAN JURISON

In this installment of our series about various facets of RDS, I'm going to focus on optimizing Program Service name scrolling on your stations. You can read the first two articles in this series at [www.rwonline.com/article/99554](http://www.rwonline.com/article/99554).

## RADIODATA

As we've discussed, many stations in the United States employ PS "scrolling," "framing" or "dynamic PS," changing the text over time in the eight-character PS field. In April, when we talked about RDS/RBDS RadioText send rate optimization, I suggested an RT adjustment. Even before that adjustment, you might have found your station dropping the eight-character PS

making the scroll go faster, it looks great in optimal conditions.

But then get in the car and drive around and you'll quickly find that

**We need to fine-tune** our RDS implementations to provide a good experience for all receivers – not just in the PD's car in the station parking lot.

you're jumping frames as the receiver runs into multipath and other impairments. This isn't a great user experience. You need to be mindful not to set your delay too low.

If you've followed my recommenda-

you deem appropriate for your situation. Some people may feel my recommendations are almost too aggressive.

Or perhaps your station has an Open Data Application agreement and can't dedicate that much data to RT because you're leasing out your RDS carrier for traffic data. Or maybe you feel that

a delay of 4 seconds on the PS is just too long.

For those situations, I'd recommend that you find a "middle ground" compromise. For example, on the Inovonics line of encoders, perhaps you change

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frames periodically.

I've found that a lot of stations have this scrolling delay set way too low. Text scrolls too quickly and, if the receiver has impairments such as multipath, you may drop these frames. With typical RDS encoder defaults, anyone running a delay on their PS at under 2 seconds already was prone to this dropping phenomenon.

I can't tell you how many times I've seen dropped PS packets because the station had its dynamic PS scrolling delays set too low. Often the demand to "make it faster" comes from a PD or GM who is looking at the radio in his or her car, near the studio, in optimal receiving conditions. They get frustrated that the song information, station name etc. aren't scrolling fast enough.

To a point, that's understandable. We're often trying to display something that's 50-100 characters long, eight characters at a time, with a delay in between. By decreasing the delay, and

tions for an aggressive RT sending rate, you'll find that the receivers that prominently display the PS may start dropping frames, perhaps even under optimal conditions. This drop is due to the data rate limitations of the RDS standard.

### MINIMUM DELAY

Given this, I would recommend a minimum delay of 3.75 seconds to 4.0 seconds between frames. If your station is more multipath-prone, you might want to make the delay closer to 5.0 seconds.

At first, this delay might drive your GM or PD crazy. After all, they might have thought 2 seconds was too slow. But again, I maintain that we need to fine-tune or "tweak" our RDS implementations so it provides a good experience for all receivers, not just in the PD's car in the station parking lot. It might take some explaining for this concept to get this point across.

Feel free to fine-tune these settings as

the DRTS=8 and change your PS delay to 3.5 seconds to back off the aggressive nature of the RT. While I don't recommend this setting because the RT will take longer to send, you might like it better.

Luckily, the RDS standards are flexible to allow you to have a variety of parameters you can customize for your situation.

I've been getting good feedback from people interested in these details of RDS. Feel free to comment as we continue this discussion. My e-mail is [alan.jurison@citcomm.com](mailto:alan.jurison@citcomm.com).

In our next article in the series, we'll discuss RDS subcarrier injection rates and pilot synchronization of the RDS signal.

*Alan Jurison is a regional IT manager/broadcast engineer for Citadel Broadcasting in Syracuse, N.Y. He holds several SBE certifications including CSRE, AMD, DRB and CBNT. Opinions are the author's own.*

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# Your Station Can Be the Hero

'If We Have Steel in the Air, We'll Be There for You'

What an opportunity radio has.

Much attention is being paid, rightly, to when and how stations must be able to accept a CAP-formatted EAS message. But let's realize too that we are at a moment of opportunity for broadcasters to reestablish themselves as first communicators in times of local crisis.

Radio often has been viewed as absent or unattended when emergencies strike. Sometimes the criticism is unfair. Certainly it has been applied with a broad brush; many outlets are responsible channels of vital information in emergencies.

But most of us know of instances when a station was merrily playing music or airing a ballgame while listeners remained ignorant that serious weather or another emergency was developing near at hand. And criticisms about "radio as an automated jukebox" hit close to home. That reputation gives support to people who want government to institute more stringent rules about "localism."

Radio and alerting go together. At least, they should.

At the Radio Show convention, Lisa Fowlkes, deputy chief of the FCC's Public Safety and Homeland Security

Bureau, urged broadcasters to review their states' EAS plans and their own deployment of EAS assets, in cooperation with State Emergency Communications Committees. I agree. Further, I think savvy managers can use this time to reintroduce themselves and their stations to emergency managers and to local leaders.

Politically, alerting is "on the radar." A decade of terrorist activity, floods, mine disasters and hurricanes; the success of Amber Alerts; and the penetration of mobile devices in consumers' everyday lives have elevated awareness. The government's plan to update alerting infrastructure has sharpened focus.

I believe many stations should do honest self-assessments of their involvement in alerting and their policies about breaking format for times of emergency. They should reach out to local government leaders and emergency managers to drive a new dialogue; this would be good business as well as good citizenship. And they should better promote the coverage and emergency services they already provide.

Work with your local government officials to build partnerships. Those folks are

responsible for warning the population, and you have means to help.

Remind emergency managers about how powerful your platform is, of radio's penetration in the market and your ability to serve the community when electricity is out — even when TVs, Internet connections and cell phones are silent.

Talk to them to decide, in advance, under what circumstances you are willing to interrupt your programming (and, importantly, what kind of situation does not warrant interruption). Insist on post-emergency/post-test reviews, to understand where the system works and where it doesn't. Most important, get to know them, and make sure they know you.

(What if you don't have management authority? Push the boss to reach out to the emergency alerting community. Collect the contacts. Prompt a dialogue. Sell the boss on why it's good for your station to be seen as involved. Encourage a review of your organization's policies on emergency coverage. Talk to your peers at other stations in the market and around the state to be as informed as possible about your local infrastructure.)

And when your station does an exceptional job at informing your community, trumpet that fact. Write to the local news-

FROM THE  
**EDITOR**

Paul McLane



paper; create a promo spot. Tell listeners about the snow week when thousands of people without power relied on your signal for blizzard news or post-hurricane help. Pat your staff — and those emergency management personnel — on the back on the air.

What could be more powerful PR than a station saying to community leaders: "If we have steel in the air, we'll be there for you"? What could be more impressive to an emergency manager than you calling to ask, "How can we help you meet your public warning responsibilities?" What could be more motivating to a radio manager than the chance to be a hero?

The worst outcome for radio in complying with CAP would be if new equipment were simply screwed into a rack. The best would be for managers to recommit themselves to partnerships that produce timely local coverage of emergencies — and to see their standing as local businesses rise as a result. And with NAB citing radio's alerting capabilities as proof of the need for radio chips in cell phones, this discussion is even more relevant.

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**THIS ISSUE**

OCTOBER 20, 2010

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

**NEW PEP STATION IN FLORIDA DEDICATED**

FEMA recently dedicated a new PEP station, Cox outlet WOKV(AM), Jacksonville, Fla.

The agency believes the addition is significant as it works to expand and update more modern alert and communications warning equipment in its Primary Entry Point stations, which can air a national warning before, during and after an emergency.

As part of its general warning system upgrade, FEMA and the Integrated Public Alert Warning System are increasing the number of PEP stations from 37 to 74 by the end of 2011, with the effect of covering 90 percent of the population, according to the agency. PEP stations are the primary sources for a national EAS message, like one from the president.

FEMA also is modernizing existing PEP stations with modular shelters, EAS encoders/decoders that can handle the new Common Alert Protocol and Internet protocol-enabled gear. Satellite communications also will be used to increase the resilience as an alternate path for disseminating alert warning, FEMA states in its advisory about the Florida event.

Agency officials told me expansion stations are being equipped with offline, surge-protected backup pro-



In front of the new fuel storage and generator shelter for newly commissioned PEP station WOKV. From left: Damon Penn, FEMA assistant administrator, National Contingency Programs; Rick Benson, chief engineer for Cox Jacksonville; Mohan Singh, P.E., U.S. Army Corps of Engineers, chief of Interagency and International Services

gram origination, transmission and power generation equipment. "Legacy PEP stations depend upon the station transmitters, which may not be as well protected against electrical hazards. The new installations add an extra layer of resiliency," they said.

WOKV is a dual site, with both day/night operation.

PEP stations, you'll recall from your EAS/EBS/CONELRAD history, are significant both historically and in terms of next-generation of alerts and warnings.

Starting in 1963, alerts and warnings in the U.S. were administered under the Emergency Broadcast System; in 1997 the Emergency Alert System was

established. PEP stations were established in the early 1990s as a backup to the Emergency Activation Network, when AT&T handled most radio and television network distribution.

In 1995, President Bill Clinton eliminated the Emergency Activation Network, leaving PEP stations as the remaining distribution source for national-level EAS.

In Florida, Damon Penn, FEMA assistant administrator of national contingency programs, said the design and construction that went into WOKV will serve as a model for the 46 new PEP stations and the retrofit of the existing PEP stations.

In case you're wondering, as I did, why someone from the Army Corps of Engineers ("USACE," in government-speak) was there, here's the back story:

The USACE provides construction management services through an inter-agency agreement. ACE chose KBR as the prime contractor, which handles site design and then contracts the actual work. The WOKV PEP site was officially a construction area until it was accepted by FEMA, which then accepted the keys from the Army Corps of Engineers, who, in turn, turned over the keys to a representative of the Cox Jacksonville cluster.

I hope no one lost the spare key along the way.

If your station is taking part in the expanded PEP program, let me know so we can report it; write to [Lstimson@nbmedia.com](mailto:Lstimson@nbmedia.com).

**NEWSROUNDUP**

**FM TRANSLATORS:** Some commercial radio broadcasters who have FM translator applications still pending from the 2003 FM translator window have a counter-proposal to one made earlier by Educational Media Foundation and the Prometheus Radio Project. In that August pitch, EMF and Prometheus proposed that the FCC subject the now-pending FM translator applications of commercial broadcasters to over-filings by new applicants for LPFM stations. In a filing submitted in early October to the FCC (MM Docket No. 99-25), 21 commercial radio broadcasters with pending FM translator applications stated that EMF/Prometheus proposal would "change the FM translator application rules midstream, in essence yanking the rug out from under commercial broadcasters who followed the FCC's rules." Some of the broadcasters are The Cromwell Group, East Kentucky Broadcasting, East Arkansas Broadcasters and Hancock Communications. The original Auction 83 rules anticipated a settlement window and auction; that's what the group is proposing, saying it would not harm the goals of EMF nor Prometheus. The "singletons" resulting from the settlement window would proceed to the grant stage, according to the proposal. Womble Carlyle attorney John F. Garziglia told

Radio World: "Our government is being asked by EMF and Prometheus to change its rules by a results-oriented fiat on small and medium-size commercial broadcasters that only benefits EMF, Prometheus and other similarly situation non-commercial broadcasters."

**PTFP GRANTS AWARDED:** The National Telecommunications and Information Administration has issued approximately \$20.45 million worth of Public Telecommunications Facilities Program grants for this year. A total of 126 projects have been funded. Of those, 72 grants are to replace equipment at public radio and television stations, awarding \$9.9 million; 30 grants for some \$4.6 million will extend new public radio service. Three digital conversion grants totaling a little over \$202,000 were awarded for radio. With those, stations in Arcata and San Diego, Calif., will be able to buy digital production equipment and a station in Baton Rouge, La., can establish an HD Radio multicast service. Thirty-eight projects totaling more than \$2.8 million will replace "urgently needed" equipment at public radio stations. One of the projects, a \$20,407 grant to Cumberland Communities Communications Corp., was awarded on an emergency basis to replace an antenna that suffered catastrophic failure as a result of a lighting strike.

**BBG***(continued from page 1)*

running. The resolution would be effective Oct. 1 and restrict BBG's funding to previous levels, according to a BBG spokeswoman.)

**FULL COMPLEMENT**

Some of the additional money in recent years has been focused on efforts to reach the Muslim world following the attacks of Sept. 11, 2001, observers said.

For this article Radio World talked to several insiders who have worked in U.S. international broadcasting. Observers agree that the new board was functioning well after its first two meetings.

Over the last half-dozen years, insiders say, tumult and partisan politics have snarled the work of the board, which consists of four Republicans and four Democrats plus a reserve seat for the sitting U.S. secretary of state.

Board seats often have been left unfilled, according to a June report on U.S. international broadcast stations by the Senate Committee on Foreign Relations. Since 1995, the BBG has only been fully seated for six of 15 years. Chronic confirmation delays, according to the June report, have had a profound impact on the country's broadcasting efforts.

The board is fully seated now following Senate confirmation this summer of new members nominated by President Barack Obama nearly a year ago.

The board is expected to reflect the priorities of the administration, observers said. Walter Isaacson, the new chairman, is former CEO and chairman of CNN. Isaacson assumed his position this year along with Dana Perino, Michael Lynton, Victor Ashe, Susan McCue, Michael Meehan, Dennis Mulhaupt and S. Enders Wimbush.

Isaacson, who replaced James Glassman, is viewed in the world of international broadcasting as a "bold reformer" unafraid to make tough decisions as BBG prioritizes its services, according to several observers.

**A NEW DIRECTION**

In remarks at a late September reception marking the 60th anniversary of RFE's first broadcast, Isaacson announced what he called a new direction for U.S. international broadcasting.

"We must seize the latest media tools and technology to stay one step ahead of those who seek to repress free information around the world.

"Our traditional role of delivering the news from the top down needs to be complimented by a new approach that catalyzes social networks. By creat-



The new BBG board holds its September meeting. New Chairman Walter Isaacson is at center.

Courtesy Broadcasting Board of Governors

ing peer-to-peer global communities, we help guarantee the universal human right of access to a free flow of information."

Isaacson said U.S. international broadcasters must respond to modern threats to freedom in new and inventive ways. He talked of "a great virtual global news service" that would provide reliable reporting for every medium, including social media.

Analysts said even more important was Isaacson telling those in attendance that America "will not be out-communicated by its enemies." He noted increased investments by "autocratic

leaders" in countries like China, Iran and Venezuela to expand their international media outreach.

Isaacson has talked about sharing resources among the U.S. services. Analysts have predicted he will consider consolidating several of BBG's networks, as some critics have recommended, or even possibly bringing all operations under one combined news service.

The BBG has said it values the unique roles that each of its broadcast entities performs in support of the agency's mission.

"However, the BBG also has a legislated mandate to seek efficiencies where

## Remote Up in the Air? Get it ON the Air with ACCESS!

"We were invited to ride along in a hot air balloon to help promote the Grove City Balloons and Tunes Festival near Columbus," says Matt Bruning of WTVN in Columbus, OH. "When I asked about doing a live shot from 2,000 feet up, our engineering department went straight to the shelf with our Comrex ACCESS on it. The unit did a great job...as we expected. Thanks so much for making a GREAT product like the Comrex Access - so easy even a news person can use it!"

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possible, and so as part of its year-long comprehensive strategic review will be looking at ways in which this might be done without diminishing or diluting those roles," according to the BBG spokeswoman.

Set in motion by the board at its first meeting in July is a review process that will include separate evaluations of the BBG's Cuban broadcast policies and how the various news organizations use social media such as Facebook and Twitter.

"Idea labs" will explore new media. Isaacson told the RFE audience he'd invited Sheryl Sandberg, chief operating officer of Facebook, to participate in an idea lab that would ask, "If you were Facebook and you were trying to create a media the way the people 60 years ago created Radio Free Europe, what would it look like?"

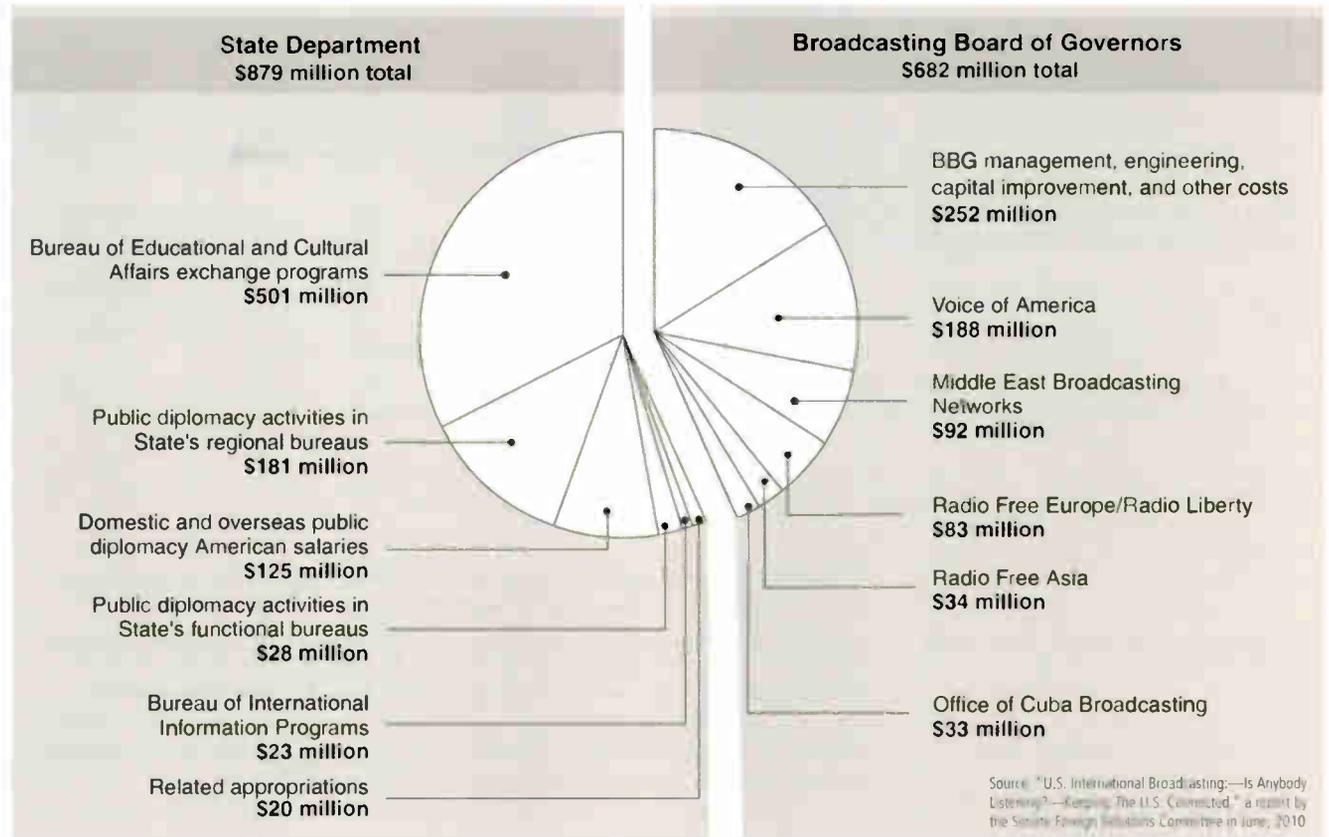
The board's strategic review will include an updated market-by-market analysis on how audiences prefer to get news and information.

Various experts on international broadcasting expect the new board will be active in coming months charting a new direction.

**MARTÍ: 'MINISCULE' AUDIENCE**

Analysts said U.S. government broadcasts to Cuba are facing opposition in Congress right now.

*(continued on page 8)*



A Senate Foreign Relations Committee report in June summarized public diplomacy spending for fiscal 2008 using figures from the Government Accountability Office. Broadcasting in 2008 received 43% of the public diplomacy budget; by fiscal 2010 the figure had fallen to 40%, though funding for most individual 'accounts' had increased. 'Public diplomacy' refers to efforts to engage the population of a country directly, rather than through official interactions with a host government.



## BBG

(continued from page 7)

A Senate Foreign Relations Committee report issued in April on Radio and TV Martí by Democratic staffers at the request of Committee Chairman John Kerry of Massachusetts was critical of the service, saying it has gained only a tiny audience in Cuba and is considered by many as less than objective.

In fact, less than 2 percent of Cubans listen to Radio Martí, the April report concluded, in part due to Cuba's government jamming of the broadcasts.

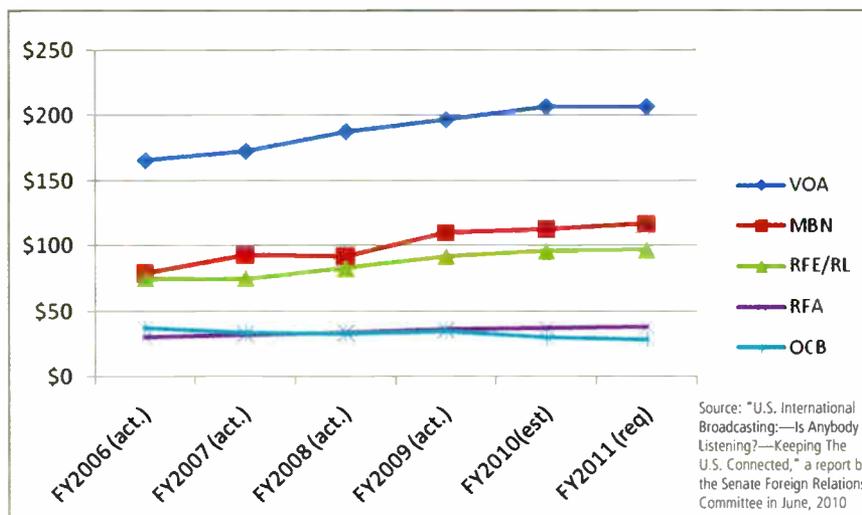
Several high-powered senators have been especially critical of Cuban efforts. Sen. Russ Feingold, a Wisconsin Democrat who serves on the committee, went so far as to ask the White House to eliminate funding for Radio and TV Martí broadcasts to Cuba. Sen. Kerry said the Office of Cuba Broadcasting should be incorporated into VOA.

"Trouble with adherence to traditional journalistic standards, miniscule audience size, Cuban government jamming and allegations of cronyism have dogged the program since its creation (in 1983)," Kerry wrote.

Funding for the Office of Cuba Broadcasting was cut from approximately \$34.6 million in 2009 to around \$30 million in 2010, according to OCB's summary of funds.

The BBG earlier this year appointed Carlos Garcia-Perez as the new director of the Office of Cuba Broadcasting, which oversees Radio and Television Martí.

The new board, as part of efforts to prioritize research and strategic planning, also will review funding for VOA's Persian News Network, accord-



Since 2001 the BBG has been the beneficiary of increases in funding, with its annual budget rising from roughly \$425 million to more than \$750 million, according to a Senate committee summary. It notes that this has come in large part at the direction of Congress, the result of launching new channels. During this time, BBG believes global audiences have climbed approximately 70%, to around 170 million weekly. The recent exception to these increases is the Office of Cuba Broadcasting's Radio/TV Martí, as congressional critics and the General Accountability Office have questioned its effectiveness.

ing to the spokeswoman.

The VOA-PNN has been under attack by critics including Rep. Trent Franks, R-Ariz., who sent a letter to President Obama signed by 69 members of Congress requesting that the White House investigate reported mismanagement and bias at VOA-PNN. The lawmakers expressed concern over the apparent lack of oversight regarding the management, staffing, mission and content of VOA-PNN broadcasting.

#### FUNDING PRIORITIES

Funding priorities of previous board

governors have come under fire from others on Capitol Hill. In an interview with The Cable, an online column by Josh Rogin for ForeignPolicy.com, Oklahoma Republican Sen. Tom Coburn was quoted saying, "The BBG is the most worthless organization in the federal government. It's full of people who know nothing about media or foreign policy. All they are doing is spending money."

In a letter from Richard Lugar, ranking member of the Senate Foreign Relations Committee, that accompanied the June committee report about BBG-led sta-

tions, the Indiana Republican asked for a critical look at Middle East broadcasting "that is struggling for market share in a media market that only grows more crowded each day."

Much of Congress' dissatisfaction has been aimed at Alhurrah Television. Poor ratings have dogged the satellite news channel since it was launched in 2004. Meanwhile, viewers have become more skeptical of its content and coverage of the region, according to the June report.

Also gaining the attention of congressional critics was confirmation that the former executive director of the BBG, Jeffrey Trimble, had collaborated with the National Security Council over a statement released by VOA that was critical of Iran's jamming of international satellites.

But U.S. international broadcast experts say the new board appears to be off to an upbeat and cohesive beginning, though its ultimate direction is unclear.

"I think it's very hard to determine the priorities of the new board just yet," said Alan Heil Jr., who was a deputy director of Voice of America in the late 1990s.

"They are looking at the recommendations of the old board in terms of budget. There could be shifts in funding. Very hard to get a handle yet on where the board might be going. They have not tipped their hand."

Heil, who had a 36-year career at VOA, is encouraged that the board is opening its meetings to the media and public.

"This board seems intent with improving communication with staff and with key members of Congress. Willing to accept feedback, too."

The BBG has said it will look for opportunities to hold open meetings to the extent it can responsibly do so without threatening the integrity of the board's processes. Previously, board meetings had been closed to the media and public. A meeting scheduled for Oct. 13 in Prague was to be available via live and on-demand streaming at [www.bbg.gov](http://www.bbg.gov).

#### INCREASED COMPETITION

Meanwhile, the BBG is battling increased competition in nearly every category in which it is active, according to the June Senate committee report.

Because of that, some observers feel more money should be spent on marketing and promotion of programming in a media-saturated world. However, according to BBG's budget request for 2011, it actually will cut its advertising and program placement spending by more than \$300,000. It will still spend over \$5 million on marketing next year.

Heil believes VOA maintains a critical role as a full-service broadcaster that provides accurate, objective and

(continued on page 10)

## BBG HISTORY

The Broadcasting Board of Governors sets the policies and provides oversight of U.S. broadcasting operations, including Voice of America, Radio Free Europe/Radio Liberty, Radio Free Asia, Middle East Broadcasting Networks, consisting of Arabic Radio Sawa and Radio Farda, and the Office of Cuba Broadcasting, home to Radio and TV Martí.

The BBG, established in 1994, says its networks broadcast in 59 languages and reach a total estimated audience of 171 million people in 100 countries. The agency had nearly 3,800 employees in 2009.

U.S. international broadcasting had its beginnings during World War II, when VOA broadcast around the globe using shortwave radio. Its services have evolved to include FM radio, TV and social media on the Internet.

Funding for BBG's broadcast services in 2010 was \$745.5 million. The BBG has requested a budget of \$768.8 million for FY2011.

The BBG has faced criticism over the years for lacking leadership and being slow to react to changes in worldwide politics. The agency has redirected monies to the Middle East and steadily cut back on services to "Cold War" countries since the end of that era. For example, it

cut VOA Russian-language radio broadcasts in 2008.

BBG has the distinction of being selected as one of the worst-managed U.S. federal agencies, according to the U.S. Office of Personnel Management. OPM's 2008 employee survey resulted in BBG receiving the lowest rating ever for good management from its employees.

The director of the VOA at the time, Dan Austin, told the Washington Post that VOA employees were projecting anxiety about the agency's operations changing to new media platforms. The VOA, Austin was quoted as saying, has been transformed "from what had been a shortwave radio broadcaster to a true international, multimedia organization. We're out there on Facebook, YouTube, text messaging, certainly radio, but also on television. Half of our audience see us on television. This is a huge change, a seismic shift, if you will, and when you get that kind of change it creates a lot of issues for many people. I think the survey reflected some of that."

The BBG also oversees the International Broadcasting Bureau, which provides program transmission services and engineering support for all BBG broadcast organizations. The U.S. Senate confirmed Dick Lobo as director of IBB in September, replacing Austin, who had been acting director.

— Randy J. Stine

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World Radio History

# Water Eases Ground Rod Installation

## It Makes a Nifty Antenna, Too!

Engineer Richard Cabrera has enjoyed and derived many good tips from Workbench postings. He seldom writes in but felt compelled to do so when he read the Sept. 8 tip about driving a ground rod with a drill.

### WORKBENCH

by John Bisset

Read more Workbench articles online at [radioworld.com](http://radioworld.com)

From a safety perspective, he reminds us, please maintain control and let the tool do the work.

As a young apprentice electrician in the 1980s, Richard met a journeyman who had been encouraged to drive a ground rod with a hammer drill. As he was applying his full weight on the drill, it slipped off and he caught the rod right in the mouth. He had to have extensive maxillofacial surgery.

Safety first with any power tools.

Richard Cabrera can be reached at [cabrera.r@att.net](mailto:cabrera.r@att.net).

Steve Heaton is the director of engineering for Community First Broadcasting of Iowa. He writes about driving ground rods without even breaking a sweat.

He saw a trick performed by a local electrician several years ago. All you need is a bucket of water.

The electrician poked the rod a few inches into the ground, removed it, poured some water into the hole and reinserted the rod. With an up-and-down motion — reminiscent of someone using an old-fashioned butter churn

— he was able to work the rod deep into the ground in no time at all, and with one hand.

Occasionally he would pour a little more water alongside the rod to “lubricate” its movement through the mud.

Steve has used this method several times. The technique works great in rich Midwest soil.

Reach Steve Heaton at [tech@kuoradio.com](mailto:tech@kuoradio.com).

Greg Muir is principal engineer for Wolfram Engineering in Montana. He too has been following the continuing column snippets regarding ground rod installation.

Not to beat a dead horse (or a stubborn ground rod), Greg offers additional observations.

First, be aware that natural gas suppliers now use the popular plastic piping for plumbing gas into buildings. With that in mind, steer clear of any underground piping or electric lines. Always contact Miss Utility before digging.

Next, if you do a Google search for “ground rod driver,” you will find a plethora of hits for a neat little fitting that adapts your hammer drill to ground rods of various sizes. It’s a simple approach, much like Scott Christensen’s comment in the Sept. 8 issue of Radio World.

Yes, these bits cost; but so do several boxes of Band-Aids after you’ve

pinched your fingers with a hammer or “widow-making” post-hole driver. Besides, a hammer drill will help you through the rocks, compared to an ordinary drill.

To read more “seasoned” experiences, head to <http://forums.radioreference.com>. Search for ground-rod-install-horror.

Thanks Greg for the suggestions. Greg Muir can be reached at [engineering@mt.net](mailto:engineering@mt.net).

Last issue, we talked about theft problems, including theft of outside air conditioning units.

Fig. 1 shows a good solution that will discourage this cut-and-grab theft.

Sure, the padlock can be cut; but enclosing your units in this kind of steel cage makes the thief work harder. Odds are that he’ll pass up your unit for an easier take.

Thanks to Engineer Jonas Emechebe of Radio Nigeria for this tip.

Consulting engineer Lew Collins was interested to read of the demise of the 4CX300A vacuum tube.

Consequently, he got out his collection of Eimac data sheets to see what might be unique about that tube besides its “brechblock” base.

It appears to Lew that the only significant difference between the electrical parameters of the 4CX300A and the 4CX250 family is the maximum plate voltage. Lew suggests that it is probably because of a longer leakage path across the ceramic insulator between the plate and screen grid in the 4CX300A than found in other similar ceramic tetrads.

Since Lew is not familiar with the particular Harris/Gates transmitter that uses the 4CX300A as a driver tube,

(continued on page 14)



Fig. 1: A metal cage around an outdoor air conditioner discourages theft.

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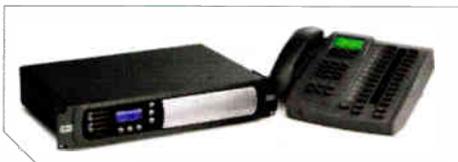
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## WORKBENCH

(continued from page 12)

he can only speculate. But because the transmitter design used a common supply for both the driver and PA tube, providing a separate low-voltage supply would be the first step in evaluating a substitute tube.

It might be possible for someone who is committed to keeping one of those transmitters in service to add a separate driver plate supply, at a lower voltage. Then change the tube socket to use a tube from the 4CX250 family. Those sockets seem still to be available from several sources.

Any takers? Let us know your results. I'm at [johnpbisset@gmail.com](mailto:johnpbisset@gmail.com). Reach Lew Collins at [lewisdyecollins@aol.com](mailto:lewisdyecollins@aol.com).

**W**es Boyd at Cumulus in Youngstown, Ohio, sent in a YouTube link prepared by the Space and Naval Warfare Systems Center Pacific in San Diego.

Antenna engineer Daniel Tam has developed a technology that uses the magnetic induction properties of seawater to couple RF signals into a very narrow stream of water. At YouTube, enter "Sea Water Antenna" in the search box to view a video of the antenna in

operation. The column of seawater becomes the antenna element.

Tests have been conducted on HF, VHF and UHF frequencies. Although the idea is to create an emergency antenna for the commercial and recreational boating industry, land use is also possible by enclosing the salt-water stream in a thin plastic tube.

Wes Boyd can be reached at [wboyd@theradiocenter.com](mailto:wboyd@theradiocenter.com).

**Fig. 2: A researcher at the Space and Naval Warfare Systems Center Pacific in San Diego has developed a technology that uses magnetic induction properties of seawater to couple RF signals into a very narrow stream of water.**



*John Bisset marked his 40th year in radio in broadcasting recently. He works for Tieline Technology. He is a past recipient of the SBE's Educator of the Year Award. Reach him at [johnpbisset@gmail.com](mailto:johnpbisset@gmail.com). He can be reached at (603) 472-5282. Faxed submissions can be sent to (603) 472-4944.*

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

## WHO'S BUYING WHAT

**Bridge Networks** provided the **New Zealand Fire Service** with **Sonifex Net-Log Audio Loggers** for installation within new **Hazmat/Command Vehicles**. **NZFS** is building 17 dual-purpose **Hazmat/Command vehicles** for deployment throughout the country. ...



**Sonifex Net-Log loggers** are being used in the **New Zealand Fire Service's Hazmat/Command Vehicles** to monitor and record their two-way communications.

The **University of Southern California** has a new studio at **KXSC(AM)**, formerly **KSCR**. The turn-key installation was done by **Harris PR&E** and **SCMS**. Hardware involved in the job includes a **PR&E NetWave 16-fader console**, **PR&E QuickLine** furniture, **AirTools Voice Processor 2X** and **Comrex Access** remote package, accord-

ing to **Doug Tharp** of **SCMS**. **Brandon Operchuck** is director of performance venues for the school. ...

**Telos Systems** shipped talkshow systems to **WFAN(AM)** in New York, **WCMU(FM)** at Central Michigan University and **KBBI(AM/FM)** in Homer, Alaska. Sister company **Omnia** sold **Omnia One** processors to **WJCF(FM)** in Greenfield, Ind.; **WHKO(FM)** in Dayton, Ohio; and CBS stations **WAOK(AM)**, **WVEE(FM)** and **WZGC(FM)** in Atlanta. **Axia** provided consoles and networks to **KSTO(FM)**, **St. Olaf College**, Northfield, Minn.; **KLSQ(AM)**, **KISF(FM)**, **KQMR(FM)**, Las Vegas; and **WMIT(FM)**, Asheville, N.C. ...

**Crawford Broadcasting** moved a four-station cluster and corporate engi-



A new studio at the **University of South California** was installed by **SCMS** and **Harris PR&E**.

neering offices from near downtown Denver to nearby Aurora, in the southeast of that metro area. Stations served are **KLZ**, **KLTT**, **KLVZ** and **KLDC**, all AM stations. For 17 years the old studios were on West 29th Ave. The new location is leased space on South Parker Road. The job included four control rooms and talk studios, three production rooms, and station and corporate tech offices. Prewiring started in March, and the move took place in late July. New equipment includes **Middle Atlantic** equipment racks and **Trango Apex-11** 11 GHz microwave links. Coming over in the move were **Wheatstone Bridge Router** and **Generation-6** control surfaces, **RCS NexGen** digital media system and **Harris Intraplex** digital audio transport gear. ...



**Crawford** moved a four-station cluster and its corporate engineering offices. Shown, **Art Reis**, **Derek Jackson**, **Cris Alexander**, **Jack Roland**, **Amanda Alexander**, **Stephen Poole**, **Cliff Mikkelson** and **Robert Payne**.

**Continental Electronics** this summer announced it will supply four 250 kW HF DRM-ready transmitters and associated equipment to the **Saudi Arabia Ministry of Information (MOI)** through **First Gulf Company** of Riyadh. **First Gulf** will construct a new HF facility consisting of transmitters, antennas and other equipment, to be installed at the existing **Al Khumra** site, outside Jeddah. The **Al Khumra** facility was first constructed by **Continental Electronics**, and its civil contractor, between 1978 and 1980. The new HF facility will be in addition to multiple 2-megawatt and 1-megawatt medium-wave systems, also using transmitters from **Continental**. The station is to be operational by mid-2011.

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# SBE14 Tours Unusual Wind Turbine

What's That Odd Structure on the Hill?  
Optiwind Provides Some Answers

BY JOHN N. RAMSEY

There isn't any doubt in my mind that wind power will play a larger role in the United States in the years ahead;

## **GREENRADIO**

so when I had a chance to set up a tour of a large wind turbine installation for SBE Chapter 14, the Connecticut Valley Chapter, I jumped at the chance.

In July I was driving out to do routine transmitter maintenance on WAPJ(FM) in Torrington, Conn., a community-based, noncommercial station with which I have been involved since its inception in 1999.

Like most broadcast engineers I look at towers as I drive around. On this day, much to my surprise, I spotted a strange new structure on a hill on the west side of Torrington. It was a self-supporting tower with a wide face and what looked like a platform on the top. It dwarfed nearby farm silos; I estimated that it had to be close to 200 feet tall.

It had a uniform cross section, unlike most self-supported towers, which are tapered at least to some extent. It looked like a few radar installations I had seen; however it was not at the top of the hill but on the side. Our area is well covered by FAA and weather radars, so I couldn't image why anyone would put radar in Torrington.

Clearly this wasn't a broadcast or cellular tower; it was too low for the former and too wide for the latter. The idea that it might be a wind turbine crossed my mind, but this was unlike any wind installation I had seen.

It only took a few minutes to find the tower, which is located on a working farm. As I drove up I spotted two small wind turbines at the base, turbines that would later be hoisted to the top of the structure. Clearly this was a work in progress. Carpenters working nearby gave me the name of the company that was putting up the wind turbine.

### **MID-SIZED**

When I got back to the office that day I found the website, <http://optiwind.com>, and sent an e-mail inquiring about the installation. The next day I heard back from Dave Herwitz, vice president of marketing.

He told me that Optiwind was founded in 2007 by Russ Marvin, an engineer with a background in fuel cells and fan technology. In examining the wind mar-

ket, he found vibrant supplier markets for large turbine applications like wind farms and small turbine applications for residential use, but little technology customized for the mid-sized market.

These customers — schools, manufacturing plants, retailers, water treatment plants, etc. — have different needs and locations than wind farms. Marvin felt that the products serving this market were too expensive and didn't meet its needs because they essentially were reduced-scale industrial turbines.

He raised venture capital funding

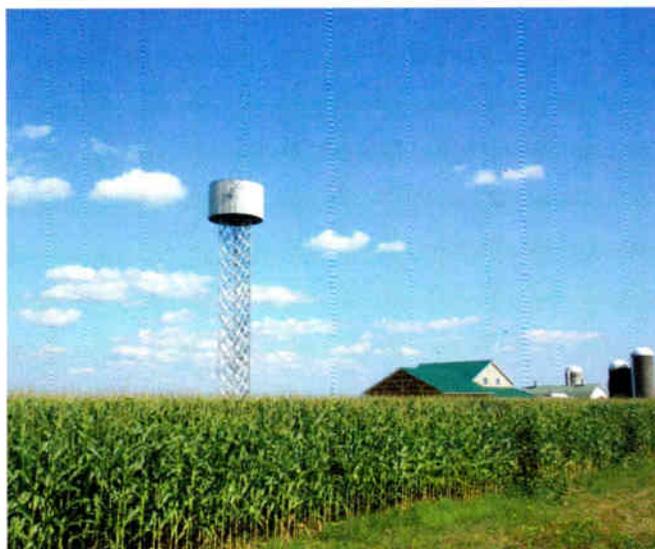
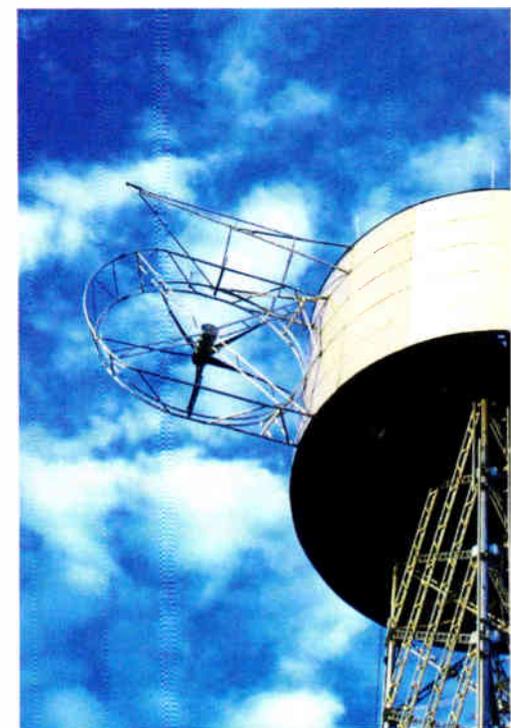


Fig. 1 (top) : Artist' conception of a single-level 50 kW wind turbine.



Fig. 2 (right): Arist's conception of a six-level, 300 kW turbine.



in 2008 and now has a company of 26 people based in Torrington manufacturing a new style of turbine. They hope to launch commercially beginning in 2011; the structure I'd encountered was a prototype.

The company expects to fill a market need for wind turbines in the 100 kW to 1 MW range. It claims several unique features including multiple small turbines in place of a single large

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unit and a supporting structure that actually accelerates the wind into the fan blades.

Significant installation savings are promised with their design, which eliminates the need for an expensive crane; the tower is assembled horizontally on the ground and then raised to the vertical position using hydraulic jacks!

Another significant expense of large turbine installations is the concrete used in the base. Instead of using massive amounts of concrete to support the tower, Optiwind uses pilings that go down 50 feet or more and are filled with concrete, saving in concrete costs. This method also allows the design be installed in locations where it is difficult to bring in large quantities of concrete.

The users for whom Optiwind hopes to install its turbines generally will experience much lower wind speeds than you find on open-prairie wind farms.

As such, Optiwind says it has uses a system that accelerates wind into a series of smaller, quieter fans that are safer and require less maintenance. By using fixed pitch blades, permanent magnet direct drive generators and sealed bearings, they reduce maintenance and ownership cost.

Also, the turbine reportedly does not cause the interference issues of con-

After being treated to pizza we sat down for an informative PowerPoint presentation by Dave Herwitt.

He covered economies of wind generation and said that large, single-blade wind turbines are fine for generating large amounts of power, for instance greater than a megawatt, but that they are very expensive. Optiwind's economical design would allow the turbine to be located where the power is needed, such as adjacent to a factory, high school or government building or perhaps even a broadcast facility.

The design uses a tower that is 199

feet tall to avoid the need for FAA obstruction lights in most areas. That height can support six levels or rings, with each ring supporting two, 25 kW AC alternators for a total capacity of 300 kW. The Torrington installation will be a 150 kW installation with dual five-blade driven generators at three levels.

Then we drove up to their installation on Klug Hill Road in Torrington.

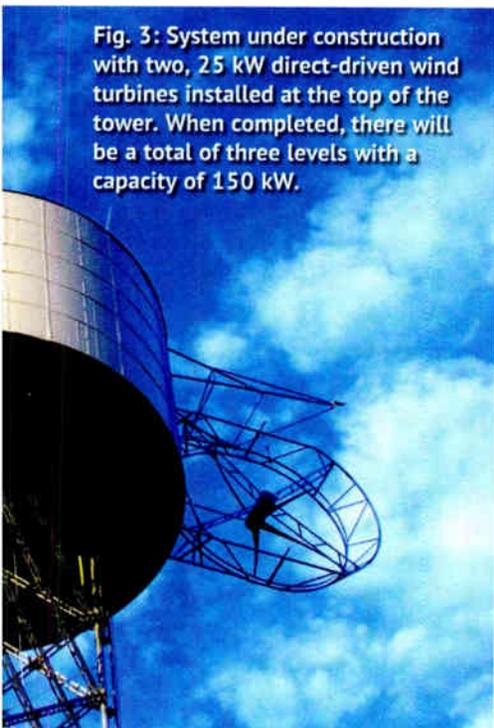
Things had changed since my visit a month earlier. The first of three rings had been hoisted to the top of the structure and the five-blade fans had been con-

nected to the two 25 kW AC turbines.

The entire ring assembly rotates around the tower so that it is always facing into the wind. The cylindrical housing between the turbines is designed to increase wind speed by 1.7 times, increasing efficiency significantly.

As you can imagine, maintenance on a traditional wind turbine with a blade 100 feet or more in length is problematic. Any work requires a large, expensive crane; swapping out a generator or fan blade can take weeks, during which the system is offline.

*(continued on page 20)*



**Fig. 3: System under construction with two, 25 kW direct-driven wind turbines installed at the top of the tower. When completed, there will be a total of three levels with a capacity of 150 kW.**

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**PROTOTYPE**

Our meeting started at the Optiwind facility in an old factory building formerly used by the Torrington Company.

# AM Radio: My First Real Love

The Affair Continues, and the Romance Hasn't All Died

BY JIM WITHERS

I have a certain fondness in my heart for AM radio. I suspect this is true for many broadcasting veterans of my, shall we say, length of service in the human race.

## FIRSTPERSON

When I got my first "ham" radio license at the age of 11, it was because I really wanted to be a "radio guy." New operators like me were limited to tapping out messages in Morse Code. All of us longed for the day when we could flip the plate switch on a Heathkit DX-40 and talk into an actual microphone.

My voice! Blasting out of my attic ham shack at the speed of light! Circling the globe!

(Or not, since the "blast" from the venerable Heath was really more of a dribble, at around 40 watts or so, and then only if you would scream into the mic. I mastered the technique, though, and could reliably get a 40 watt light bulb tied to the output to throw out a respectable number of lumens when I yelled "Test!-ing ...Test!-ing ...TEST!!!-ING." My neighbors, who just knew me as the pest who interfered with their TV reception, must have wondered what, exactly, I was testing all the time.)

It was AM radio, and I loved it.

### WARM GLOW

Even before I could transmit, I was an avid receiver and, as they called it in those days, AM band "DXer."

DX is telegraphese for "distance."



istockphoto/Jason Gemnich

and I was right there with my dad's old Zenith Model 7 console radio sweeping my way across the AM band, looking for the station no one else could hear.

Dad had bought an RCA 12-inch black-and-white television set that had a cabinet the size of our bathroom; there was simply no way both it and the Zenith could coexist with his easy chair in our cramped living room. He would have been reclining on the back porch watching TV with a pair of binoculars trained on the screen like an artillery spotter.

So I got the Zenith. I lugged it up to my hideout in the attic, hooked up a long-wire antenna and started listening.

I eventually knew (and dutifully logged) all of the clear-channel stations east of the Rocky Mountains including

WOAI in San Antonio, the first clear-channel station to become a Clear Channel station.

The Zenith had a wonderful "magic eye" tuning tube that glowed green; the stronger the signal, the greener the little shining tube glowed. The radio itself emitted a very satisfying 120 Hz hum when it was working properly, and filled the heaterless attic with a glow and warmth that I still remember ... squirreled away up there on a cold night, while the Zenith hummed and toasted along, listening to stations in cities and towns that I got to visit through AM radio.

### ONLY GAME IN TOWN

In the 1960s I got a car, and then a girlfriend, and so that was the end of the Zenith. I no longer wanted to warm up to a radio, if you know what I mean.

The Zenith was retired once again and I began tuning around on the Delco AM radio in my '56 Chevy.

Now, car radios of the day were not all that married to the idea of "high fidelity," so the car designers stuck the speaker wherever it would fit. In the Chevy, that was in the top-center of the dashboard.

Since the dashboard was also the perfect milkshake and French fry table, all manner of odds and ends got spilled and dumped up there. Coins, paperclips, toothpicks, milkshake straws, the occasional petrified French fry — all of it ended up on the dashboard, where it of course eventually bounced down through the speaker grate onto the speaker cone itself.

The sun also baked the paper cone into the rough equivalent of ancient parchment, so what with that and the vibrating French fries and coin toss, the sound was pretty awful.

For a year or so — until I finally crawled up underneath the dash and replaced the speaker — I thought the primary instrument of most rock groups was the kazoo.

AM radio in the '60s was really the only game in town. There were plenty of stations to choose from, both locally and, given the way AM propagates at night, across the nation.

It was against my personal coolness code to cruise around in the Chevy before 9 p.m., but that meshed perfectly with the physics of AM "skip."

We had some great AM rock stations in St. Louis, but I preferred the bigger game that came out after dark, and so left all but one of my pushbuttons set to out-of-town stations. WABC was the

## THE RELEVANCE OF AM

This is one in a series of articles Radio World has published over the past year exploring the business challenges and successes of AM radio. Read the series and reader reactions at [www.radioworld.com/article/92680](http://www.radioworld.com/article/92680).

gold standard; WLS and WCFL were favorites. (No one ever said the "W" except me, since I aspired to be Larry Lujack and spent endless hours saying "Double-U ... L ... S!") in my best radio voice.)

KOMA in Oklahoma City was good; Bill Clinton and I probably were listening to "The Mighty Ten-Ninety, K-Double-A-Y" in Little Rock at the same time (though I'll bet he did better in the back seat of his car than I did in mine).

In 1965, the new car warranty expired on my parents' 1962 Ford Falcon. They decided that if we were going to take that long-anticipated "family vacation," it had better be before the planned obsolescence cycle kicked in the following year and the car collapsed into a pile of steel framed by four tires.

That car had a Philco AM radio, the first car radio I ever heard that did not have a vibrator in it.

Setting aside the vibrator's later, uh, consumer uses, car radios of the '40s and '50s used an altogether different device. It was a little metal can containing a vibrating contactor that turned DC battery voltage into AC, which could then be stepped up to high voltage, turned back into DC and finally, used to power the tubes.

Complicated, yes, but absolutely vital when you really, really needed an Otis Redding moment after sharing that chocolate milkshake on a Friday

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night date.

In any event, back in the Falcon, we chugged across the continental divide, vibratorless, while I listened to KCMO in Kansas City, KOB in Denver, KSL in Salt Lake and finally, the Mecca of AM radio (outside of New York City, at least): Los Angeles.

Oh, man. Robert W. Morgan ("GOOOOOOD Morgan, Los Angeles! ... It's Robert W" — (he, of course pronounced it "double-U") — "in the Morgen!!!") The "Real" Don Steele (was there an imposter? A "fake" Don Steele?). KRLA. KHJ. KFI. More 50,000-watt screamers than even I could keep track of.

**REDISCOVERY**

Along about this time, back in St. Louis, the local NBC television and radio affiliate put on a "stereo" broadcast demonstration. FM was, of course, on the air by then (playing, oh-so-soft mortuary music, which was an order of magnitude less descript and more somber than elevator music), but it was largely broadcast in "mono."

So to introduce the unwashed masses (those of us who had never been to a mortuary and only rarely traveled in elevators) to stereo music, they broadcast one channel on the TV station and one on KSD(AM) radio. That demonstration, with audio carefully chosen to maximize the stereo effect ("And now ladies and gentlemen ... a jet airliner will seem to fly right through your living room!"), was a bit goofy; but still, for me, it marked the real "Day the Music Died" on AM radio.

FM stereo came soon after and killed the top 40 AM station; slowly, I, along with most of the rest of the audience, left AM behind for the full-fidelity fields of FM.

During the '70s and '80s, I never even bothered to program the AM buttons on my car radio. It was all music, all the time, and I began to think of AM radio in Newton Minow's terms: a "vast wasteland."

Then in 1989, I had the opportunity to drive across country in a company vehicle.

Like a lot of fleet cars in those days, this one was stripped of anything non-essential and so had only an AM radio. Well, yikes. Two days on the road with "nothing" to listen to.

Except that it was on that trip that I rediscovered AM radio, to my complete delight. Every town, large, small and in between, has an AM radio station. Unlike a lot of small-market FM stations that are plugged into satellite dishes for 22 out of 24 hours, many of these are run by actual humans.

The result for me was a running, town-by-town local and regional commentary as I drove right across America.

Driving in the deep South, it was hard to find a town that didn't have a southern gospel station preaching an Elmer Gantry sermon. In the Midwest, I learned an awful lot about pork bellies and wheat futures. Into Oklahoma and Texas, it was country (and I mean Patsy Cline, pickin' and strummin' country), giving way to TexMex and Tejano about 100 miles south of Dallas.

I heard more accordion music in Texas than Lawrence Welk ever thought of playing. And of course, every couple of hundred miles, a blowtorch: KMOX, WWL, KRLD, WBAP, WOAI.

Major-market coverage and events, and in between the big guys, town "doin's"; high school sports, little tidbits of folks' lives.

All of it comes through the local AM radio station. It was like driving back in time, and I loved every minute of it.

I ended up owning an AM radio station in Texas. I have divided the net profit by the number of hours I work at this endeavor each month, and if I was schizophrenic, I would sue myself for underpayment of the federal minimum wage. It is not the easiest game in town, by a long shot; but for all that, it is a

lot of fun.

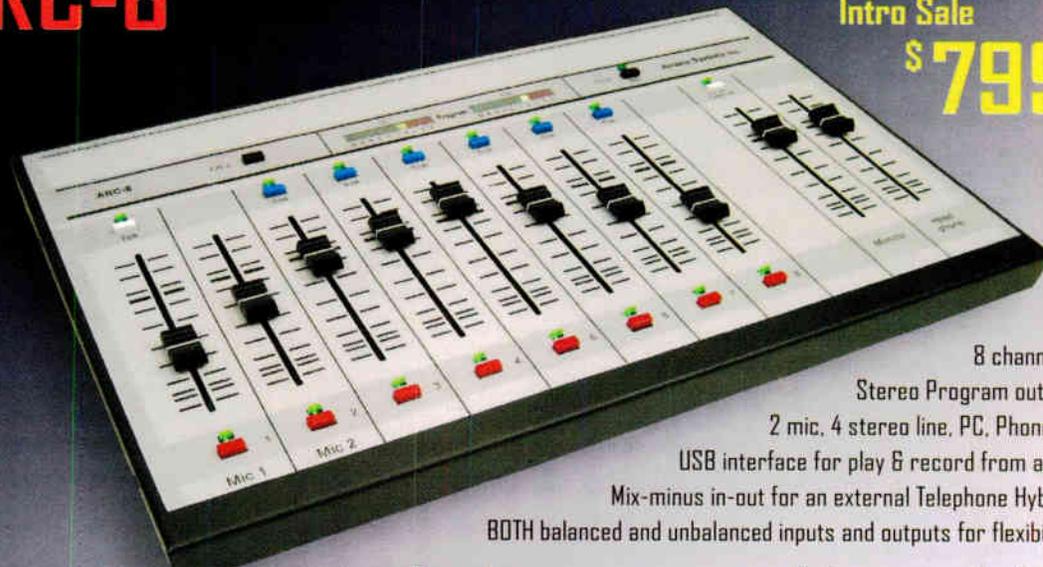
And I do sometimes wonder, in the middle of a long night at the transmitter site trying to squeeze that last watt up into the antenna, if there is a kid out there somewhere, not yet jaded by the Internet and iPods, cellphones and texting; who, with the help of an old AM radio, has just stopped by for a visit.

*The author is owner of KSIX(AM) in Corpus Christi, Texas and a partner in KRBK(DT), Springfield, Mo. Reach him at jgwithers@earthlink.net.*

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## TURBINE

(continued from page 17)

Optiwind says it designed its system for ease of maintenance. The structure has a built-in hoist system eliminating the need for a crane; individual components such as the fan blades and generators can be swapped out relatively quickly. The failure of a single generator or even a group does not take the entire unit offline.

Other advantages include elimination of low-frequency acoustic noise and of interference to VHF and UHF signals caused when conventional designs are placed near transmitting antennas.

The Optiwind design starts producing power with wind speeds as low as 4 mph and is capable of operating up to 40 mph.

I'm going to stay in touch with the folks at Optiwind. Perhaps someday I'll be able to specify one of their wind power systems for one of my broadcast clients?

*John Ramsey is chief technical officer with Marlin Broadcasting and president of Ramsey Communications Services. He is chairman of SBE Chapter 14 in Connecticut.*

*RW welcomes your first-person story ideas. Write to radioworld@nbmedia.com.*

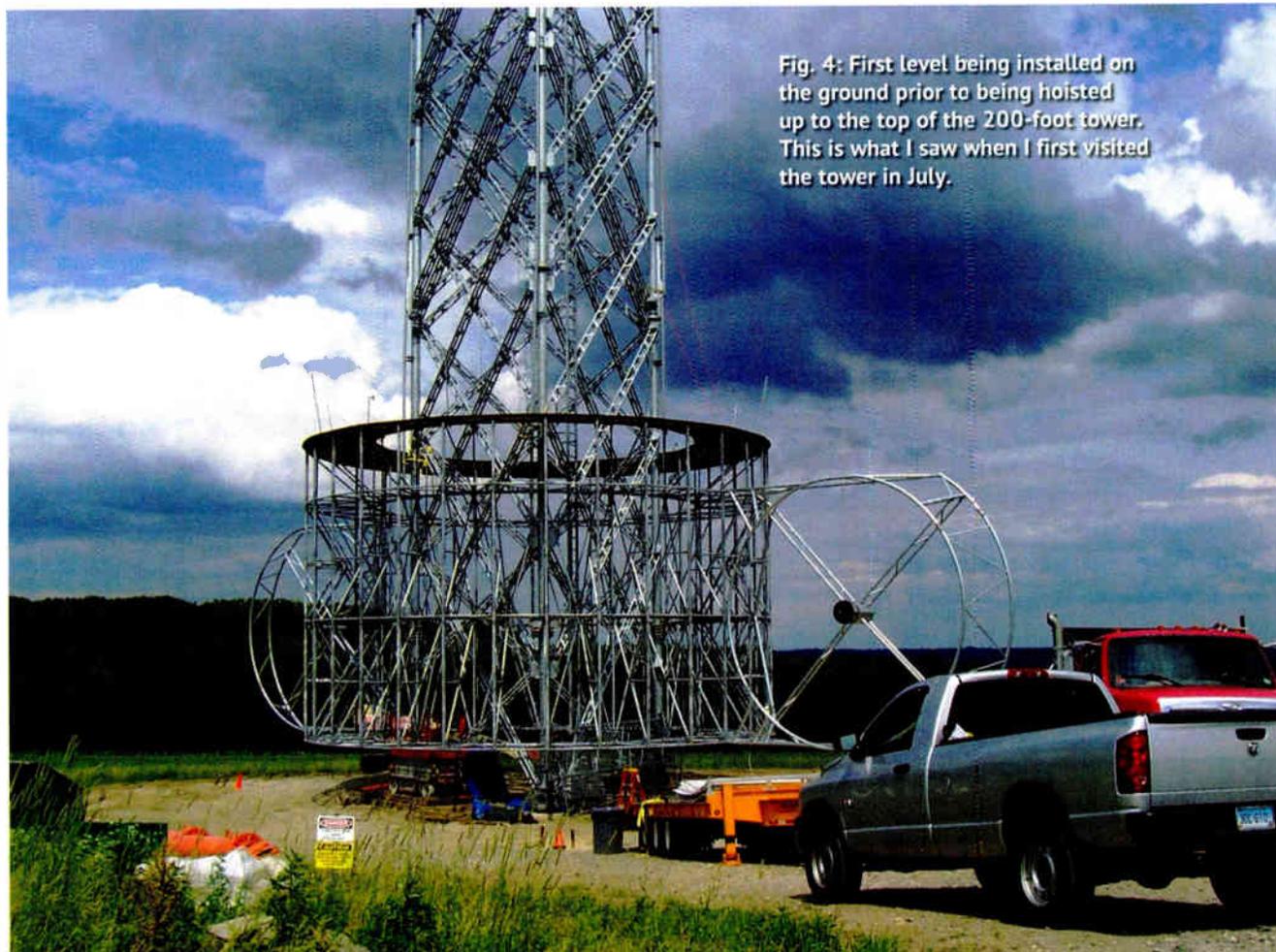


Fig. 4: First level being installed on the ground prior to being hoisted up to the top of the 200-foot tower. This is what I saw when I first visited the tower in July.

## MARKETPLACE

**ANALOG OASIS:** Harris' PR&E division is out with a new analog console for radio ... not a control surface working with a central processing engine but an actual "audio-comes-in-bounces-around-goes-out" console.



Called the Oasis, it is an 8-to-12-channel board. In a bow to digital reality it does offer digital outputs and, as Harris notes in a press release, a digital migration path.

It provides mic, line and telco inputs, plus a dedicated computer channel. The telcos can be assigned to any channel fader. Input choices are flexible and based on modular input cards. Harris says it is aiming the Oasis at all stations, not just small markets.

Info: [www.harris.com](http://www.harris.com)

**AUDIOSCIENCE EIGHT:** AudioScience says it developed the ASI5680 after a customer provided a detailed request for such a product.

The ASI5680 is an eight-channel output PCI

Express (PCIe) card designed for playback purposes. The input is stereo. Internal digital conversion is 8–32-bit and 32–96 kHz.

The card includes AudioScience's mixing/routing apps and SoundGuard transient voltage suppression technology. Drivers for Windows Server 2003/2008, XP and 7 along with Linux are available. APIs such as DirectSound, ALSA and AudioScience's HPI and ASX are supported. Price: \$1,995.

Info: [www.audioscience.com](http://www.audioscience.com)



**CAPPING THE 730:** Timely given the developments in the world of EAS and alerting, the Inovonics 730 RDS encoder now can work with the



Sage Alerting Systems Endec and encode CAP messages for running as RDS messages.

This new capability is a downloadable firmware update for current 730 owners. New 730s, retailing for \$2,200, will ship with the feature.

Info: [www.inovon.com](http://www.inovon.com)

**HANDS ACROSS THE WATER:** Vortex Communications, the U.K. distributor for Comrex, recently came up with a bright idea, an application to keep multiple codecs online at the same time. Comrex liked the idea, imported it and made it available to Comrex Access BRIC IP codec users.

Name	Address	Profile	Current State (Last state)	1st	2nd	3rd
ATL Studio USA	72.34.136.131000	Talkback	Connected (Connected)	1st	2nd	3rd
Comrex Lab Main	72.22.168.132	HQ1 Default	Not connected	Talkback	Two-Way	Discussion
Comrex Lab Voice	72.22.150.1311000	Talkback	Connected (Connected)	1st	2nd	3rd
Station Portable 1	63.126.54.222	HQ1 Default	Not connected	Talkback	Two-Way	Discussion
Station Portable 2	63.126.54.223	HQ1 Default	Not connected	Talkback	Two-Way	Discussion
London	127.0.0.1	HQ1 Default	Not connected	Talkback	Two-Way	Discussion
London DR A	72.202.31.19	HQ1 Default	Not connected	Talkback	Two-Way	Discussion
London DR B	72.202.31.19	HQ1 Default	Not connected	Talkback	Two-Way	Discussion
London Main - London	81.143.136.1321000	Default	Connected (Connected)	Talkback	Two-Way	Discussion

Called Access HotSwitch, the Windows-based app allows a centrally-based Access BRIC codec to maintain a one-way connection with numerous Access portables in the field and switch between them depending on who needs to be online two-way at a given time. As Comrex explained in the announcement, this is suitable for sports reports from the field or election night coverage from numerous reporters at various polling stations or campaign headquarters.

Access HotSwitch is available from the Vortex Web site for a 30-day free trial. Final purchase price is \$75.

Info: [www.vtx.co.uk](http://www.vtx.co.uk)

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# Peak Broadcasting Diversifies Offerings

## 11-Station Group Turns to StreamGuys to Expand Its Online Presence

### USERREPORT

BY JOE MAUK  
Director of Engineering  
Peak Broadcasting LLC

FRESNO, CALIF. — Peak Broadcasting LLC operates 11 commercial radio stations in the western United States: a six-station cluster serving the Boise, Idaho, market (four FMs and two AMs) and a five-station cluster serving the Fresno, Calif., region (four FMs and one AM).

The group also broadcasts a variety of online programming, including a live stream for each terrestrial station and an assortment of on-demand audio streams (archived broadcasts, specialty shows).

With a primary online presence established, Peak Broadcasting began seeking ways to expand its streaming services. This included the development of an iPhone app and video advertising pre-rolls for live and on-demand streams, as well as online video for special remote broadcasts.

The restrictions of the previous content delivery network prevented Peak Broadcasting from growing into such areas due to technical limitations or unreasonable new service expenses.

Upon recommendation from Media Tuners, which provides streaming audio tuning services for both clusters, Peak Broadcasting sought out StreamGuys and soon signed on for its services.

StreamGuys configured a dedicated Flash Media Interactive server to accommodate current Internet radio streams and provide the appropriate architecture and technical support to launch iPhone and online video initiatives.

Peak Broadcasting engaged the ser-



vices of Modulation Index and Tuner2 to develop the iPhone app. The custom configurations from both companies allowed access to real-time streams and provided directory-based access to on-demand programming.

#### APPS-OLUTELY

For suitable audience consumption, Peak Broadcasting required ultra-efficient audio encoding that would consume as little bandwidth as possible and still provide a high-fidelity audio source. The minimal bandwidth requirement would address mobile streaming and performance at the Edge or 3G networks to provide the audience with a reliable listening experience.

Peak Broadcasting also was interested in supporting its desktop and mobile streams on a single server. StreamGuys moved the entire streaming operation to the Adobe Flash Media Interactive server. This accomplished everything from a central platform, while employing the HE-AAC v2 codec at 32 kbps. This allows transmissions equivalent to 128 kbps AAC streams, providing exceptional audio quality at very low bandwidth.

The Flash Media server also allows Peak Broadcasting to encode its on-

demand audio in HE-AAC v2 as M4A (MPEG 4) files for iPhone streaming, maintaining the efficient bandwidth mantra that is key to the company's Internet streaming product.

As impressive as the increased diversity of Peak Broadcasting's streaming output is, the efficient plan put in place through StreamGuys has reduced the company's streaming costs from our previous CDN by more than \$100,000 a year.

Online streaming is critical to a radio station's performance and growth in the modern broadcasting universe. The

to the online streams using the same Flash Media Interactive server. Peak Broadcasting integrated its content management functions for preroll video and graphics, along with the handles from Tuner2's Media Tuner platforms within the StreamGuys platform. The integrated service enables the video pre-rolls and banner ads for both desktop and iPhone streams, with Ando Media automation systems triggering the layout.

StreamGuys also has enabled the launch of online video services. Cross-promoted on our radio broadcasts, listeners can access live and archived video streams on our website from various remote broadcasts and special events. This includes a two-hour pregame show prior to each Fresno State University football game. KMJ(FM) in Fresno, in

**An efficient plan has reduced the company's streaming costs from our previous CDN by more than \$100,000 a year.**

streaming side of Peak Broadcasting's business is growing constantly. The company has reported online audience increases of as much as 10 percent over the previous month.

Still, this is the radio broadcasting industry, and audio quality is king. Peak Broadcasting utilizes high-quality equipment throughout its audio chain to maintain pristine audio quality.

The signal generated at the studio console eventually splits, with one signal destined for the FM or AM transmitter and the other routed to the StreamGuys streaming platform. The streaming signal passes through Orban audio processing and an OpticoDec unit to encode the audio to HE-AAC v2.

Video pre-rolls have been added

cooperation with the Central California Latino Water Coalition, has streamed live video of "water rallies" on its site.

StreamGuys has been instrumental in providing a flexible streaming platform with the necessary bandwidth at a reasonable cost. They have proven their ability to customize our platform by establishing data interchanges between the Modulation Index Flash players, the iPhone app, the Ando Media ad insertion system, and the Tuner2 album art and directory service. The streaming platform also establishes future expansion possibilities, including unique live streams, more on-demand specialty programming (such as agricultural program content) and redundant streaming servers.

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

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**TECHUPDATES**

**NETIA CAMDIRECTOR AUTOMATES LIVE STUDIO VIDEO**

Netia's CamDirector module brings direct camera control and automated video switching to the company's Radio-Assist 8 suite of digital audio automation software.

Using voice detection, CamDirector enables automation of in-studio production by triggering the switching of cameras according to the speaker and mic in use.

CamDirector gives radio broadcasters an automated, low-cost means of creating live feeds or recorded programs for

repurposing to multiple broadcast, streaming, podcast and mobile platforms.

The module provides broadcasters a more sophisticated solution than a single still camera, Netia says, without requiring the investment and resources typically required for more complex multicamera program recording.

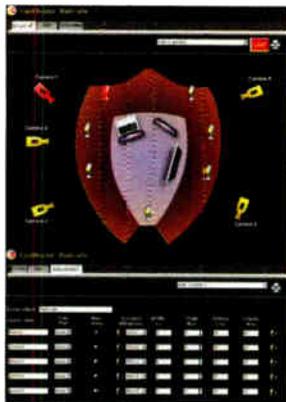
The system operates within existing installed Radio-Assist automation systems and does not require an additional dedicated IT infrastructure, database or server. The module allows cameras installed in a radio facility to be controlled from Netia's Radio-Assist 8.

Positioned to capture each speaker participating in the program, individual cameras in the studio are triggered by CamDirector as associated voice-activated microphones pick up speaker voices. When a host or guest begins to speak, the software automatically switches the feed to that person's mic and camera.

A built-in scene-creation program lends greater fluidity and interest to the video and dialog. For example, the program can be set so that after two minutes, a particular camera will zoom to wider angle, or zoom in.

These tools give the broadcaster choices in defining how cameras and mics are used to create video pieces.

For information, contact Netia in New Jersey at (888) 207-2480 or visit [www.netia.com](http://www.netia.com).



**SECURENET OFFERS ONLINE STREAMING**

Securenet Systems says it provides online radio streaming services to terrestrial and Internet-based radio stations around the world.

It operates a proprietary, high-speed, multi-backbone network and provides a choice of Windows, Silverlight or Flash Players with customizable skins and some 35 interactive listener advertising features.

Broadcasters can stream in Windows, MP3 or AAC+;



the players work on all desktops and mobile devices, ensuring market penetration and the best possible listening experience.

Securenet's multigigabit network is housed in a disaster-ready datacenter with battery and generator backup technology. It also has built-in redundancy at all levels. 24/7 monitoring and support staff ensure the reliability and uptime needed for critical applications like online radio streaming.

For information, contact Securenet in Florida at (866) 568-9402 or visit [www.radiostreamingservices.com](http://www.radiostreamingservices.com).

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**-BILL CLINE**  
Director of Broadcast Engineering  
Radio Free Europe/  
Radio Liberty Prague

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**-GRACE BLAZER**  
Program Director  
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**BUYER'S GUIDE****CasterStats Monitors Net Visitors**

Belgian Broadcaster Is Pleased to Know Who Listens to Its Audio Streams

**USERREPORT**

BY **BAS BOONE**  
Chief Engineer  
Nostalgie Vlaanderen

**ANTWERP, BELGIUM** — When we launched Nostalgie in 2008, Internet streaming was not our main concern. We set up one main server in order to satisfy our audience's demand, but we never bothered with in-depth analyses.

In the meantime, Nostalgie has tripled its initial market share (from 1.7 percent to 5.63 percent in 12 and older), and so have our streaming servers as we experienced the same boom in our online listeners. Because of the limited reporting tools available at the time we began looking for a new reporting tool.

It was our service provider who suggested taking a closer look into CasterStats from Touchcast. This system has the possibility to monitor multiple servers in "real time" and combine them into "single-stream" statistics.

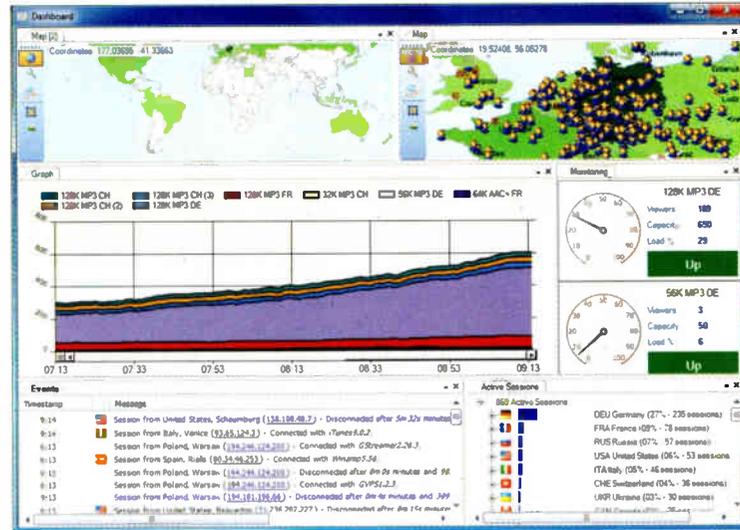
The user interface looked promising and the specifications indicated high level reporting for different types of users.

We installed a copy of the CasterStats Collector on a network server to retrieve available audience data from our streams. A wizard guided us through the set-up process, so we had it running in no time.

After launching the Dashboard we could see our current online audience and individual server status. The system can be customized by the user to show any desired data, in real time, on any connected client. Needless to say we have found this a practical feature.

**REPORTING TOOLS**

The historical reporting tool was thorough, giving us many unexpected insights on how our streams were used. I



ers like the Dashboard as they can visualize the audience in real-time. On the other, our technical staff appreciates the access to information on the server status. Our marketing department, being used to relying on audience panels that are only published twice a year, now has a powerful solution that will give instant access to listening trends, even in real time. This allows them to present accurate and up-to-date information about our listeners to existing and potential advertisers.

We work closely with the team at Touchcast, who have been helpful with advice. They listen

positively to our upgrading suggestions, improving their product constantly. Version 2.0, to be released shortly, looks promising including lots of features such as new reports including playlist analytics (combined with audience) and other technical related reports, as well as a redesigned Dashboard and support for more streaming servers.

For information, contact CasterStats in Belgium at 011-32-2-808-12-08 or visit [www.casterstats.com](http://www.casterstats.com).

On one hand, operators and produc-

**TECHUPDATES****BSI SIMIAN LITE TAKES ON THE INTERNET**

Broadcast Software International has announced that Simian Lite has full Windows 7 compatibility.

After much testing, Simian 2.1 Lite is now compatible with the Windows 7 32-bit operating system. BSI designed Simian Lite to handle the requirements of Internet broadcasting. Simian Lite has the ability to export metadata through serial, text, HTTP, TCP and UDP interfaces.

There is built-in integration for sending HTTP calls to SHOUTcast, Icecast, SimpleCast and Live365. The user can optionally configure three custom HTTP calls to his or her needs.

A new manual metadata export feature allows for non-automation sending of information through serial port, PAD data and HTTP calls while doing live events where data is not normally be sent.

Orban and Omnia integration simplifies the output of PAD data to those interfaces. The ability to data-merge two text files allows for output to XML, HTML or other text-based formats.

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

**WOWZA MEDIA SERVER 2 UNIFIES**

Wowza Media Server 2 is a Java engine that simultaneously delivers content from a single set of live or on-demand H.264 video or AAC/MP3 audio streams to multiple clients and devices, eliminating the need for specialized, client-specific encoders.

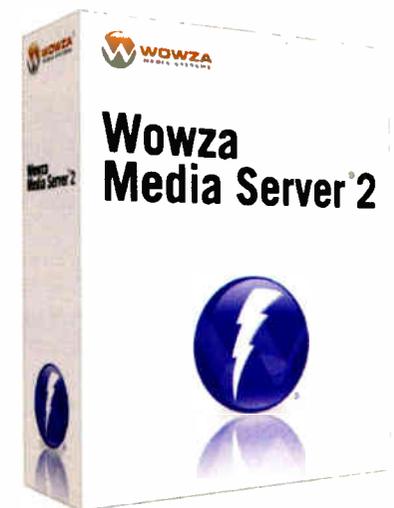
The company describes it as the industry's first unified media server. It can deliver content to any player or device, including Flash, Silverlight, QuickTime and IPTV set-top boxes as well as video-friendly mobile devices like Android and BlackBerry smartphones and the Apple iPhone and iPad.

Wowza Media Server 2 allows the user to deliver a high volume of audio and video content over IP networks, public or private, to desktop/laptop computers (Web TV), mobile phones/tablets (mobile TV) or IP set-top boxes (IPTV).

The supplier says improved economies of scale and reduced encoding, storage and management expense mean broadcasters, content delivery network service providers and other media enterprises can save money, improve their efficiency and streamline systems.

As a single-server platform, Wowza Media Server 2 also simplifies personnel training and operation, reducing enterprise expense.

For information, contact Wowza Media Systems in California at (888) 778-7997 or visit [www.wowzamedia.com](http://www.wowzamedia.com).





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 -Leslie Whittle, Program Director  
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# StreamOn Creates Revenue Opportunities

Canadian Broadcaster Upgrades Its Streaming to Support New Format

## USERREPORT

BY MARK CRICHTON  
Chief Engineer  
LA Radio Group Inc.  
CJUV(FM), CKIK(FM)

**RED DEER, ALBERTA** — We started streaming CJUV(FM)'s audio (hits from the '60s, '70 and '80s) on the Internet four years ago using a PC with XP Media Center, a sound card and an Internet connection. Connection losses, computer freezes and audio dropouts were constant problems.

With the launching of our second radio station, top 40 CKIK(FM), in the larger market of Red Deer, Alberta, we knew that our method of streaming was not going to be a hit with the computer-savvy top 40 listener. This obliged us to take a look at other means to stream our audio online. We soon discovered another driving force: revenue generation.

I discovered StreamOn while attending the radio exhibits at NAB Show in Las Vegas.

The StreamOn hardware really took us no time to install. The streaming



hardware (appliance) required an Internet connection with its own static IP address, connection to our automation system Scott Studio SS32 for playlist data and an audio connection (XLR balanced). I installed the audio after our Omnia 6 audio processor to make sure that the audio into the appliance was the same as what we put to air.

Once this setup was done it was a quick call into StreamOn support and they had us streaming within 30 minutes. Technically, I have had nothing more to do with the appliance beyond

the initial setup.

I provided the appliance with its own dedicated ADSL Internet connection to isolate it from the rest of our network. Initially I had it on our office network behind the firewall but opted to provide it with its dedicated connection after additional network requirements were being implemented. I have had no connection problems with the appliance since it was installed.

### PERIODIC CHECK

One of the problems I had initially with the service was the DSM32 software I was using to get the play data to transfer to the StreamOn appliance from our legacy Scott Studio automation system.

The program would stop sending data, which resulted in having to reset the program on the Scott server on a regular basis. The fix came when WideOrbit came out with a newer version of the DSM32 program, which corrected this communication problem.

The data transfer between the Scott system and StreamOn has been rock-

solid since. I do recommend checking your stream and player periodically to make sure that it is working correctly. There have been a couple of times where I have caught a problem before it went unnoticed for a period of time.

A big selling point for the StreamOn system for us was the revenue-generating potential. Offsetting costs of a service is an important consideration when it comes to purchasing new gear. The player provided us with the opportunity to customize it, not only for our own station's identity but to create a client sponsorship of the service.

We developed our skin to match the look of our website as well as provided our sponsored client with their banner on the player, a link to their site and pre-player launch audio commercial.

It did not take our sales people long to find a client who wanted this type of exposure. In the year that we have been using StreamOn we have experienced a doubling of our listening hours and a steady increase of our daily listeners.

We also had an iTunes link added to the player's "now playing" information, which provides the listener with the opportunity to purchase the music from iTunes. We have set up a partnership with iTunes through Linkshare so we receive a small commission from every song purchased by our listeners.

With the purchasing of a service like StreamOn, you must look at this as being another way for your radio station to make money. There are plenty of broadcasters streaming their audio online but I believe that we, as the technical support group, must look to revenue generation as an important consideration for equipment purchases.

For information, contact StreamOn in California at (951) 801-2309 or in Canada at (780) 438-1482 or visit [www.streamon.fm](http://www.streamon.fm).

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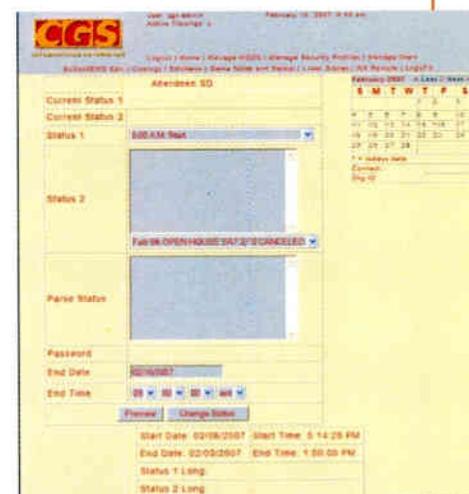
## TECHUPDATE

### CGS DELIVERS LATEST NEWSCHIEF

CGS Automation is delivering the most recent version of its NewsChief software bundle to assist broadcasters with the labor-intensive task of collecting and distributing school closings, high school sports scores and election results for both the Web and on-air personnel.

The information collected also can be announced automatically using a new voice synthesis feature.

For information, contact CGS Automation in Kentucky at (859) 299-4081 or visit [www.cgsautomation.com](http://www.cgsautomation.com).



**TECHUPDATES**

**ABACAST RADIO STREAMING PLATFORM**

Abacast Inc., a provider of online radio streaming solutions, has announced the launch of its Radio Streaming Platform, services that enable terrestrial and Internet-only radio stations to stream their stations online profitably.



Abacast Radio Streaming Platform includes fixed-price streaming; mobile applications the iPhone and Android platforms; ad sales via the Abacast Ad Sales Network; ad insertion and trafficking; customizable player with advertising integration; radio-friendly analytics; royalty reporting; and Abacast Premier 24/7 support and audience support.

According to the company, the focus is on broadcaster revenue generation. The Abacast Online Radio Platform offers third-party ad sales via the Abacast Ad Sales Network and support for four revenue channels including audio, preroll video, sponsorships and display.

Pricing for the Radio Streaming Platform is done on a fixed-price model. Generally, Abacast says, industry pricing plans allow streaming costs to grow unpredictably with audience growth, inhibiting profitability. Fixed-Price Streaming is a tiered fixed pricing model that allows broadcasters to grow their audience without risk of overage charges. Fixed Price Streaming provides stable and predictable streaming costs, even while a broadcaster's audience is growing.

For information, contact Abacast in Washington at (360) 384-5229 or visit [www.abacast.com](http://www.abacast.com).

**OMNIA A/XE STREAMS AUDIO**

A/XE is next-generation audio processing software from Omnia, extending the capabilities of the original Omnia A/X.

Where A/X could process one audio input per PC, A/XE can handle multiple audio inputs at the same time in the same PC. In addition to audio processing, A/XE can encode the audio to MP3 or AAC and send the encoded audio to multiple servers at the same time, such as Shoutcast style, or Windows Media. In addition, A/XE can send streams to Wowza servers for streaming to Flash clients.

Using the included virtual audio cable, A/XE can accept audio from other applications on the same PC without needing to go through a physical sound card. It is also able to feed audio to other applications on the same PC (e.g. third-party encoders).

It runs silently as a background service and can be managed and configured remotely with a Web browser. It features adjustable wideband AGC with a three-band compressor/limiter, IIF EQ and low-pass filter and a precision look-ahead final limiter to prevent clipping. Current Omnia A/X users can receive a free upgrade.

For information, contact Omnia Audio in Ohio at (216) 241-7225 or visit [omniaaudio.com/axe](http://omniaaudio.com/axe).



**Site Control**



**WVRC-8** Web-enabled and Voice Dial-up Eight Channel Remote Control



**Site Sentinel® 16** Web-enabled Sixteen Channel Site Remote Control System



**WVRC-4** Web-enabled and Voice Dial-up Four Channel Remote Control



**Site Sentinel® 4** Web-enabled Four Channel Site Remote Control System



**VAD-2 Plus**

Dual channel Voice alarm Dialer



**AUDIO Sentinel™**

Web-enabled dual channel stereo silence monitor



**I/O Sentinel® 4**

Web-enabled four logic/status input, four relay output module

**Relay Sentinel®** Web-enabled three relay module

**Relay Sentinel® 16**

Web-enabled sixteen open collector/SS relay module

**Schedule Sentinel®** Web-enabled Event Scheduler

**Status Sentinel®**

Web-enabled three input status/logic module

**Status Sentinel® 16**

Web-enabled Sixteen-input status/logic module

**WebSwitch™** (not shown) Web-Remote Power Switch



[www.broadcasttools.com](http://www.broadcasttools.com)

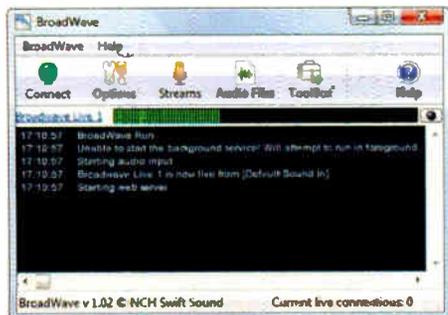
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# TECHUPDATES

## BROADWAVE STREAMS AUDIO

NCH Software feels that its BroadWave software will broaden a radio station's listener base by streaming live over the Internet.



With BroadWave users can stream multiple live radio feeds and an unlimited number of prerecorded audio clips or podcasts, all from one PC. Users can stream any audio connected to the sound input of a computer. Audio automatically will be compressed or converted to the optimal file format for streaming. Audio files and live streams can be recorded and saved as WAV files to use for future podcasts or archiving of broadcasts.

BroadWave audio streams play automatically in popular Web browsers including Internet Explorer, Firefox, Safari and Chrome. Listeners do not need to have any special software or download anything in order to listen to the webcast.

For information, contact NCH Software at [www.nch.com.au/streaming/index.html](http://www.nch.com.au/streaming/index.html).

# BUYER'S GUIDE

## IVIPLANET CONVERTS RADIO INTO TV-RADIO

Internet streaming technology is the fastest way to convert a traditional radio station into TV-radio station. Modern radio can be a new visual medium.

Ivplanet software's itvcapture and itvplayer are applications designed for radio broadcasters.

Users can stream from multiple cameras and sources with the built-in four-channel video switcher. They can also create their own playlist for automatic or manual automation mode.

The itvplayer has a smart character generator that is used to create, display and control graphics, texts and logos.

The picture-in-picture feature can add a prerecorded video or streaming feed to the live source. The itvcapture application allows users to do a live recording in multiple video formats.

Streaming can be done directly inside the application with support for Windows Media and h.264/AAC technologies. For information, contact ivplanet in Florida at (866) 706-6247 or visit [www.ivplanet.com](http://www.ivplanet.com).



## RADIOTIME ACQUIRES TUNEIN

RadioTime, the Internet radio portal, acquired Tuneln, developer of the Tuneln iPhone/iTouch Internet radio app.

Ben Alexander joins RadioTime to oversee development of future RadioTime iPhone and iPad apps.

Bill Moore, CEO of RadioTime, stated: "An ever-growing number of our RadioTime.com users are now accessing Internet radio on their smart phones, using their headphones, connecting to a docking station and plugging into their car stereos ... Adding the Tuneln application to the lineup of our own and partners' mobile apps, along with the expertise Ben brings to our team, brings our customers and partners a significant competitive advantage."

Alexander said he looked forward to working on bringing Internet radio to a variety of mobile, automotive and connected in-home media players, televisions and sound systems.

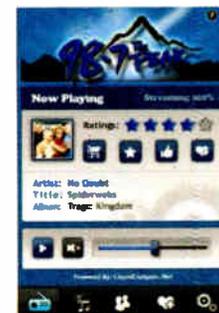
The RadioTime Tuneln app can be found at the iTunes store for \$1.99.

For information, contact RadioTime in Texas at (866) 917-9797 or visit [www.radiotime.com](http://www.radiotime.com).

## LIQUID COMPASS JOINS MOBILE APPS PARADE

Radio streaming services provider Liquid Compass announced a division devoted to building radio station streaming apps for the mobile phone market.

The first app, the LC ProM, is a spinoff of the desktop Liquid Compass player, the LC Pro. The first platform for the app will be the iPhone. Android and BlackBerry versions are to follow.



Liquid Compass CEO Zackary Lewis said the purpose of the mobile division is to provide "state-of-the-art apps that include features and functionality that extend a station's desktop streaming brand to mobile devices and, at the same time, engage listeners in a highly user-friendly and interactive environment."

He added, "Now, terrestrial broadcasters can reach their audiences anywhere they go — and keep them tuned in longer — in the same stable, secure environment they currently enjoy on the Liquid Compass Streaming Delivery Network."

Liquid Compass also offers a full-scale content and streaming delivery network.

The LC ProM will be available in standard skins; also available are customized skins like the one shown, to match station logos and themes. It will include social networking features and "buy" functionality as well.

For information, contact Liquid Compass in Colorado at (303) 839-9400 or visit [www.liquidcompass.net](http://www.liquidcompass.net).

UNITED STATES POSTAL SERVICE  
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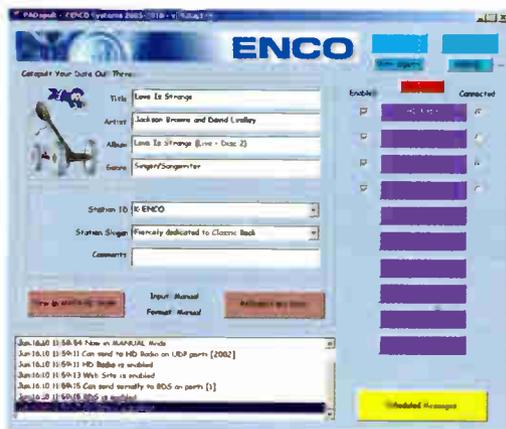
**TECHUPDATES****ENCO ANNOUNCES LATEST PADAPULT**

ENCO Systems has released the latest version of its PADapult program.

PADapult is designed to distribute "Now Playing" information and messagecasting content, sending real-time text data to up to 10 destinations including RDS, HD Radio and station websites.

It automatically formats data in the correct format for each destination from a single data input. PADapult works with ENCO's DAD/Presenter automation system and is compatible as well with other automation systems.

Also included is the PADLive! module that allows real-time instant messaging and relevant text to be



sent to any or all metadata destinations. PADapult supports social networking destinations like FriendFeed and Twitter as well as streaming services like ShoutCast.

Along with program-related data, PADapult can be used for scheduled messages ranging from traffic and weather info to promotional or commercial material to Amber Alerts. PADapult allows broadcasters to schedule and maintain an unlimited number of messages, then track them for billing.

When used with a compatible automation system, PADapult also can send iTunes song ID information to iTunes tagging-enabled HD Radio receivers.

It supports ENCO's Content Adaptive Processing, allowing stations to vary audio processing automatically based on type of audio content, when used with compatible Omnia and Vorsis audio processors.

PADapult is available as a software-only package or as an integrated metadata appliance called RAMA.

For information, contact ENCO Systems in Michigan at (240) 827-4440 or visit [www.enco.com](http://www.enco.com).

**RADIOSTREAMHOST ADDS FEATURES**

Seattle-based streaming company RadioStreamHost.com has deployed a number of new cloud-based

services that allow its radio clients to develop revenue-generating strategies and to control online player content with a few clicks, from anywhere, via the Web.

Client stations, it says, can manage banner ads, multiple audio or video prerolls and other aspects of the universal Web player, making it easier to generate Web revenues using streaming.

The system features a password-protected streaming option for stations that want to deliver specialized streaming content from their websites or as subscription-based content and an optional PayPal donations button that can collect listener donations.

RadioStreamHost has added on-demand video streaming. Clients can log in to their private Web-based control panel, upload and manage videos on their website with one click. There's no need for the user to have HTML or Flash player expertise.

For information, contact RadioStreamHost.com in Washington at (800) 727-9815 or visit [www.RadioStreamHost.com](http://www.RadioStreamHost.com).

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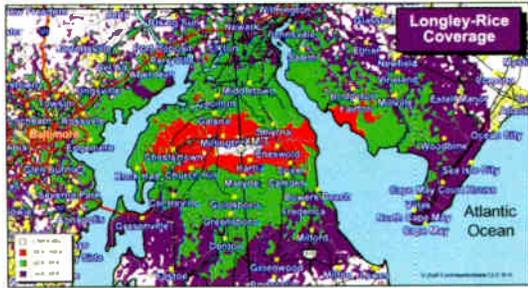
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[digitaldevelopment.net](http://digitaldevelopment.net) for a copy today.

### WANT TO BUY

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

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"You Know We Know Radio"

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### WANT TO BUY

ADM (audio designs and manufacturing) 70s era consoles and parts. [abgrun@gmail.com](mailto:abgrun@gmail.com).

## MICROPHONES/ HEADPHONES/ SPEAKERS/AMPS

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RCA 77-DX's & 44-BX's, any other RCA ribbon mics, on-air lights, call after 3PM CST, 214 738-7873 or [sixtiesradio@yahoo.com](mailto:sixtiesradio@yahoo.com).

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**Kintronics 4-tower AM Phaser**, includes ATUs & cabinet, \$15000. Call Duane Daves at 828-285-8477.

### WANT TO BUY

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

2" plastic "spot" reels 6.5 or 8" diameter, as used for quad video. Wayne, Audio Village, 760-320-0728 or [audiovlg@gte.net](mailto: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](mailto: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, KSF, KOFY, 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](mailto:ronwtamm@yahoo.com).

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

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# Texas Broadcasters Salute George Marti

The Texas Association of Broadcasters presented its second Lifetime Achievement Award to George Marti this summer. Here is the text of its award biography.

Everyone in broadcasting knows the name Marti. It's associated with the

## NEWSMAKER

well-known and ever-present system for remote broadcasting and studio-transmitter links. The man behind the name — George Marti — is a legendary Texas broadcaster who continues outstanding service to the industry and his community on a daily basis. And he shows no sign of slowing down.

George Marti graduated from Central High School in Fort Worth at the age of 16 and then attended technical school for nine months. He received his radiotelephone First Class and Amateur Radio licenses just prior to his 17th birthday (call letters: W5GLJ).

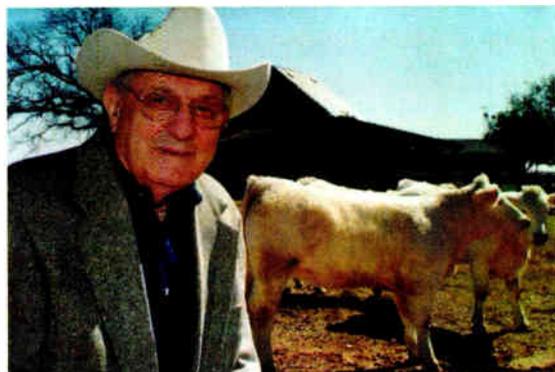
### ROOTS OF A BUSINESS

Marti says his grandmother influenced him more than any other person. He spent time at her house each day on his way home from the two-room schoolhouse at Oak Grove. She told him when he was 12 that he needed to make a business plan.

He decided that his plan would

involve establishing a radio station in Cleburne.

Marti started working part-time at KTAT(AM) and KFJZ(FM) Fort Worth. By 1938, he was employed by Tarrant Broadcasting Company, which was owned by Elliott Roosevelt and later sold to Sid Richardson.



Entering the Marine Corps in 1942, Marti went through basic training in San Diego and then to First Radar School at the Naval Research Lab in Washington, D.C. During a brief leave in 1944, he met and married Jo Chambers.

After nearly four years, he returned to KFJZ where he worked until 1946. In April 1947, he and Jo put his first station on the air: KCLE(AM) Cleburne.

Marti designed and built his own 250-watt transmitter and audio console in his mother's living room. KCLE(FM) joined the fold in 1949. In 1953, Marti added KKJO in St. Joseph, Mo., and

kept the station until 1968.

When he sold KCLE in 1960, Marti started his second career. Marti began manufacturing remote pickup equipment and later added studio-transmitter link equipment.

Before he designed and built the units and successfully lobbied the FCC to allow their use, radio stations had to use telephone lines that were expensive and not always reliable. His invention revolutionized the industry. Small stations in remote areas could be operated and stay on the air while being controlled from a larger studio in another city.

He owned and operated Marti Electronics until 1994. During that time, he also had either an interest in or financially supported more than 12 radio stations. When Broadcast Electronics purchased Marti Electronics, Marti's equipment was in more than 80 percent of radio stations worldwide.

In 1992, Marti began yet another profession. He and his late wife Jo purchased the Bank of Cleburne, which was within 14 days of failing. He owned the bank for five years, eventually merging it with First Financial of Abilene.

### EDUCATION BOOST

In the 1980s, he and Jo created what he considers his *best* business interest: the Marti Foundation. The foundation funds scholarships to help Johnson

County graduates attend college. These \$10,000 scholarships are aimed at helping youth in lower-income families.

Students must maintain a 2.75 grade-point average and carry a minimum of 14 credit hours per semester to retain their scholarship. The foundation primarily helps those who are the first children in the family ever to attend college.

More than 300 students have received bachelor degrees from colleges and universities around the state.

Jo passed away in 2003 but her legacy lives on through the foundation. He married his current wife Margaret in 2004.

Marti served six terms as the Mayor of Cleburne and in 2003, the Cleburne Independent School District opened Marti Elementary.

Marti still retains an interest in more than 12 stations in Texas.

In 1991, Marti received Texas broadcasting's most coveted honor: TAB's Pioneer Broadcaster of the Year Award. In the same year, the National Association of Broadcasters presented him with their highest engineering honor. In 2001, TAB installed the Association's first Legend of Texas Broadcasting Award on permanent display at the TAB Building in Austin.

He was inducted into the Texas Radio Hall of Fame in 2002. In 2010, the Texas Association of Broadcast Educators named him as their Broadcaster of the Year.

Marti believes that the duty of a broadcaster is to help others. "If you are not helping people, you are not doing your job."

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25	Broadcasters General Store	www.bgs.cc
3	BSW	www.bswusa.com
6-7, 35	Comrex Corporation	www.comrex.com
1	Continental Electronics Corp.	www.contelec.com
18	Grace Broadcast Sales	www.gracebroadcast.com
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2, 36	Wheatstone Corporation	www.wheatstone.com

# Radio World Talkback

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



"Great idea. I wish our company did this awards presentation. Way to go Richard!"

— on "Beasley Names Top Performers," including engineer Richard Gallow. See [www.radioworld.com/article/105890](http://www.radioworld.com/article/105890)

Shown: Richard Gallow

"If the FCC wanted to improve the 'AM' service they would: 1. Stop IBDAC digital transmissions at night and during critical hours; 2. Move all the little 'AM' stations to a new VHF digital band; 3. Enforce Part 15 rules to reduce interference from power lines and other RFI sources."

— on "FCC Nixes AM Power Hike," regarding Richard Arsenault's proposal. See [www.rwonline.com/article/101384](http://www.rwonline.com/article/101384)



Shown: Grand Hyatt

"We stayed in College Park — for \$90/night including tax. Rode the Metro in (though having used both the Paris and Berlin metro I found the D.C. system inscrutable). But I agree this was a poor venue. Seemed like every session had people standing because the rooms were too small. Ohio Bar annual meeting last June in Dayton had more people — and more meeting and exhibitor space."

— on "Exhibitors Vent About Lack of Radio Show Traffic, Space." See [www.radioworld.com/article/107472](http://www.radioworld.com/article/107472)



"I am one of those CEs who has moved to another industry, mainly due to bad experiences with 'the GM from hell.' But I still miss the excitement and challenge of problems to solve and obstacles to negotiate, whether they be hardware, software or peopleware. I now have a position in IT where I'm respected and my talents are seen as a valuable resource — something that a CE often doesn't get in the broadcast industry. GMs need to wake up and see engineers as one of the most valuable resources that a radio station has."

— on Guy Wire, "So You Want to Be the Chief Engineer." See [www.rwonline.com/article/85920](http://www.rwonline.com/article/85920)

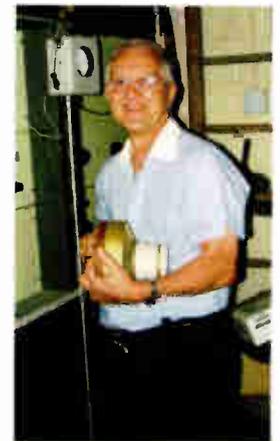
"Guy Wire is a coward, hiding behind a pseudo-name, having attacked Bob Savage (WYSL) in the past for speaking out about this HD Radio Farce."

— Reader "HD Radio Farce," posting to "Guy Wire's Prediction for a New Decade." See [www.radioworld.com/article/95332](http://www.radioworld.com/article/95332)

"These blogs should be censored. Because nothing but trash comes out of HD Radio Farce's mouth in writing. His credibility for being a good informant is a laughing joke. He's simply an annoying spammer for the airwaves. And he is only helping iBiquity because of that."

"Guy Wire should be censored because nothing but stupidity comes out of him. BTW I'm not the farce guy."

Shown: Charlie Goodrich



"I have a very high regard for Charlie Goodrich. He is another one of the angels on the other end of the phone line when you need to get back on the air. I took care of a 3.5k McMartin FM in Gunnison, Colo., for a bit of time. He helped me out with some driver tube problems. It was on the second floor of a log house north of town."

— on "Charlie Goodrich, Engineer Extraordinaire." See [www.radioworld.com/article/105742](http://www.radioworld.com/article/105742)

"Don't program directors listen to advertisements to see if they are suitable for the audience? A bad ad will hurt your ratings. I do not want ads that are for male-only or female-only products or for any sexual-related products."

— on "FCC: Broadcast Complaints Up." See [www.rwonline.com/article/105010](http://www.rwonline.com/article/105010)

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Printed in the USA**READER'S FORUM****WELCOME SIGHT**

I read your recent column where you addressed various complaints some blogger had made about Radio World ("Remaining Relevant in a Radio World," July 14).

Since my entry into the business in 1992, a new RW at the station has been a welcome sight. I've always found the articles interesting and informative; and unlike the blogger, I've read the ones about HD Radio with interest. Also, unlike the blogger, I've enjoyed the *GM Journal* and other non-engineering specific sections.

I believe the best engineers are well-rounded broadcasters in all respects and seek to understand and make positive contributions to all departments within their organization.

The blogger also complained about the ads. I've probably discovered and had my appetite whet for more new products in the pages of RW than by all sources combined. Consider me a very satisfied reader!

Robbie Green  
Chief Engineer  
Cumulus Houston  
Houston

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**NEW 'THIS AND THATS'**

I enjoyed your editorial attempting to explain by Radio World isn't confined to engineering matters alone. Even as a "non-technical" person I still get something by reading about current technology matters; at least I feel I can often ask others what they think or get their advice and input before agreeing to purchase one of those new "this and thats."

I have, for years, relied on your excellent publication to try to understand an evolving and ever-changing radio medium ... one that I enjoy and have worked in for over 50 years.

Bob Greenlee  
Boulder, Colo.

**NOT TOO NARROW**

Paul, I just got done reading your editorial in the July 14 edition. While it's certainly no secret I've not always agreed with everything Radio World has published, and not always agreed with you, I do think your publication is far better than any presently available.

One thing I really like about it is you are not tied 100 percent to broadcast-only writing. You put in regular articles about shortwave listening, ham radio and history.

If, as you claim, FCC staffers read RW, let me give them a big raspberry for allowing AM IBOC, and doing *absolutely* nothing about the complaints that have been filed over its raucous and intentional interference.

As you also know, I read with great interest all letters and columns written in Radio World, even the ones that drop to the level of name-calling in trying to persuade people to their side of an issue.

Jerry Arnold  
Director of Engineering  
Midwest Communications  
Terre Haute, Ind.

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NEWS

## Remaining Relevant in a Radio World

I Aim to Provide Useful Content for Technical Managers & Engineers. How Am I Doing?

When I left my former place of employment and set out as a contractor, I also left my Radio World subscription behind.

I have started a blog post I spotted recently. Now coming back to RW, the blogger commented on the smaller number of pages compared to some years back. He acknowledged that he finds some interesting things to read here, yet he griped about the number of HD Radio content and the number of engineering-specific stories that are not what he considers engineering-specific.

He wondered whether RW is the best way to stay abreast of things in the technical end of the business. "Is it worth the price?" he asked.

is more respected than John Bisset's *Workbench*. Reader reaction suggests strong ongoing involvement. We have the best letters section anywhere: meantime, more and more readers use the "Comment" function below our online articles to publish their thoughts and reactions.

The blogger beveled about advertisements, but the ads are among the most important things you'll find in RW. Those ads not only make it possible to bring our content to you; they constitute what some of the smartest engineers and designers in radio think will be important in years ahead? Want to identify which companies remain strong and supportive of your industry, are putting forth new solutions and investing in the future of broadcasting? Watch our ads. They'll tell you a great deal.

RW advertisers are industry leaders and deserve our appreciation and patronage.

Without question, though, these times are challenging for publications: all media face concerns when infinite information is available online. That's generally a good thing, so I am not embarrassed to say that we too confront tough choices. We try to make them wisely. I believe we deliver great value.

Radio World remains a strong, relevant brand in print and online. Top radio engineering executives read it, field engineers read it, FCC staff read it, manufacturers read it. Our publication held up very well during the recent harsh business downturn, when others were scaling back the number of times they publish. I'm proud that we have a print edition and continue to support it. Many readers tell me, "Online stuff is fine but there's still a place for a good, physical publication. I prefer it that way."

I believe our content mix is better, our journalism and our columnist's are better, than in any other radio technical trade publication. Is it worth the price? To me, you can get all this through a free subscription that's a no-brainer.

to support working

July 14, 2010

FROM THE EDITOR

Paul McLane

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If there is a question I hear most, it is "There was a time when RW consisted entirely of tech content written by engineers: why isn't it anymore?" Looking back through the archives, that generation was never true: RW has been around since the very beginning.

Our content mix has evolved, with good reason. The world of radio engineering has evolved.

\*\*\*

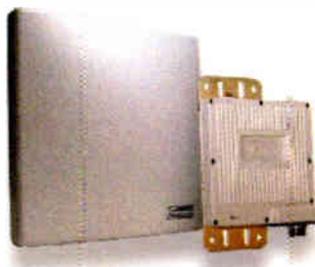
I am proud of Radio World, though humbled by its challenges. If anything, I reflect on how far it has come over the years. It has evolved like a



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# IMAGINE THERE'S NO IP HASSLE. IT'S EASY IF YOU TRY.

**Preface...** Clear your mind. All that anxiety that you've come to associate with the typical AoIP network install is going to leave you now... Think of cool clear water flowing into the coffee maker and the sound of sprinkles hitting fresh, hot donuts... OK. Ready?

## 1. OPEN

Confront your boxes. You know they're there. They know they're there. But only YOU have the power to change that. Go ahead... open them.



10:03am

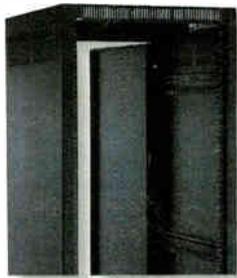
## 2. LOOK

Take a good look at what's in the boxes. You've got a control surface mixer item and rack mount BLADE something or other. They sure look pretty. And they are. Using this stuff you are gonna be a chick magnet. Or a guy magnet. Whatever, you are going to be IN CONTROL. Cool part is, THAT is only moments away!

10:09am



Every BLADE has all the information about your entire network stored in it. Should any part of the network go down, the rest continues to function perfectly. Simply plug in a new BLADE and you'll be where you started in moments!



## 3. RACK EM UP

Rack mount the rack stuff. OK, we're going to be brutally honest here. THIS SINGLE ONE STEP takes the longest of the entire setup process (unless you have a REALLY dull knife in step 1). Of course you'll need your own rack and screws, but hey, if it's a deal breaker, we'll work it out.

10:20am



## 4. PLUG IN

Time to hook them up. You knew it was coming. Your little tummy is wrapped around your throat. I mean, it's gotta be a real hassle, right? Interfacing these things? Setting them up? Getting them to talk to each other? Somebody get me an antacid.

Wait... is that a CAT-6 cable? You know what that is. And that's all it takes? Mmm Hmm. Yep. You bet.

11:02am



It's literally this easy. WheatNet-IP has all your bases covered. CAT-6 cables hook up the BLADES and surfaces. Regular audio cables for the rest.

## 5. PUSH THE BUTTON

OK. Everything all hooked up (meaning, is the CAT-6 cable plugged in)? Great. Now we're gonna configure the system. We start by turning it on. Then?

Um... that's it. It configures itself. Every piece talks to every other piece and does what it's supposed to do. What? Doesn't EVERY IP Audio system do it that way?



WheatNet-IP does ALL the work of configuring your system EVERY BIT OF IT! It knows when you are adding on or when you are taking something out. You concentrate on content. We concentrate on getting it where it needs to be.

11:05am

## 6. IT'S WORKING!

You've got a system! From here on out, it's just like the analog stuff you're used to. Except ultimately more flexible. And much more reliable. And better sounding. And completely expandable. And such a joy to use. Yes - you heard it - I said A JOY TO USE! (Bet you never thought you'd hear an IP system described that way. Certainly not one from the other guys)



11:06am

## 7. CELEBRATE

Time for that cup of coffee and donut we talked about in the preface. Let's face it...the whole process was painless. AMAZINGLY PAINLESS. So painless, you are already up on Facebook and Twitter talking about what a stud muffin you are with your technical prowess. Don't get cocky, kid. But DO enjoy a delicious coffee and donut. And remember, next time you even think about installing new gear, you've gotta call your Uncle Wheaty...



11:07am

## 8. SLEEP EASY

With a WheatNet-IP system, rather than having to be on the phone to who-knows-where in the middle of the night, you can take your emergency engineers off the clock and let them get a good night's sleep. We ARE here, 24/7, in beautiful New Bern, North Carolina, and if you need us, we'll talk to you all night long. But with Wheatstone's reliability record, chances are much greater that those visions of sugar plums will just keep dancing in your head.



3:40am

## AoIP ADVANCED...

It's great to be able to say you invented something (whether you did or not). Turning that invention into a viable, workable solution for modern applications is what's needed if we are going to take this technology to the next level. The status quo was a pretty good starting point - but taking it out of the vacuum and into the workplace requires a fresh, objective yet passionate approach to advance it.

WheatNet-IP certainly advances it, making your workflow everything it should be. We cost the same or less. We can handle 10 times the bandwidth. We are far more reliable. And we're poised for THIS decade as well as the NEXT one. We're Wheatstone! This is what we do! What else would you expect?



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