



# RADIO WORLD

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Scott Harrison

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ISTOCKphoto/Maria Pavlova

## At the NRSC, A Year of Acronyms

Group Sponsored by NAB and CEA Explores RBDS, FM SSB, MDCL

BY LESLIE STIMSON

Members of the National Radio Systems Committee are looking at designing and conducting lab and field tests for AM and FM broadcast transmission schemes as well as creating Radio Broadcast Data System user guidelines.

The NRSC is a standard-setting body sponsored by NAB and CEA.

The AM and FM Analog Broadcasting Subcommittee is exploring FM stereo transmission using single-sideband suppressed carrier modulation, or FM SSB. While the concept has been around for decades, only recently has technology been available to implement it economically, advocates say.

A task group headed by Bert Goldman, vice president of engineering of Independence Broadcast Services,

*(continued on page 12)*

## Jack DeWitt: An Engineer's Engineer

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Learn about the impressive, and largely unappreciated, contributions of this technical innovator from Radio World's history sleuth James O'Neal.



Courtesy of Grand Ole Opry

## ‘Rapid Deployment’ Challenges Radio

Spring Themes: Cellphone Chips, Digital Back-Channel, Alerting

BY LESLIE STIMSON

**LAS VEGAS** — In his first appearance before attendees as the executive vice president and chief technology officer of NAB, Kevin Gage challenged engineers to gaze beyond the traditional broadcast horizon and seek out technology to connect with consumers more closely. “We’re operating in an environment of rapid

deployment and constant development,” said Gage, who warned broadcasters to become proactive and “take the lead, or someone else will.”

Meanwhile, C-Net Editor-at-Large Brian Cooley calls the age we’re living in the “post-PC” era, with smartphones, tablets, connected TVs and connected cars the hot gadgets, at least for the near future. Connected

*(continued on page 6)*

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# PREC Focuses on the Practical

Public Engineers Hear Updates on NPR Move, 'Singleton' FM Translator Processing Timetable

BY LESLIE STIMSON

This year's Public Radio Engineering Conference focused on practical information that engineers can use to better manage time and money while keeping their technical facilities current with new technologies.

Some 100 broadcast engineers attended the event, held by the Association of Public Radio Engineers in the Caesar's Palace Conference Center in Las Vegas just prior to the NAB Show.

"A huge shift is occurring in broadcast plants with the widespread adoption of IP-based equipment, resulting in significant new control and flexibility but with a steep learning curve," said APRE President Mansergh, who's director, radio engineering and media technology at KQED, San Francisco as well as an RW contributor. "We aim to help with that, so that engineers can feel confident when considering these new technologies."

Some highlights of the 12th annual event:

- The FM HD+ booster project at KUOW(FM), Seattle is in



APRE members honored Mike Starling, right, of NPR Labs, with the Meritorious Service Award for his work leading NPR Labs' HD Radio multicasting efforts.

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the construction phase. NPR Labs Technologist John Kean said the booster developed by Harris is cost-effective and has built-in digital signal processing.

- The FCC may process so-called "singleton" FM translator applications, pending from 2003, by the third or fourth quarter of this year. That's according to Margaret Miller of law firm Dow Lohnes. Singletons are applications that have no competitors for the same allocation. She gave attendees the skinny on the FCC's recent decisions regarding how the agency will process applications for new FM translators and low-power FM stations with an eye towards creating enough spectrum for both services.
- NPR listeners are in the car a lot and tend to be early tech adopters. That's one reason NPR and Ford in January launched a partnership to bring NPR to Ford Sync. "In cars, you only have a handful of apps" that make it onto the car platform early, said Rick Ennis, NPR Digital Services, who said the network is working on deals with other automakers as well.
- NPR Public Radio Satellite System personnel discussed NPR's upcoming move from its location on Massachusetts Avenue to North Capitol Street in Washington. The satellite system is

building a new operations center now, which will be moved to the new location; the move is slated for April of 2013. Planning has been in the works for five years.

- APRE members are talking about holding a mini-event this fall in advance of the RAB-NAB Radio Show in Dallas.

At the dinner capping the conference, APRE members honored Mike Starling, vice president, Technology Research Center & NPR Labs at the Public Radio Satellite System, as the recipient of the 2012 Meritorious Service Award. APRE cited Starling's work leading NPR Labs' HD Radio multicasting channel efforts. Starling is also a founder of APRE.

"Mike is and always has been passionate about radio, a firm and steady advocate for the technology, for the medium, and for stations," stated APRE members in the nomination. "His commitment to technical excellence, innovation and service are outstanding."

During his acceptance speech, Starling said his first radio job was at WBMD, an AM daytimer in Baltimore. Starling drew chuckles when he described buying a used transmitter from a station in Washington "that had been through a site fire" for WKYY, a commercial AM in Amherst, Va. he founded in 1976 and managed until 1980.

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# Schwartz, Upbeat About Radio Sales

## Scoffs at Claims that Radio as We Know It Is 'On Its Way Out'

*Radio Sales Café is celebrating its third anniversary this month. I emailed with Rod Schwartz, its owner and creative director, about the service and issues facing radio salespeople.*

*Rod, you launched the website radiosalescafe.com three years ago. Assess its success to date.*

Radio Sales Café continues to attract new members on a daily basis. To date, more than 2,700 radio advertising sales professionals have become part of this community, exchanging ideas, answering sales questions, sharing their own solutions to challenging sales problems they've faced, and just helping one another to become better at what we do.

*What's the general mood among radio sales folks these days?*

Well, on the basis of what I observe in the exchanges that take place regularly at RSC, I'd have to say that people seem pretty upbeat generally. Even when a discussion centers on a problem someone is facing with a particular client, say, the responses from other members are always helpful and



encouraging, which in turn gives the person who came looking for help a renewed optimism and energy to move forward. Sales can be a difficult business at times.

The support and encouragement that accompany the practical advice people share with one another tend to foster an *esprit d'corps* that is most enjoyable and satisfying to witness.

*What's the biggest challenge facing radio salespeople in 2012, as compared to five or 10 years ago; how have their challenges changed?*

The biggest challenge facing radio salespeople today is what it's always

been: having a genuine belief in our product.

Competition has always been there. When I started in radio sales in the 1970s, newspaper was the 800-pound gorilla; broadcast and cable TV, shoppers, Yellow Pages and billboards were also after a share of the advertising pie. Radio stations largely went after one



another's clients, trying to cannibalize their meager budgets because it's what we thought we were supposed to do. Jim Williams used to call it the battle of the pygmies, fighting one another to show who was tallest among them.

But as radio people received serious sales training and came to realize that the real money was to be made by going after newspaper-sized budgets and proving to large newspaper advertisers that they could achieve phenomenal results on radio when they spent the same kind of money with us, the game began to change.

Listen to this short bit of Jim Williams' training, for example. It's a good illustration of the "before training" and "after training" mental attitude I'm trying to convey. This six-minute video clip of Roger Utnehmer's presentation at NAB last month, talking about Jim's "15 System," is another great example of how belief in the power of radio changes things. [The clips mentioned here are linked at <http://radioworld.com/May-23-2012>.]

Listen to Roger. Look at his eyes, at the confidence he exudes — it's almost predatory (and I mean that as a compliment)! If I were a newspaper or Yellow Pages salesperson in his market, I think I'd be looking for work elsewhere!

Today "OI' Smudgy" is less of an issue. Ditto the Yellow Pages. Cable TV still sells \$3 spots, but generally speaking, local TV creative is pitiful.

But online advertising has become the new marketers' darling and is emerging as a serious competitor.

The trades are filled with discussions about Pandora doing this and smartphones doing that, and radio-as-we-

## FROM THE EDITOR

Paul McLane



know-it is on its way out. Pardon me, but you'd have a hard time convincing my clients of that here in Pullman, Wash. You'd have a hard time convincing Roger's clients in Door County, Wis., of that. Ditto Chris Rolando's stations in Arizona, Jerry Papenfuss'

stations in Minnesota, Randy Miller's in Illinois ... and I could go on and on.

Yes, we need to adapt to new realities in the digital age, embrace the new technologies that our listeners are embracing and seize the opportunities these technologies afford us to engage our listeners throughout the day across additional platforms.

Some see this as a problem, others as an opportunity.

*Anything else we should know about the state of the business?*

After nearly 40 years in radio advertising sales and management, I am as enthralled with the business as I've ever been.

It's always a genuine pleasure to go to work for a new client, uncover his story, then tell it in a way that causes listeners to seek him out and give his business, product, or service a try. When everything's going well, everyone wins: the advertiser, his customer and the radio station. What's not to like about that?

The state of the business is what we make of it. And the salespeople and managers that seem to be most active at Radio Sales Café are people who love this business and make it even better by their participation.

*Radio Sales Café is running a promotion in May to mark its anniversary; prizes include a subscription to Roy Williams' "Wizard of Ads Live!" monthly video meetings; Norton Warner's "David Can Still Beat Goliath (Radio Advertising Is David's Slingshot)" and the voiceover serves of five veteran voice talents. Find info posted at <http://radioworld.com/May-23-2012>.*



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**NEWSROUNDUP**

**PANDORA:** Internet audio service company Pandora says it had 51.9 million listeners by the end of April, a 52 percent increase from 34 million a year ago. The company believes its share of total U.S. listening in April was 5.95 percent, up 3.11 percent last April. Seventy percent of Pandora subscribers listen on a mobile device and are not paying for the service. Some in the terrestrial radio industry have challenged the company's measurements. Pandora says its service is available across 18 automotive brands.

**CONNECTED DEVICES:** Digital audio is now established

among consumers while the use of Internet-connected devices, like in-car devices, smartphones, tablets and connected TVs, is increasing and boosting the digital market. That's according to the findings of a study from digital advertising firm TargetSpot. It found 86 percent of Internet radio listeners do not pay a fee for access to premium digital audio content.

**WTC:** One World Trade Center's claim to tallest tower in the U.S. once it is completed, at 1,776 feet, could be challenged if the 408 foot antenna spire at the top is not enclosed in an ornamental white shell. Completion is scheduled for the end of 2013.



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## NAB2012

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cars are on his top 10 list for tech, behind connected TVs and the smartphone. He characterizes the latter as the "main computing device for the world."

Seventy percent of new cars have connected dashboards. The days of putting in "a CD deck with AM/FM and HD and you're fine" are over, warned Cooley.

Here are radio highlights from this year's NAB Show in Las Vegas.

### SMULYAN: 'THIS IS THE START OF A PROCESS'

Several events at and after NAB renewed attention on broadcaster efforts to encourage the use of FM chips in mobile devices.

Research in Motion introduced the BlackBerry Curve 9320 smartphone, which includes built-in FM radio, its third model with FM this year. NAB released a study that it says shows the chip issue is gaining traction among consumers. A meeting on Capitol Hill in April delved in FM chips; broadcast participants say they were left hopeful.

"This is the start of a process," Emmis Communications CEO Jeff Smulyan told Radio World.

Rep. Gus Bilirakis, R-Fla., called for the private meeting with members of the broadcast, cable and wireless industries. He chairs the House Subcommittee on Subcommittee on Emergency Preparedness, Response and Communications. NAB's Gordon Smith, Florida Association of Broadcasters' Pat Roberts, Clear Channel's Jeff Littlejohn, Cris Guttman-McCabe of CTIA—the wireless Association and congressional staffers attended, as did a representative of the cable industry.

AT&T and Verizon were invited but didn't come; however they are members of CTIA, which was present.

Smulyan and an NAB spokesman made clear the chip discussions don't center on a mandate. They believe events will shake out with a negotiated settlement among industry parties. Smulyan, iBiquity Digital and NAB have pressed carriers for a while on the issue. Carriers repeatedly have said consumers aren't interested in the feature.

"We are asking cell carriers to voluntarily add or activate radio chips, in part because of radio's demonstrated role as a lifeline service in times of emergency," said an NAB spokesman.

Broadcasters now believe they have more to offer carriers, after the announcement at the NAB Show of a smaller, more power-efficient HD Radio chip and radio's ability to close the so-called "backchannel" (see below).

"I think if the carriers realize they can offload some of the spectrum use onto us, that's valuable to them," Smulyan said.

NAB and Smulyan said this issue is the number one radio priority for the association.

More discussions are expected, possibly including congressional hearings. Bilirakis plans more meetings on the topic. Smulyan said broadcasters have been approached by the House and Senate Commerce Committees, as well as the Senate Homeland Security & Governmental Affairs Committee.

### NAB: MORE CELLPHONE OWNERS WOULD PAY

A poll fielded by Harris Interactive for NAB indicates that four out of five adults who own a cellphone would consider paying a small, one-time fee to hear FM on their device. Two thousand survey participants were asked about a fee of 30 cents, estimated cost of a microchip.

Eighty-one percent of cellphone owners would consider paying that to access local FM stations through a device, compared to 76 percent in a similar survey in 2012.

Local weather and music are the top reasons survey participants would listen to their local stations on their cell phones.

### CELLPHONE WITH FM HD CHIP UNVEILED

Representatives of core proponents working on getting FM HD Radio chips embedded into mobile phones and other devices unveiled a prototype cellphone manufactured by ZTE, as well as an HD Radio app and a backend system to insert and track ads and associated data all the way from automation system to broadcast.

"In 2012, a car is a smartphone with four wheels," said iBiquity Digital Bob Struble. iBiquity, Emmis Interactive, Intel and BIA/Kelsey were tasked by NAB Labs a year ago to nourish an HD Radio smartphone "ecosystem."

The proponents say they've closed the so-called backchannel, creating a system that makes it possible for a consumer to interact with an FM HD Radio station through his or her mobile device.



A prototype cellphone made by ZTE with an FM HD Radio chip displays an interactive ad.

Photo by Jim Peck

Emmis Interactive calls the broadcast insertion system TagStation. It pairs HD Radio broadcasts with the phone's data channel to deliver features like couponing, geo-location ads and other features.

Emmis Interactive founder and Co-President Rey Mena says this provides a more interactive experience than radio currently can. It also incorporates Artist Experience, in which album art and other images are synched with HD Radio audio, and other features.

The point was to make the HD Radio experience for the user interactive and standardize the experience so user and advertisers know what to expect from station to station, Mena added. "This changes the game for HD," Mena told Radio World.

With the updated HD Radio app, visuals on the phone look like they would with a streamed audio product, helping radio keep up with other personalized audio in the dash and other mobile devices.

As envisioned by proponents, a consumer with an HD FM-equipped smartphone and associated app would listen to an HD station. By clicking on a thunderbolt-shaped "action button" on the device, the user can perform a variety of functions, from tagging songs for purchase, placing a phone call or visiting a website, to saving a coupon QR code for

a later purchase.

With these actions, audio content has the opportunity to be supplemented with rich interactive content synchronized to the station's broadcast. TagStation, Emmis Interactive's mobile traffic system that powers this experience, delivers this enhanced mobile experience to the device via the smartphone's data connection. This hybrid technology utilizes the efficiency of broadcast delivery for audio content while enhancing the experience with interactive elements.

At the station, with TagStation, personnel can see the music or ads coming in from the automation system. They will have, for example, the ability to change the associated image and other metadata, as well as track what consumers do with those ads or songs.

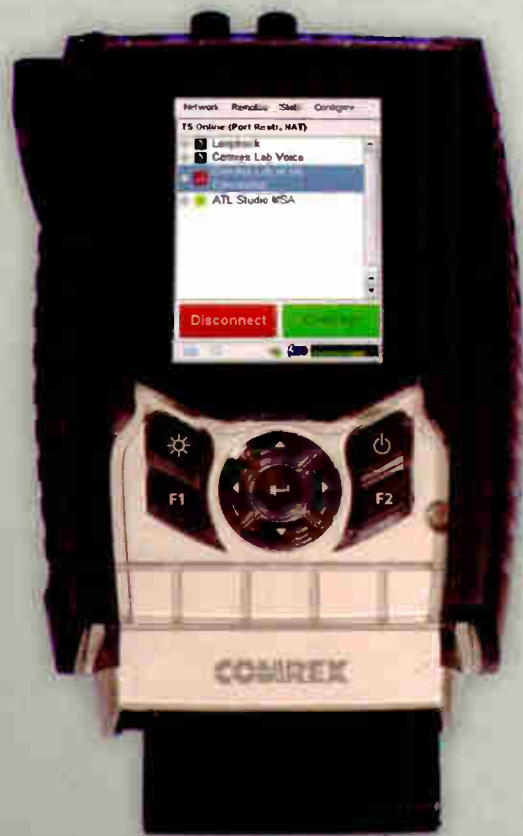
Emmis Communications Chairman and CEO Jeff Smulyan has been trying to convince carriers to embed and activate FM HD Radio chips in mobile devices for about four years. He said, "We think this gives us the opportunity to compete in every appliance out there," including cellphones, media players, tablets and cars.

The next step is convincing carriers to go along with the concept. Smulyan said that is the priority for the radio industry and NAB. Asked when the new

(continued on page 8)



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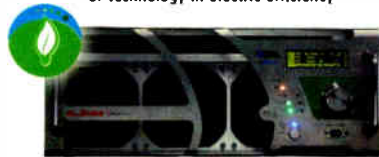
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## NAB2012

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cellphones could be in stores, Smulyan said "soon."

"This is a 21st century user experience," Smulyan said.

## GM FIRST TO DEBUT ARTIST EXPERIENCE

Chevrolet, GMC and Buick will be the first American automotive brands to offer the HD Radio "Artist Experience" feature; it will be standard on the new Traverse, Acadia and Enclave crossover utility vehicles. The new vehicles are likely to be available this fall.

Artist Experience synchronizes images, such as album art and station logos, with the HD Radio program audio on the receiver display. Stations that are implementing AE, notably Clear Channel, Greater Media and Beasley, plan to have that capability operating by this summer, according to iBiquity Digital President/CEO Bob Struble in an interview. That's a little later than the estimated Q1 start.

With this announcement, 28 automakers offer HD Radio technology as standard or an option, according to the technology developer. Struble said that every 15 seconds, a car is sold that contains HD Radio technology.

Those car sales, plus purchases in portable, tabletop and aftermarket auto HD Radio product categories mean that now 7 million HD Radio receivers have been sold to-date, Struble told Radio World.

## EAS TEXT-TO-SPEECH NOW ALLOWED

Also in the news, both during and after the convention, was emergency alerting.

The FCC has changed its Part 11

rules governing EAS so that broadcasters may use text-to-speech functions for the Common Alerting Protocol delivery of alerting messages if they wish to do so. The agency officially deferred a longer-term decision on this question but made the change in the meantime after hearing from the industry about it.

Publication in the Federal Register triggered the modification, which went into effect May 7.

The commission previously had banned TTS, saying it didn't have a lot of information on the record to do otherwise, according to Tom Beers, chief of the Policy Division for the FCC's Public Safety & Homeland Security Bureau.

He asked for a show of hands in the EAS session room to judge how many people were "chagrined or distressed" at the text-to-speech ban. Virtually all — some 50 or so broadcasters, public safety officials and vendors involved in alerting — raised their hands.

FEMA, NAB and EAS equipment manufacturers had lobbied the agency to change its stance. Without the use of TTS, they said, some equipment might pass along alert tones with no audio or distorted audio.

## FCC MULLS OPTIONS ON MISSING EAS TEST REPORTS

Also on the EAS front, federal regulators believe there will be another national test, though not this year. Meanwhile they're still trying to get some stations to report results from last November's test.

FEMA Integrated Public Alert and Warning System Division Director Antwane Johnson said officials hope to have all data in and analyzed before scheduling another national test.

The FCC is trying to decide what to do about stations that didn't send in

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Photo by Jim Peck

Tom Beers, at microphone, is chief of the policy division of the Public Safety & Homeland Security Bureau. He says about 40% of stations had not yet sent the FCC their reports on last fall's national EAS test. Next to him are Mark Lucero, chief of FEMA IPAWS engineering, and Sharon Tinsley, president of the Alabama Broadcasters Association.



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## NAB2012

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results. Beers said enforcement action is possible, although he stressed that no decisions have been made about that. He estimated that only about 60 percent of stations and cable systems had complied.

The FCC's electronic reporting system lacked a validation function, compounding confusion among stations about whether the agency had received their reports, Beers said. It wasn't clear whether the commission has a list of non-filers. To check if the commission did receive a station's results, Beers recommended that broadcasters email [timothy.may@fcc.gov](mailto:timothy.may@fcc.gov).

Members of the National Alliance of State Broadcasters Associations have offered to work with state broadcast associations to obtain responses.

The deadline for broadcasters to have Common Alerting Protocol-compliant EAS gear operational at their stations is the end of June. Federal regulators indicated that the deadline probably will not be extended again.

FEMA IPAWS officials said the agency is working with third-party developers like Google, Pandora and AOL to distribute IPAWS EAS alerts.

### FCC BEGINS TO MAKE LPFM/ TRANSLATOR DECISIONS

Shortly after the show, the FCC shone a light on its formula for determining how many FM translators and LPFMs can be allocated in "spectrum-challenged" markets as well as areas that have enough



Photo by Jim Peck

**Bureau Chief of the FCC's Audio Division Peter Doyle discussed the commission's latest decisions regarding LPFMs and FM translators.**

spectrum for both services.

The commission also released an online LPFM channel finder tool.

Media Bureau Chief Peter Doyle said consulting engineers now have access to the FCC's software and other information so they can identify potential channel combinations in those markets.

The commission also has capped at 50 the number of translator applications it will process for one licensee nationally, and imposed a market-based cap of one application per applicant for some 156 markets.

The agency has indicated that many translator applications in spectrum-squeezed markets would be dismissed in order to create opportunities to license new LPFMs. Melodie Virtue of Garvey Schubert Barer said that of the 6,500 pending FM translator applications, about 1,000 would be eligible for grant and the others would be dismissed

according to the agency's new processing guidelines.

The idea of releasing the newly-released software and data, Doyle said, is to give "everyone clarity so they can figure out which ones to focus on," meaning the pending 6,500 translator applications, he told Radio World.

The FCC will issue a public notice announcing a deadline by which applicants must select which FM translator applications they'd want to have processed that fit within the caps.

### ARBITRON BEGINS SMARTPHONE MEASUREMENT

Arbitron's Mobile division launched a syndicated "opt-in research panel" in the U.S. to produce data about how consumers use them.

The service, Arbitron Mobile Trends Panels, relies on software meters on each device. In the U.S., the company set up a panel of 6,000 smartphone and tablet users recruited in November.

The idea is to provide clients like marketers and content providers with info about how mobile consumers are acting as they use apps, surf, use social media and shop. The meter also provides data on what ads consumers are exposed to, how they act on those ads and how they use devices to communicate.

The service measures reach, frequency, use and consumer engagement. Arbitron says its measurement technology can serve real-time, context-sensitive questionnaires to a user's mobile device. The feature is designed for custom research studies of the user experience or

ad effectiveness.

To be included, individuals must be at least 18. They voluntarily install the Arbitron Mobile on-device meter app on a smartphone or tablet.

### JAMIE BARNETT EXITS FCC

The FCC lost Jamie Barnett, chief of its Public Safety & Homeland Security Bureau, at the end of April. Barnett returned to the Potomac Institute for Policy Studies, a science and technology policy think tank.

David Furth, a deputy bureau chief in PSHSB, is now acting chief.

Barnett came to the FCC in July 2009. He had been a senior research fellow at the Potomac Institute.

During his tenure at the Public Safety & Homeland Security Bureau, Barnett proposed the first nationwide test of the Emergency Alert System, which was conducted Nov. 9, 2011.

## NEWS ROUNDUP

**FM TRANSLATORS:** Three regional noncommercial FM broadcasters — Hope Christian Church of Marlton, N.J., Bridgelight and Calvary Chapel of the Finger Lakes — are asking the FCC to rethink its one-to-a-market limitation on translator applications. They argue that such restrictions prevent them from properly covering a particular region and that a waiver should be granted in uncrowded markets.

**LIBERTY MEDIA:** Liberty Media is not giving up trying to gain control of SiriusXM, committing \$650 million to increase its share of the satellite radio company from 40 percent to 45.2 percent, and then to 46.2 percent with the purchase of another 60.35 million shares the following week. The FCC earlier dismissed an application asking it to declare that Liberty essentially controls SiriusXM even without owning more than 50.1 percent of the shares because Liberty is the largest shareholder. Liberty hopes to change the agency's mind.

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# Arbitron 'Leaps' Forward With E-Diary

## R&D Testing Underway for Compatibility With Web Browsers, Mobile Platforms

BY LESLIE STIMSON

**COLUMBIA, Md.** — As radio grapples with staying relevant and keeping up with the digital dashboard, Arbitron, too, must work to keep its audience research methodology in step with the times.

More young people are gravitating towards a cell-phone-only lifestyle, rather than landline use, coinciding with the increased popularity of mobile devices.

That's why the audience research firm has been working to improve its diary methodology for small and medium markets, areas where it wouldn't make sense economically to use its Portable People Meter to measure the radio audience.

Arbitron has been calling its diary improvement R&D Project Leapfrog.

With the current paper diary placement process, Arbitron mails several notices to prospective diary keepers, telling them the diary is coming and to fill it out. The firm also calls potential respondents to urge them to fill out the diary.

Leapfrog moves away from the phone to an online data collection process. Those invited in the mail to register do so online, and fill out an e-diary for seven days.

For Leapfrog, the audience research firm is testing Web and mobile diaries.

"The ability to keep a diary on a mobile device is an important capability to have," said Arbitron VP Diary Management Brad Feldhaus during a client webinar in March.

In a pilot test in five markets in 2011, Arbitron sent out invites to 11,000 households to register and fill out an e-diary. Some 1,455 households registered. Seventy-nine percent of those completed a seven-day diary. Eight percent asked for a paper diary.

The overall response rate was 8 percent, not enough for implementation, according to Arbitron Vice President of Research Beth Webb. The company is looking for a completion rate somewhere in the mid-teens.

Several elements need to coincide for that to happen: The household must register and each person in the household needs to complete an e-diary for the full seven days.

In the testing so far, people either filled out the e-diary for one day or seven days, according to Webb.

More 18-to-35-year-olds and fewer 55+ respondents filled out e-diaries compared to the sample population

of the current diaries. In the test markets, "We got more younger adults. We're encouraged by that," said Webb. "This may be more in their comfort zone than a paper diary."

Research goals for 2012 include increasing the response rate for Leapfrog, including the numbers of household members who fill out e-diaries; and developing Hispanic test materials. The company has been working with a consultant to conduct focus groups, tests and field work, according to Feldhaus.

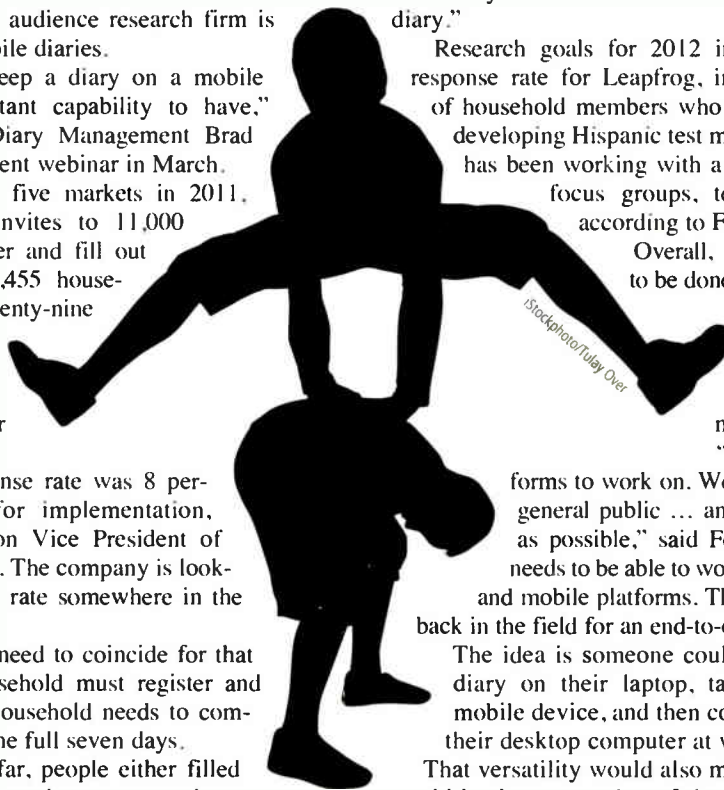
Overall, much testing remains to be done. Arbitron has lined up focus groups to determine test design, modifications and to test a Web and mobile app.

"There's a lot of platforms to work on. We're trying to reach the general public ... and get as large a group as possible," said Feldhaus. "Our product needs to be able to work on different browser and mobile platforms. Then we'll be able to go back in the field for an end-to-end test."

The idea is someone could start filling out the diary on their laptop, tablet, phone or other mobile device, and then continue to fill it out on their desktop computer at work, and vice-versa.

That versatility would also mean the survey period could begin on any day of the week, rather than the current Wednesday through Thursday survey period for the paper diary.

Arbitron plans another field test this year.



## NRSC

(continued from page 1)

wants to initiate formal lab and field-testing of FM SSB to quantify perceived benefits of the technology and to discover any downsides. Members would determine what kind of testing would be done, where it would be done and who would pay, according to NRSC Chairman Milford Smith, vice president of radio engineering for Greater Media.

There's a perception that, in some cases, FM SSB reduces multi-path degradation in existing receivers. FM SSB has been tested informally at Greater Media's Boston cluster.

"We've got enough anecdotal evidence now so the group came together and decided to go forward," he said, to try to quantify what kinds of multipath potentially can be reduced by FM SSB transmission.

Other claims of improvement will be explored too. They include better protection of analog and digital SCAs as well as improvement in signal to noise, the latter with specially designed receivers.

The ultimate goal would be to learn whether FM SSB offers enough improvement to ask the FCC routinely to allow its optional use. Right now,



NRSC Chairman Milford Smith, left, vice president of radio engineering for Greater Media, talks with former NRSC Chairman Charlie Morgan.

stations need an STA to transmit in this mode.

### POWER AND DATA

A similar task group was formed to review the AM power-saving Modulation-Dependent Carrier Level transmis-

sion algorithm.

The group, led by Nautel Head of Engineering Tim Hardy, is investigating the technology's compatibility with HD Radio technology. There are AMs on the air now with MDCL technology from both Nautel and Harris.

The goal would be to allow routine deployment without experimental FCC authority.

The RBDS Subcommittee is drafting two user guidelines.

Previously the group adopted an RBDS guideline that "harmonized" FM RDS and HD Radio data receiver displays so they looked the same. Now the group is looking at how stations use RDS data in a broader sense, such as transmitting traffic data.

"Lots of folks have tried lots of different things," said new Subcommittee Chair Dan Mansergh, "and we want to collect all that industry intelligence into one place and say 'Here's the best thinking about this right now.'" Mansergh is director of radio engineering and media technology at KQED, San Francisco.

The group is discussing an accompanying guideline that covers metadata distribution throughout broadcast networks.

The RBDS Subcommittee hopes stations use the guideline procedures so that consumers will have a better user experience. The RDS data displays on a receiver would look similar from station to station, without errors, holes or mis-transmitted information, according to Mansergh and Smith. The subcommittee hopes to wrap up its work by the fall Radio Show.



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MH

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# Jack DeWitt: An Engineer's Engineer

The Radio Industry Has Not Fully Appreciated His Contributions

BY JAMES E. O'NEAL

John Hibbett DeWitt Jr. was a radio *wunderkind*.

He put Nashville's first radio station on the air when he was 16; was hired by Bell Labs even though he was a college dropout; revolutionized AM

## ROOTS OF RADIO

transmitter technology; built the country's first commercial FM station; set the stage for satellite communications; put Nashville's first TV station on the air; created the first solid-state broadcast gear; and headed operations for one of the nation's biggest entertainment operations.

Yet Jack DeWitt seems to have escaped notice in many industry circles, even though he left the transmitter building for the last time only about 13 years ago.



Jack DeWitt, seated left, is seen in a WSM staff photo from the early 1930s. The microphone is an RCA 4-AA condenser.



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### BEGINNINGS

DeWitt was born in Tennessee on Feb. 20, 1906, about the time serious experimentation in transmitting speech and music over the air began. He became interested in radio early; he was a radio amateur operator in his early teens and was hired at age 16 to construct a radio station for a Nashville girls' school. The callsign WDAA was issued in 1922 to what became the city's first commercially licensed station.

Before completing high school, DeWitt started up two other Nashville stations. After graduation, he briefly explored a career as a shipboard radio operator but decided this was not his calling and enrolled at Vanderbilt University. His career at the school proved equally short-lived, as did DeWitt's next stop at the University of Tennessee in Knoxville.

"I became interested in a broadcasting station [in Knoxville] that was owned by a local telephone company and spent my time at it rather than studying," DeWitt said, as quoted in Craig Havighurst's 2007 book, "Air Castle of the South: WSM and the Making of Music City."

DeWitt's efforts to obtain a college degree ended here; but as the record shows, he didn't really need one.

### WSM TAKES TO THE AIR

When the 19-year-old returned to Nashville, he learned that the National Life and Accident Insurance Company

was interested in launching a radio station. He was hired to help and spent summer and fall working to construct what was to become WSM ("We Shield Millions," a reference to the insurance company's slogan). The station took to the air on the evening of Oct. 5, 1925, with DeWitt running the controls.

He remained at WSM for a time and did engineering work for other stations, until an opportunity to become more deeply involved in radio engineering arrived in 1928 with a visit to WSM by a Bell Labs engineer.

DeWitt made a favorable impression, and soon the Nashville radio prodigy was on his way to New York City and a research job at the prestigious laboratory.

However, it was not to last. In the fall of 1930 DeWitt took leave from that job to testify at Federal Radio Commission hearings aimed at determining WSM's worthiness for one of the new 50 kW assignments opening up. WSM was awarded the coveted slot and DeWitt was offered the job of shepherding the power increase as the station's chief engineer.

Understandably, this caused him considerable angst. "It was one of the tough decisions of my life," he said, as recorded in Havighurst's book.

"Here was the great Bell Telephone Laboratories, where I really got a good education in electronics with all sorts of facilities and everything. And here was WSM, a radio station in my hometown. Should I go back to my hometown where I would be a big frog on a little pond, or would I stay in New York and try to make my career?"

### RETURN TO NASHVILLE

The pond won out, and soon DeWitt was back in his old surroundings, where the 50 kW project was in progress.

One element was not quite a done deal: the antenna. RCA, supplier of the 50 kW transmitter, advocated conventional flat-top horizontal antenna technology. DeWitt had been involved at Bell Labs in testing a "new" half-wave vertical radiator, and he appreciated the superiority of that design.

"Bell Laboratories was in the business of designing radio transmitters and studio equipment [and] now, they wanted a good antenna to recommend to purchasers of their equipment," DeWitt recalled in a 1982 interview.

"There was a man by the name of Dr. Stuart Ballantine ... brilliant man ... He pointed out that there was no point in putting up separate towers and stringing antennas between them because the towers could only be a problem due to the currents induced in them from the antenna and it would distort the pattern.

(continued on page 16)



**We live in  
uncertain  
times.**

**“But even in uncertain times  
there is one thing you can count on.”**

## DEWITT

(continued from page 14)

Why not use [just] the tower?

"The first one of those towers was put in at Wayne Township, N.J., for the Columbia Broadcasting System. Strangely enough, I worked on that installation."

DeWitt didn't have a tough job in selling the vertical, which added only about 10 percent to the \$200,000 budgeted for the power increase. Blav-Knox was awarded the contract for another "diamond" tower. It is still used by WSM.

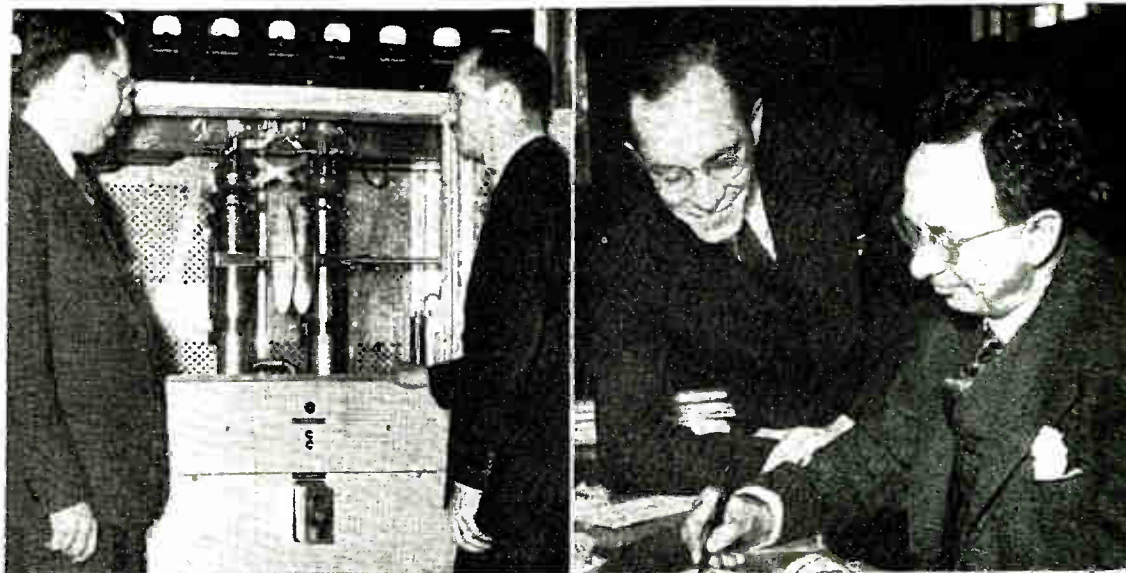
After the plant went into service, DeWitt started experiments aimed at improving transmitter performance, earning him his first patent, a feedback system for reducing hum and noise.

"It reduced the distortion from maybe five to eight percent in the transmitter, to about one percent, and it was broadband," said DeWitt. "I got a patent on it and sold it to RCA for \$10,000, which allowed me to build a house."

### MAKING HISTORY

A lifelong love of good music, coupled with curiosity and expertise in RF, undoubtedly were driving factors in DeWitt's lobbying the insurance giant to apply for an experimental FM license. He designed and constructed a 20 kW transmitter for the purpose, along with a turnstile antenna that was mounted atop the AM radiator, apparently the first time that an AM tower served a dual purpose.

WSM was a pioneer FM broadcaster in another respect. In 1941 it was granted the country's first commercial FM license, W47NV. The station's ERP was 65 kW; it provided service as far away as Alabama and Kentucky. (The low-band station survived through the war years, moving to present day high-band operations in the late 1940s. Unfortunately, like many pioneer FM stations, it produced little revenue and went dark in the 1950s.)



COMMERCIAL FM became a reality in Nashville March 1 when W47NV, FM adjunct of WSM, Nashville, took the air on a full commercial scale. Looking over the new station's custom-built 20 kw. FM transmitter, constructed by the WSM engineering staff, is Jack DeWitt, WSM chief engineer, and Warren McNeil, Tennessee bureau chief of Associated Press. At

right, H. H. Campbell, president of Standard Candy Co., Nashville, slaps the monicker on the first sponsorship contract on the first commercially operating FM station, while Tom Stewart, program director of W47NV, grins contentedly. Mr. Campbell also qualifies as the No. 1 sponsor to sign on WSM, thus attaining a two-time "first" in Nashville radio sponsorship.

### New FM Station of WSM, in Nashville, Starts Operation With 70 Hours Weekly

BECOMING the first FM station to start operating on a regular schedule under full-commercial authorization by the FCC, W47NV, Nashville, FM adjunct of WSM, on March 1 started a weekly schedule totaling 70 hours of FM broadcasting. The station, operating with 20 kw. power on 44.7 mc., broadcasts from 1 to 11 p.m. weekdays and 11 a.m. to 9 p.m. Sundays.

The station incorporates several unique operating factors. Its antenna, completely insulated from

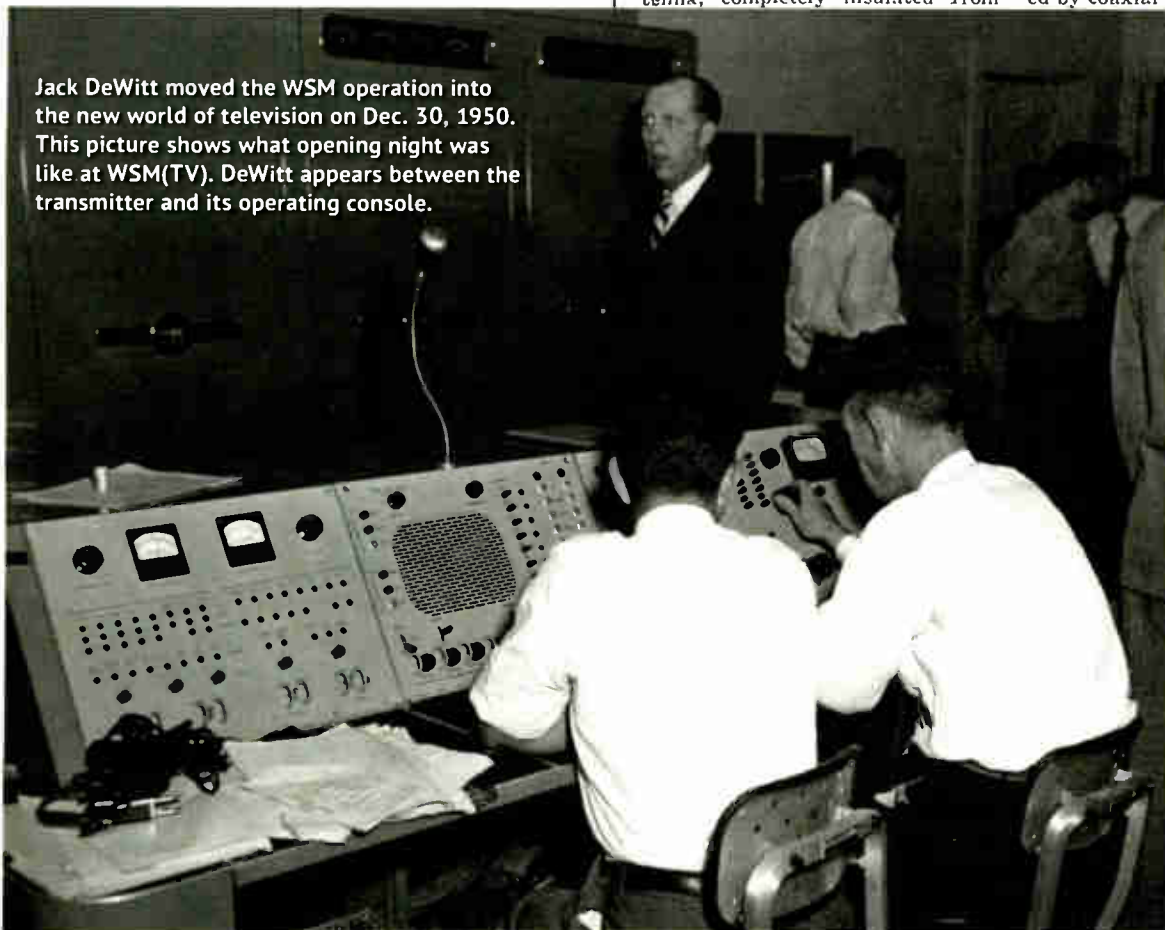
technical operation of both WSM and W47NV centers in the WSM transmitter house [BROADCASTING, Dec. 15]. The FM transmitter, designed by WSM Chief Engineer Jack DeWitt, is said to utilize a new method of generating Armstrong wide-swing FM signals and was custom-built under direction of Mr. DeWitt by members of the WSM engineering staff.

The four-element FM turnstile array on the WSM tower, connected by coaxial cable to the transmitter located just below the top of the tower. The co-

staff has not been set up. Program Director Tom Stewart and announcers Bill Terry Jr. and Herbert Oglesby are handling programs of the station. Coverage of the station is being tested, but preliminary reports from listeners indicate that coverage comes up to calculations, it was stated. First regular listener reporting lived in Beaver Dam, Ky., about 90 airline miles from the transmitter.

### Finch Gets Licenses

WITH issuance of a facsimile experimental license to Finch Telecommunications Inc., Passaic, N. J., for use at its Bendix Airport laboratory, Bendix, N. J., W. G. H. Finch, president, announced the



Jack DeWitt moved the WSM operation into the new world of television on Dec. 30, 1950. This picture shows what opening night was like at WSM(TV). DeWitt appears between the transmitter and its operating console.

W47NV became the nation's first commercial FM operation, airing its first commercial message on March 1, 1941. The event was highlighted in Broadcasting magazine.

With America's entry into WWII in 1941, DeWitt's electronics expertise was sought by the military's radar program. He became director of the Army's Evans Signal Laboratories in New Jersey and did much pioneering work in radar. But it was a postwar experiment that put him and the lab in the limelight.

DeWitt had a strong interest in space and astronomy, and after the war's end, found time to recreate an experiment he'd tried unsuccessfully in 1939: bouncing radio signals from the moon.

He made this entry in his personal notebook in May of 1940:

*It had] occurred to me that it might be possible to reflect ultra-short waves from the moon. If this could be done it would open up wide possibilities for the study of the upper atmosphere. So far as I know no one has ever sent waves off the earth and measured their return through the entire atmosphere of the earth.*

*In addition, this may open up a new method of world communication.*

*The moon is visible several hours out of every 24-hour period in the year. There are many times when communi-*

(continued on page 18)





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A handwritten signature in white ink, appearing to read "Peter Conlon".

**Peter Conlon**

Nautel President and CEO

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**DEWITT***(continued from page 16)*

ation by this method might be extremely valuable such as during magnetic storms and daytime radio 'blackouts.' This may provide a means in the future of bringing television programs over long distances, such as across the oceans."

In early 1946, his second moon bounce attempt succeeded, opening the door to the age of satellite communications. (While Arthur C. Clarke predicted satellite communications in a 1945 mag-

azine article, it was DeWitt who actually relayed the first radio signal from a satellite, in this case, the moon.)

**PEACETIME CAREER**

After the war, broadcasting was burgeoning, with equipment once again available for upgrading stations and constructing new ones. And while a partnership in a Washington engineering firm — Ring and Clark — looked especially promising, another offer soon surfaced.

The National Life folks had decided to separate WSM operations — along with those of the Grand Ole Opry, and

the organization's artist bureau — from the insurance business. It sought someone to head up these newly formed enterprises as president. DeWitt's name was at the top of the list. Though tempted by the Washington job, he realized that he belonged back in Nashville.

Television was starting to come into its own, and just as with FM, DeWitt wanted to be first on the air in Nashville.

WSM managed to secure a CP before the FCC's 1948 "freeze" on new applications; soon DeWitt was laying the groundwork for a new television station.

Television cameras were especially

pricey in 1950, the year WSM(TV) took to the air. Few people had seen one. Yet DeWitt was bold enough to roll his own. According to Ray Tichenor, who was hired during WSM(TV)'s first year, DeWitt bought two RCA cameras and immediately cloned them.

"Of course, he had to buy the IO [image orthicon] tubes and yokes from RCA, but everything else was done in-house," Tichenor recalled. "The copies worked as well as the originals. Mr. DeWitt was a genius at building things."

Television transmitters have always been big-ticket items as well. As DeWitt was an RF man *par excellence*, he likely would have fabricated his own if time hadn't been a factor, but DeWitt settled for a commercial rig. Once the dust settled, though, Nashville's RF grandmaster constructed a backup 5 kW television transmitter, as well as a 20 kW linear amplifier for boosting ERP up to the 100 kW authorized by the FCC in 1952.

This "exciter/afterburner" combo remained in service for a quarter century or so. To the credit of DeWitt and his engineering staff, the workmanship was exacting. The one-of-a-kind rig offered scant evidence of being homebrewed, blending in perfectly with the commercial transmitter.

**SOLID-STATE OUT OF THE GATE**

DeWitt also should be recognized for beating the "Camden giant" — and apparently everyone else — in bringing solid-state broadcast gear to the marketplace.

This was via the "International Nuclear" equipment line. The company existed for some two decades and produced a range of broadcast gear, with its initial product being a transistorized video distribution amplifier (the TDA-2) designed by DeWitt.

Lloyd Wayne Pilkinton, a former technician at International Nuclear, recalled that building broadcast gear was really not part of that company's plan.

"International Nuclear Corp. was formed by Mr. Ray Weiland of Brentwood, Tenn.," Pilkinton said. "Ray was working at Vanderbilt Hospital for Dr. George R. Meneely and had been building electronic equipment for the new age of nuclear medicine. I worked for Dr. Meneely and Ray at Vanderbilt Hospital during the day and for International Nuclear Corp. at night and Saturdays. I wired the first 2,000 TDA-2 units."

DeWitt filed for a patent in 1961. It became one of the first patents for solid-state broadcast products.

**WSM (WE SHALL MANUFACTURE)**

Homebrewing was done on a grand scale at WSM. As explained by J. Wayne Caluger, the TV director of engineering in the years after DeWitt's 1968 retirement, it was easier in the

*(continued on page 22)*

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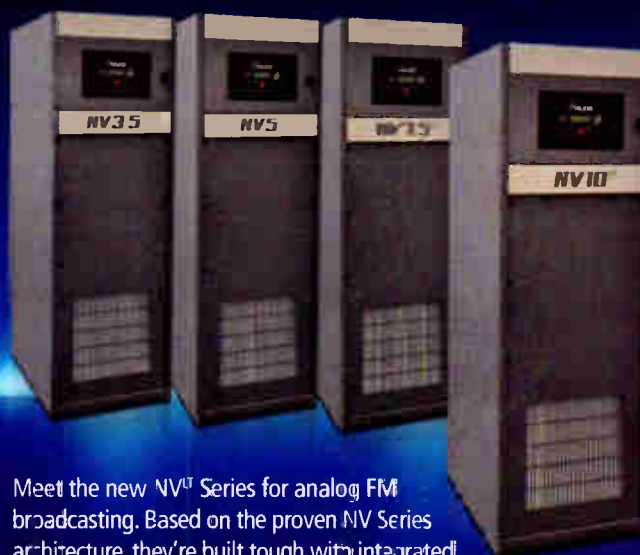
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*Greg Landgraf, Senior Engineering Manager,  
Corus Radio Western Canada*

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*Benjamin Brintzer, Regional VP Engineering  
Clear Channel Media & Entertainment*

"Wheatstone continues to hit balls out of the park and this year they did so again with the LX-24 control surface. This new product marries the best of the old (modular design architecture) with the new (Audio-over-IP). Continuing in that theme was a Wheatstone module that marries their bridge router system to the new "BLADE" audio-over-IP system. This has the potential to extend the life of bridge router facilities indefinitely."

*W.C. Alexander, CPBE, AMD, DRB, Director of Engineering  
Crawford Broadcasting Company*

"Wheatstone's innovation continues to make AoIP a viable product for professional broadcasting facilities. Just a few things that make the LX-24 stand out to me are the clear and decisive metering, individual fader modules, and "out of the box" thinking with faders for the headphone and monitor volume controls instead of rotary knobs."

*Phillip Vaughan, Chief Engineer KFROG,  
CBS Radio*

"Leave it to the exquisite design talents of Gary Snow and the Wheatstone team to really hit the nail on the head. The LX-24 is not only the most functional, feature-laden IP based console for radio, it also raises the bar for the finest ergonomic radio command center on the planet."

*Tim Schwieger, President / CEO,  
BSW- Broadcast Supply Worldwide*

"The LX caught my attention on the NAB Show floor. The look, form and function are unlike any other IP console available today. The easy-to-read buttons and displays are just second to none, not to mention the most bang for the buck. I can't wait 'til I have the opportunity to deploy my first LX."

*Anthony A. Gervasi, Jr., Sr. Vice President  
Engineering & Technology, Nassau Broadcasting*



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World Radio History



**“gotta have it!”**



**“Wow, Wow!”**

*Rick Hunt, Vice President & Director of Radio Engineering, Entravision Communications Corporation*

**“I didn’t think Wheatstone could improve upon the E-Series of consoles, but they have done it with the new LX-24. This is a beautiful, well designed console and the individual faders, integrated meters with overload indicators and low profile table-top design make this a must have for our facilities.”**

*Michael Cooney, Vice President of Engineering & CTO  
Beasley Broadcast Group, Inc.*

**“Cool and sexy (I sound like Bruno from Dancing with the Stars). A great addition to the WheatNet-IP family.”**

*Norman Philips, Vice President of Engineering,  
Townsquare Media*

**“I am very impressed with the sleek new design that incorporates single channel-strip architecture, integrated metering and stereo cue speakers in a thin, sloping chassis that needs no cabinetry cut out. Well done.”**

*Erik Kuhlmann, Senior Vice President of Engineering,  
Clear Channel Media + Entertainment*

**“By far the most elegant and feature rich control surface on the market. The attention to detail and functionality is remarkable. Its architecture, such as “hot swappable” modular design, is a winner. A traditional meter bridge is appreciated by users and your millwork guy will appreciate the fact that it’s a table-top design.”**

*Kris Rodts, Director of Engineering, IT & Facilities,  
CKUA Radio Network*

**LX-24**  
ADVANCED MODULAR  
NETWORKABLE CONSOLE

 **Wheatstone**

World Radio History





## DEWITT

(continued from page 18)

1950s and '60s for station personnel to build equipment than to buy it.

WSM had a small capital equipment budget but a large maintenance fund. Thanks to DeWitt's design engineering ability, technicians with excellent construction skills and a Nashville metal fabricator that could match most anyone's layout and paint job, the station had incentive to brew its own. Employees joked that the WSM call sign really stood for "We Shall Manufacture."

This do-it-yourself modality served WSM well and provided technicians the opportunity to learn about inner workings of equipment they used on a daily basis.

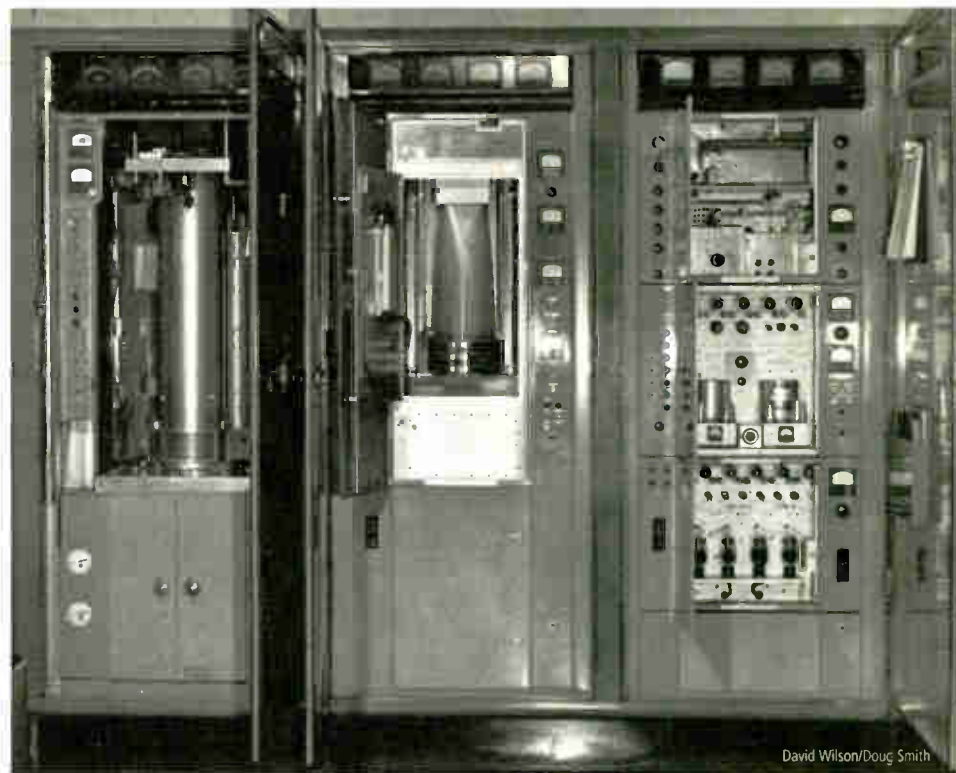
On one occasion after DeWitt's retire-

ment, this mentality caused a glitch. During a visit to the station he noticed a large number of "bootlegged" International Nuclear distribution amps. DeWitt, who received design royalties from International Nuclear, became upset.

"He went in and complained ... about how this was costing him money," said Caluger. "He was quickly reminded of all the reverse engineering that he'd done and was told that the pot couldn't really call the kettle black."

### OTHER ACCOMPLISHMENTS

DeWitt is also remembered by former WSM staffers for innovations such as a homebrewed system for receiving first-generation weather satellite images. By constructing it in-house, DeWitt trumped another Nashville station that had been promoting the arrival of satel-



David Wilson/Doug Smith

The 'home-brew' WSM television transmitter

lite imagery, for a fraction of the cost of a commercial system.

He constructed an atomic frequency standard for maintaining WSM(AM) at 650 kHz. The carrier was so precise that other stations used it as a frequency standard.

After retirement, DeWitt kept experimenting and inventing in several fields, including optics and lasers, which led to a surveying instrument for civil engineers.

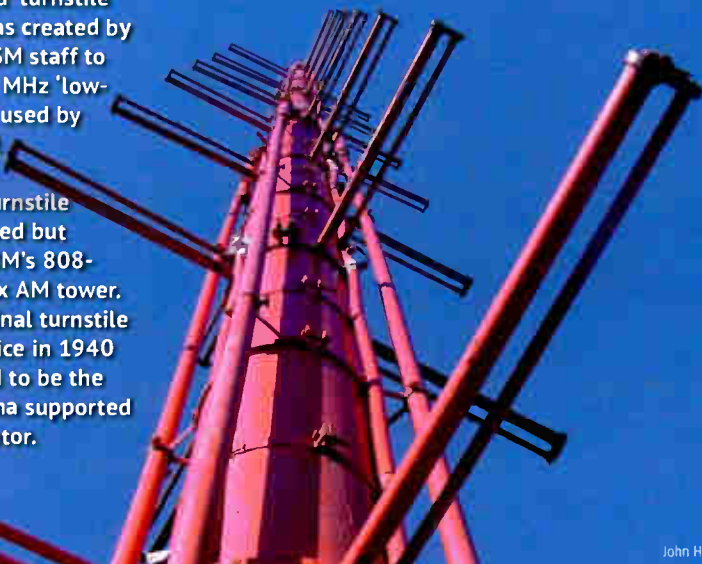
Jack DeWitt died on Jan. 25, 1999, some 53 years after his successful moon bounce experiment and just a few weeks shy of his 93rd birthday. A joint Senate/House resolution in the Tennessee legislature mourned his death "while also rejoicing in the life of this exceptional

man whose exemplary character, many accomplishments in the realms of science and technology, and voluminous contributions to the growth and prosperity of this state and nation will be remembered and appreciated for generations to come."

*James O'Neal is technology editor of TV Technology magazine. He has written in Radio World about VOA's Greenville, N.C., facility; the evolution of broadcast transmitter power supplies; radio pioneer Mary Day Lee; and numerous other topics.*

*He thanks David Hilliard of Wiley Rein LLP for recorded interviews and information about DeWitt's involvement in the CCBS. Clyde Haehnele, retired WLW engineer, helped with DeWitt's postwar work in Washington. Former WSM Director of Engineering J. Wayne Caluger provided personal recollections. Loyd Wayne Pilkinton and Larry Bearden offered insights about WSM and International Nuclear Corp. John Hettish maintains the WSM radio tower and provided photos of the FM turnstile radiator still mounted atop the AM tower. Craig Havighurst fielded many questions and helped with photos; his book "Air Castle of the South: WSM and the Making of Music City" is highly recommended. Thanks also to Scott Baxter, an RF genius put to work tending the homebrew WSM(TV) transmitter in his teenage years; Les Leverett, long-time National Life and Accident Insurance chief photographer; and the late Ray Tichenor, who was hired to work at the fledgling TV operation in 1950, shortly after high school, and remained with the operation for more than four decades. Before his passing, Mr. Tichenor provided useful information especially about the homebrew television cameras and the television transmitter.*

This 'high-band' turnstile FM antenna was created by DeWitt and WSM staff to replace a 44.7 MHz 'low-band' antenna used by WSM's original FM outlet, W47NV. The turnstile is no longer used but remains on WSM's 808-foot Blaw-Knox AM tower. When the original turnstile went into service in 1940 it was believed to be the first FM antenna supported by an AM radiator.



John Hettish

# GR

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# What's Lurking Behind Electrical Panels?

## Tighten All Electrical Connections Every Couple of Years, at Least

One of the nicest things about the NAB Show is catching up with old friends you don't get to see the rest of the year. Steve Franko falls into that category for me.

### WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

Steve is a contract engineer for two groups of stations in Idaho. Many of his sites are inaccessible for part of the year due to snow; routine maintenance often is abbreviated.

Recently Steve was called to a high-power FM that was off the air. He discovered a burned breaker panel that had gone bad on a three-phase circuit. The transmitter had promptly shut down after losing one of the phases.

Fig. 1 shows what Steve found when he opened the disconnect panel. Judging from the middle wire in the box to the right, the panel had not been checked for at least 15 years.

The damage resulted from a not-quite-tight connection from the original installation. Time marches on and so do its offspring: heat and corrosion. The green corrosion and burned wires can be better seen in Fig. 2. Steve said the owner was lucky that only the wire and not the entire box burned.

Let this be a warning to tighten all electrical connections every couple of years, at least. The services of a licensed electrician are well worth the invest-

ment, considering what could happen.

While your electrician is handling the electric panels, why not perform the same tightening regimen on wiring lugs

and connections inside your transmitters, and, for AMs, phasors and antenna tuning units? You might be amazed at what this service will uncover, espe-

cially inside transmitters with vibrating blower motors. Connections won't stay tight forever.

Remember to have your cellphone camera ready too. Tell the electrician you want to take a picture of anything out of the ordinary. Send it not only to us at *Workbench* but also to the station general manager or owner, to remind him or her

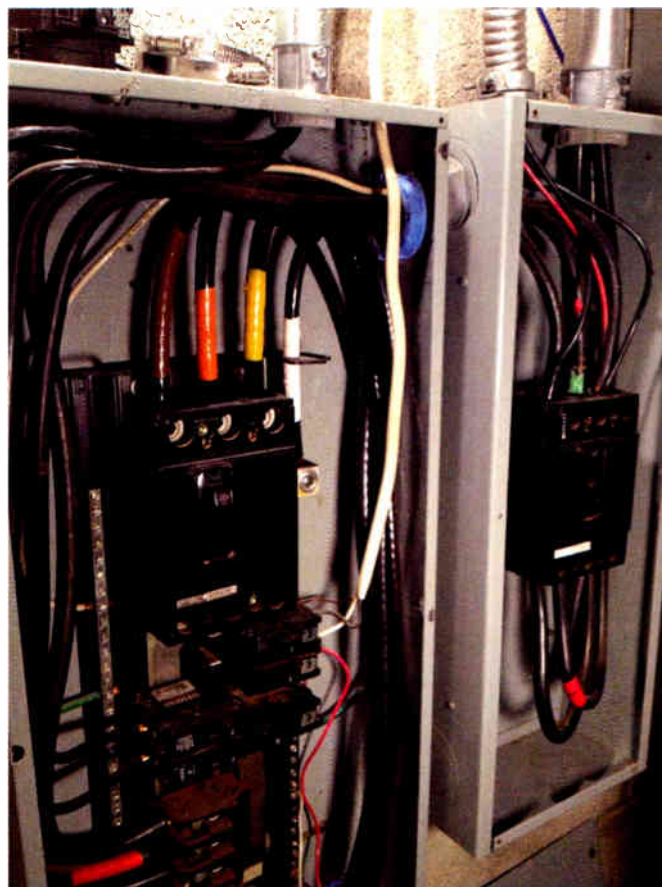


Fig. 1: Open your electrical boxes periodically to see what's inside ...

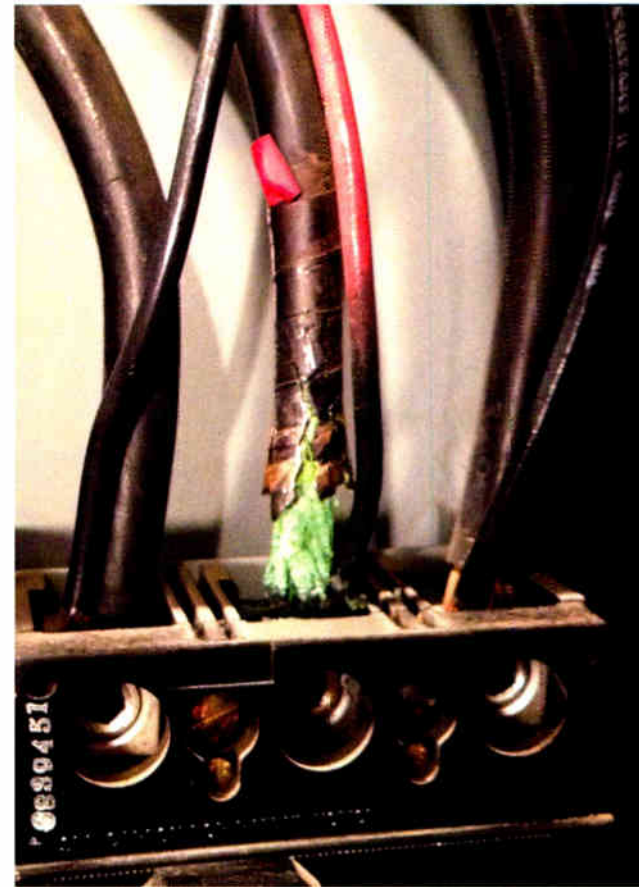


Fig. 2: You may save yourself an off-air emergency, maybe even avoid a fire.

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of the great job you are doing maintaining the company's investment. Thanks Steve for a great maintenance reminder.

Reach Steve Franko at *Lorax@moscow.com*.

**B**ob Groome from ERI passed along a link to a really cool way to build a transmitter. See the RW links page for this issue, <http://radioworld.com/May-23-2012>.

Bob can be reached at *bgroome@eriinc.com*.

**S**cott Dorsey is an independent engineer who handles a dozen or so stations in the Williamsburg, Va., area. He read our tip about using colored duct tape (April 25) and wrote in with a plea for engineers to spend the money and buy real gaffer's tape.

Gaffer's tape is available at your nearby theatrical supply store or over the Web, in a variety of colors. It's designed for gaffing cables down. Best of all, as Scott points out, gaffer's tape does not leave goeey residue all over

(continued on page 26)





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## WORKBENCH

(continued from page 24)

your cables and wires as duct tape will.

All great points: yet if you're on a budget, or if duct tape is all you can find for that last-minute remote the sales staff sold, all is not lost. Pick up a can of WD-40 penetrating oil. It does wonders cleaning off that sticky duct tape residue; and it cleans quickly.

For more uses of WD-40, head to the website [www.wd40.com](http://www.wd40.com). Also visit the Radio World links page to discover

more than 2,000 uses for this product: <http://radioworld.com/May-23-2012>.

Scott Dorsey can be reached at [kludge@panix.com](mailto:kludge@panix.com).

**H**ave you been to the SBE webinar site? A variety of webinars are archived at [www.sbe.org](http://www.sbe.org), including one on "Springtime Maintenance." Plus, SBE members can view theinars on demand.

I had several engineers remark that this webinar was like a "live *Workbench* column," with plenty of tips to get your site ready after a long winter. SBE is

making continuing education easy with these on-demand webinars. Visit the site today and feed your mind.

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*Author John Bisset has spent 43 years in broadcasting industry and is still learning. He is SBE certified and a past recipient of the SBE's Educator of the Year Award. He recently joined Elenos USA, an FM transmitter company.*

## PEOPLENEWS

FCC Chairman Julius Genachowski named **Renee Wentzel** as legal advisor to the chairman and **Charles Mathias** as special counsel to the chairman.

Wentzel comes to the commission from Wiltshire & Grannis, where she practiced telecommunications law. She was a public affairs advisor at Holland & Knight.

Mathias was acting legal advisor to the chairman. Previously, he was associate bureau chief in the Wireless Telecommunications Bureau and was also senior legal advisor to former FCC Commissioner Meredith Attwell Baker.

**Dave Milner** has been named president and market manager for **Clear Channel's** Sacramento, Calif., cluster. He will report to Susan Karis, EVP operations, Western Region. Milner was VP sales for Enterecom San Francisco. He has also worked for Susquehanna Media and was VP for sales at Clear Channel Portland.

Transmitter maker **Nautel** hired **Ken Ruzicka** for its Quincy, Ill., office.

Ruzicka most recently was with Broadcast Electronics, where he held positions from test engineer to sales engineer. Ruzicka has 30 years in the industry, including broadcast engineer work and teaching broadcast engineering. He was educated in electronics technology at Central Missouri State and picked up a business administration degree from Quincy University.

**Inovonics** promoted **Ben Barber** from COO to president/CEO. He's been with the company 23 years. Outgoing President/CEO James Wood, the company's co-founder, made the announcement. Wood remains chairman of the board.

**Elenos USA** continues its expansion of North American efforts by adding staff. New to its team are **Fab Sanabria** and **Edgar Higueros**.

Sanabria, recently with WorldCast Systems, is a new account executive. Higueros will be a tech support engineer.

John Bissett, director of engineering services and education, said of Higueros, "With the addition of Edgar and his team, we'll be able to provide 24/7 technical support and service based right here in the U.S."



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**Ken  
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**Ben Barber**





# MEET AXIA'S NEW, SMALLER IP CONSOLES. THEY'RE BIG WHERE IT COUNTS.

Plastic labels? Not on these consoles. High-resz OLED displays on each channel tell talent exactly what source is assigned.

Just a push on the Options knob lets board ops assign new sources, adjust gain trim, source EQ and more.

Razor-sharp OLED Program meter with over-load warning, VU or PPM ballistics? The choice is yours.

Inside this 2RU chassis beats the heart of a giant, with power to run two RAQ or DESQ consoles. Or maybe one of each? It's okay, we don't judge.

QOR.16 console engine doesn't just look cool - it stays cool thanks to beefy heat-sinks and fanless design.

Can a super-duty, high-performance rotary gain control still be called a fader? Just don't call it a "pot" - that's old tech.

Built-in Ethernet switch lets you easily network devices and studios. Plenty of professional, balanced analog, AES and Livewire I/O, too.

Avionics-grade switches with LED lighting.

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

Machined-aluminum work surfaces are made tough, to stand up to what jocks dish out.

Rugged, built-in, auto-ranging power supply. No line lumps or wall-warts on Axia gear.

Smooth 100mm, premium faders are side-loading to foil dirt and debris.

Event timer has manual and auto-reset options.

OLED channel displays have an audio confidence meter, too.

Four-position monitor selector lets you switch between Program or External monitor feeds on the fly.

Onboard headphone control with Preview option. Cheesy outboard amps need not apply.

Time-of-day clock can slave to your NTP server.

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

Then you saw the new RAQ and DESQ consoles from Axia, and your problems were solved. With the power and features of a big console, but minus the ginormous space requirements. RAQ will drop right into those turrets in your news station's bullpen -

the reporters can send their finished stories right to the studio. And DESQ is perfect for the auxiliary production rooms.

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

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# The Dog Days Can Be Profitable

## Four Hot Ideas to Populate Your Station's Summer Event Calendar

BY MARK LAPIDUS

Summer! Simply hearing the word brings joy. The days are long, the nights are fun and every weekend feels like a vacation. This is also a great season for radio stations, as the warm air draws the biggest crowds to station events.

If your station calendar isn't set yet, what are you waiting for?

To get your planning started, take a gander at these time-tested activities that will help you reconnect with your audience and (in most cases) generate additional sponsorship revenue all summer long.

### I. "MEMORIAL DAY WEEKEND AT THE PARK"

Kick off summer for your listeners with an offer they can't refuse, by joining up with your local minor or major league ballpark. Even though the clock

You'll gladly promote it for free if they offer you two-for-one tickets, half-off hot dogs and free snow cones for the kids. If you have SMS capability, you can send out a special pass to a mobile phone, which your listeners show at the box office.

Maybe your morning personality can throw out the first pitch or join the stadium announcer in welcoming fans.

### II. "THE WXXX JUNE BIKEFEST"

Have you noticed the surge in people who bike for exercise and fun? Ride the coattails of the trend and ask one of the larger bike stores in your area to hold a Bikefest Weekend.

Kick things off Saturday with a full day of free tune-ups and special sale prices on ancillary equipment like helmets. Finish on Sunday with a group

ride to the event. Have listeners register at the store, or on your website or Facebook page, and announce names on the air, giving people 10 minutes to call in and claim the bike. Do it every hour on the appointed day until you get a winner.

Once you have your winner, congratulate them and plug the event.

### III. "THE INDEPENDENCE DAY CHILI BATTLE"

This is a July 4 weekend you can build up over a number of years, so start small and let the event grow from there.



Scott Harrison

Kris Allen, 2009 'American Idol' winner, shows off Zorro at the 13th Annual Pet-A-Palooza held by KMXB Mix 94.1 FM in Las Vegas.

(Sometimes this kind of event can become large over time; without a proper understanding, even a contract, it's easy for a conflict over ownership to develop.)

Step one: Find a good outdoor location that is grill-ready.

Step two: Invite a group of cooks to compete over who makes the best chili.

The cooks should make enough extra chili to allow the crowd to taste test. You'll need celebrity and authentic food critics to judge, too. Of course, the cooks will run out of chili eventually, so make certain you've got a few vendors to sell additional food and beverages.

Bands are a wonderful addition to the festivities, but this does add another layer of complexity in terms of stage, sound system and sometimes permits.

Decide if you want to charge admission and sell in a title sponsor who will be in all the on-air and Web mentions.

This is another event that could benefit from charity involvement. However, before you sign with a charity, decide upfront if you want to "own" this event — because you're going to do it for years to come — or if you'd like the charity to control most of the details.

### IV. "DOG DAYS OF AUGUST"

Solicit pet pictures — dogs, cats, birds, hamsters, etc. — and post all the photos on your website. Have your listeners rate them based on cuteness, but do not show the results. Invite all the participants to your "Dog Days" Party to announce the finalists.

Suggested location: the parking lot outside a favorite local pet store.

To make the party bigger, bring in pet specialists — tables and booths with vets, animal trainers, dog walkers, groomers, pet sitters, etc. Let the owners parade their pets across a stage for all to see. Then bring up your finalists and have the crowd vote by applause for the winner.

Oh yes, be sure and serve — what else? — hot dogs!

The author is president of Lapidus Media. Email him at marklapidus@verizon.net.

You can never go wrong with pets. Let the owners parade theirs across a stage for all to see.

is ticking fast, it's probably not too late to call the group ticket office and propose that they offer a discount deal exclusively to your listeners.

ride on local trails, perhaps with a small entry fee to benefit a charity.

To draw attention to the weekend, give away a bike on a weekday leading

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**COMREX**

# Consistent Branding Reinforces Benefits

With Special Sales, Customer Loyalty Is Still About More Than Low Prices

BY JEFFREY HEDQUIST

Name two sale or holiday commercials that you remember. Difficult, isn't it?

## RADIOSALES

Too often, special-event spots, which tend to focus only on items, prices or a sizeable discount, sound nothing like the rest of a company's ad campaign, making the ads (and company) immediately forgettable.

All good commercials are designed to capture a share of your audience's mind. This is called branding. As advertising expert Roy Williams says, "Branding is implanting an associative memory with a recall cue."

As you craft commercials for an advertiser, keep in mind that no matter what kind of commercial it is – image, event, co-op, item, sale – it should tell a story about the listener's involvement with the advertiser, set within the larger context of the campaign (not just a stand-alone, one-time thing).

### THE ART OF STORYTELLING

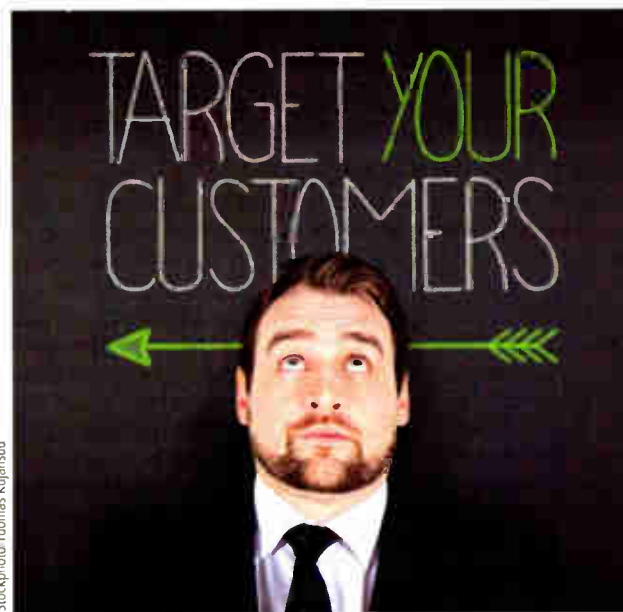
Let's say your campaign during most of the year is centered on the adventures of two goofball, slapstick-oriented characters. For your special sale, don't suddenly chuck them out the window! (Unless that's part of the humor.)

Rather, tell a story using your recognizable characters. Have them conduct humorous interviews for a faux "news report" about the sale, for instance.

Radio in particular is like the branding iron of the imagination. Often listeners are already using their imagination to fill in visuals from what they're hearing. When you excite, interest and feed your audiences' imaginations, they actually become active listeners and participants.

Active listeners will create with you, imprinting your store name and product into their DNA practically.

Too many advertisers, especially retailers, feel that the only



Stockphoto: Tuomas Kujansuu

way to get listeners to respond is to lower prices. Sure, the advertiser might see an immediate increase in customers, cash flow and gross revenue, but that surge doesn't translate into long-term, dependable profit.

In the long run, you're conditioning the audience to think of the advertiser only in the discount context. In fact, it is a consistent branding campaign that reinforces benefits for the consumer.

Try focusing on longevity, image, a share of mind, a niche, strength and a continuity of customers that could last into the future. Don't forget your branding just because there's a special sale this month.

Jeffrey Hedquist offers radio campaign services including writing, casting, directing, production and delivery. More at [www.hedquist.com](http://www.hedquist.com).

## STATION SERVICES

### 'SAVE US CHUCK'

Syndicated Solutions Inc. is offering a 60-second political feature/commentary hosted by Chuck Woolery for airing on weekdays. "Save Us Chuck" will be available June 4.

The company calls Woolery "a proud and vocal conservative" and his radio show "an extension of Chuck's wildly successful 'Save Us Chuck Woolery' YouTube Channel that has been viewed by millions." He contributes to Fox News and appears frequently on politically oriented shows.

He made his mark on television through shows like "Love Connection," "Wheel of Fortune" and "The Chuck Woolery Show," but Woolery started in radio. SSI promises he will be "poking fun at the politically ridiculous, separating fact from fiction, exposing the truths about Washington, D.C., working to spread common sense and sharing some laughs."

See a promo video at <http://radioworld.com/May-23-2012>.

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World Radio History

# 'It's Radio, Powered With NASA'

Online Station 'Third Rock Radio' Sends Space Geeks Over the Moon

BY PETER KING

Boy, do I wish I had thought of this idea: rock and roll plus space program-related features intermingled with cool-sounding sweepers and tag lines.

## INTERNET RADIO

Of course, in my days as a young space geek (1965–75), this would have been unthinkable for “real” radio. Later, when I was covering NASA for CBS News Radio, such a format would have been perceived as too narrow for broadcast media.

But it's a new era, and Third Rock Radio, billed wittily as “America's Space Station,” is a promising new Internet enterprise.

Robert Jacobs, NASA's deputy associate administrator of communications, says the music and features on their apps for iPhone and Droid are targeted toward listeners ages 18–30, a demographic he says NASA has had trouble reaching.

“Obviously, if we're going to plug into a new generation of explorers, we have to get them exposed to what we're doing, and this is an opportunity to do that,” he said. First, hook them in with the music; then, hook them with interesting information on the space program.

The station is promoted as “radio powered with NASA — a blend of art and science built to put you light years ahead with the best new music out there ... really out there.” Since its debut in December, Third Rock Radio has gained some 7,000 fans on Facebook and 2,700 Twitter followers. By the end of April, the station had been sampled 1 million times at [www.rfcmedia.com/thirdrockradio](http://www.rfcmedia.com/thirdrockradio). It did its first live remote broadcast in April, from an event in Washington.

Texas Radio Hall of Famer Pat Fant is chief operating officer and co-founder of RFC Media in Houston (also home of NASA's Johnson Space Center and Mission Control). RFC, a

producer of online radio content, partners with NASA to create the show.

### PARTNERSHIP

Who pays for Third Rock Radio? Jacobs says it doesn't cost taxpayers a dime. The agreement with RFC Media is “a public/private partnership,” Fant says. “We are sponsored and supported, and were from day one.” Consumer Energy Alliance, Halliburton and the Washington Times are among the show's current sponsors.

“We can provide (RFC) with NASA content and information and, in return,



Cruze at the broadcast desk.

they're the ones responsible for the programming,” Jacobs said.

For both RFC Media and NASA, the biggest goal is to get across to young people that science and engineering can be fun and exciting.

“We do have great interest in technology and certainly science and aerospace and astronomy,” Fant says. “There is a workforce crisis in this country. The next generation of our workforce just doesn't have the skills of science and engineering.”

“For us, it's a vehicle for us to deliver

news and information to try to reach a different audience,” Jacobs said.

As for the technical side, Fant calls his set up “wholly unremarkable ... a lot of computers with big sound cards and plenty of bandwidth ... Our technical platform is fairly common and available to any (general manager). But the way we put it together is special.”

Fant says the music is in WAV format, with approximately 24 Dell computers and T-1 lines to send programming to Triton Digital, its streaming partner. With some 40,000 titles to choose from, production and editing is done on Cool Edit.

The hosts of Third Rock are called “Music Explorers,” presenting “discoveries in new music in a rock/alternative format that's known to index among the highest in education and income,” Fant says. It also pulls in fans with a common interest who can share it through social media — a far more interactive experience to terrestrial's traditional “static approach that pushes a less defined product tuned for a mass audience.”

NASA news and other space features and highlights are presented in an accessible, “street smart” (but not dumbed down) way.

As evidence of the success of the concept, Fant says, the average session length for online streaming is 51 minutes.

“In all my years of rock and roll broadcasting, if you could get someone to tune in for 51 minutes, you had reached the promised land.”

*Peter King is an Orlando-based staff correspondent for CBS News Radio and a self-professed space geek who has covered NASA since 1994. This article is adapted from a story he reported for CBS.*



The first live broadcast of Third Rock Radio was held on April 27 in the NASA section of the USA Science and Engineering Festival, at the DC Convention Center. Left to right: Cruze, host of NASA's Third Rock Radio and RFC Media co-founder; Leland Melvin, NASA's Associate Administrator of Education; and Pat Fant, RFC Media co-founder.

## 'BRANDCASTING IS SMART RADIO'

RFC Media's pitch to clients like NASA: Use smart radio to take the messaging battle to a new venue.

RFC manages production, programs music, schedules content elements, voices client-provided copy or produces client-supplied voice tracks from experts or celebrity hosts, according to its website. It handles music licensing and provides monthly audience reports; it provides streaming at a bit rate of 96 kbps.

“Your custom-produced, Internet-delivered, iPhone-enabled private network radio station streams live from your own website to greatly extend hang time with Web visitors,” the company states. “Your brand promise is then wrapped around something the hard-to-reach generation already cares a lot about: their music! It's a fact that audiences now spend far more time streaming music online than hearing the car radio.”

As the company sees it, “The playing field has been leveled for custom, brand-specific music and information. ... Accessing content based on personal preference is rapidly replacing what we've known in the past.” Or as Pat Fant says, “The delivery system for music and entertainment has permanently shifted and it's never going back.”





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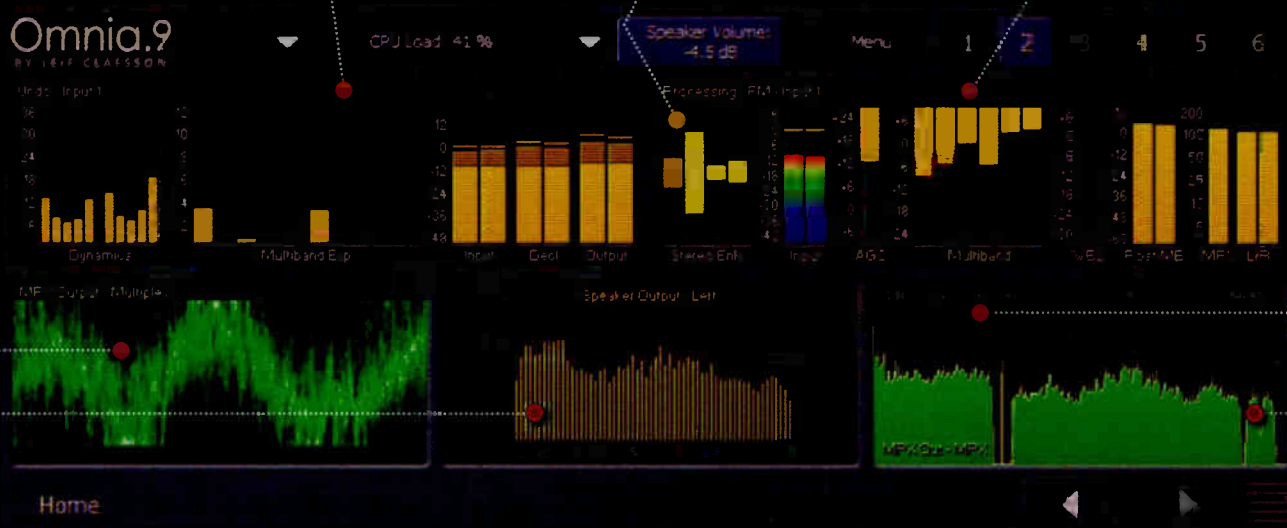
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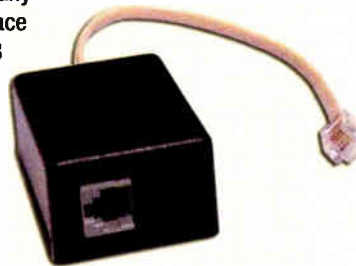
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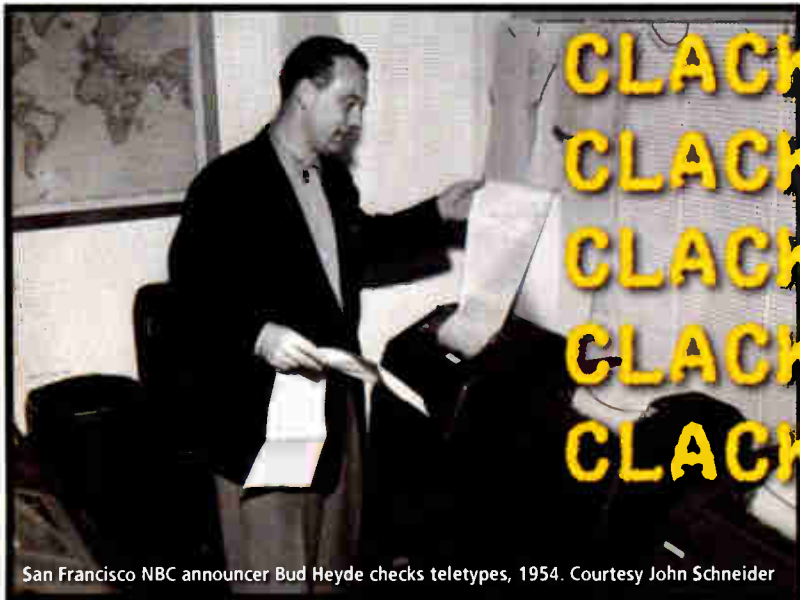
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READER'S FORUM



San Francisco NBC announcer Bud Heyde checks teletypes, 1954. Courtesy John Schneider

Author Buc Fitch invited readers to share their recollections of the teleprinter and its radio environs ("Clack-Clack-Clack-Clack-Clack," *radioworld.com*, key word teletype). See and hear a Teletype machine at [tinyurl.com/fitch3](http://tinyurl.com/fitch3).

NEWS ON HIS HANDS

In the summer of my high school senior year in a small West Texas town, I was hired as a DJ for a daytime AM station in another small town (though one larger than mine). This is how I became involved in the media business, so to speak. I played top 40 records and did "rip-and-read" news on the hour.

Yes, we had an AP Teletype. My take on it is probably a little different than most of your readers, though. As the new employee, I was the one who changed the ribbon. What a messy job. It was also a little tricky to do during a 2-1/2-minute record. What I recall the most is the mess on my hands. Since we didn't have rubber gloves then, it took at least a day of hand washing to remove that ink from my hands.

Thanks for what you do at Radio World.

*Douglas A. Boyd, Ph.D.  
Professor of Communication  
University of Kentucky  
Lexington, Ky.*

SEND A LETTER TO THE EDITOR:

Email [radioworld@nbmedia.com](mailto:radioworld@nbmedia.com) with "Letter to the Editor" in the subject field. Please include issue date.

CUE THE MACHINE

When I joined the radio industry in 1971, Teletype machines could be found in nearly every station.

When you were reading the news, you had to leave the soundproof door to the Teletype machine room open so that the Teletype's clacking and ringing could be heard in the background — then run over and close it before the next record played.

When I was a DJ, I used to put on a long song (Marty Robbins was a good source of those) so I could get organized for the newscast beforehand. After I got proficient at being on the air while doing six other things at once, I was able to read most stories cold without any mistakes.

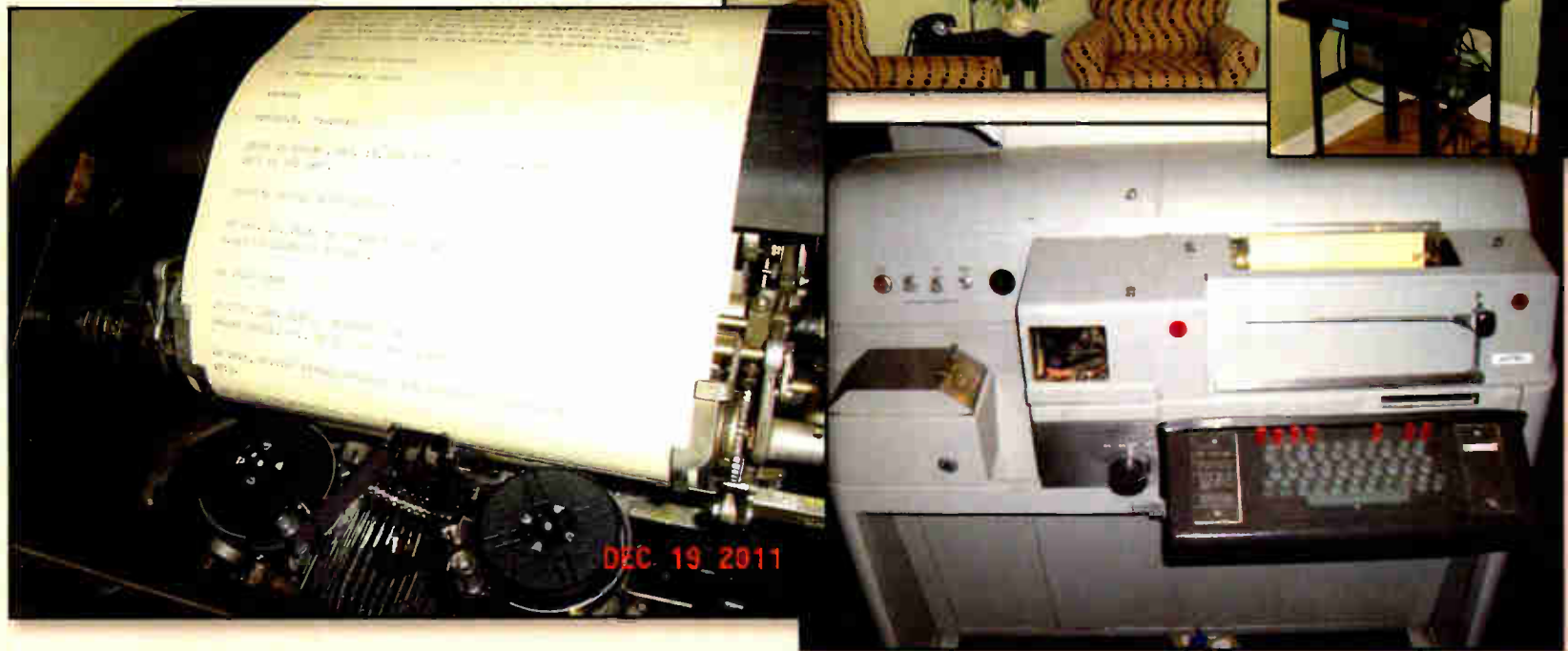
*Chuck Cooper  
Pinnacle Communications Ltd.  
Abuja, Nigeria*

THANKS, MODEL 15

Great article on the Teletype machine. We still have our Model 15 RO printer here at WRNJ and it runs twice a day. Total run time in a single day is about 30 minutes. In the photos is Russ Long, afternoon drivetime DJ, who started with the station in '76.

Thought you'd enjoy hearing that there is still a real broadcaster out here with live talent and a three-person newsroom, serving our community exclusively.

*Larry Tighe  
Owner, WRNJ(AM)  
Hackettstown, N.J.*





**GLAD HE KEPT IT**

In the 1980s, when the AP began replacing the old trusty Model 15 page printers with the Epson dot-matrix printers, we all thought those were the cool new thing. When they brought the new Epsons in, I asked if they wanted the Model 15 back. They said, "No, throw it away." Trouble was, with its heavy stand and the power supply, it weighed about 150 pounds. Since the stand had lockable casters on it, I just wheeled it into a storage room.

Good thing I did. About four weeks later the Epsons started failing. It seems no one had been told these machines would be in use all day, every day.

I just wheeled the Model 15 back into the newsroom and hooked it back up. It continued to pound out the copy 24/7 for the next 10 days until AP got us another dot-matrix printer.

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

**THANKS A LOT, AP**

When Ronald Reagan ordered the invasion of Grenada in 1983, I was the program director at NPR-affiliate station WLRH(FM) in Huntsville, Ala. We had an Associated Press Model 15 Teletype machine in a closet adjacent to the newsroom, just down the hall from master control.

One morning, just after NPR reported that American troops in Grenada had surrounded the Soviet Embassy, I

was walking past the Teletype closet. Suddenly I heard the "11-bell" warning. Convinced that the end of the world was at hand, I flung open the closet door and watched breathlessly as the printer typed these words:

**THIS HAS BEEN A TEST OF THE EMERGENCY BROADCAST SYSTEM.**

To this day, I have no idea who at the Associated Press decided that this was a good time to send a test, but I still haven't forgiven them for nearly causing me to have a heart attack.

*Tom Godell  
General Manager  
WUKY(FM)  
Lexington, Ky.*

**THE SOUNDTRACK OF A STATION**

In a typical small-town radio station, business managers were typing statements, traffic directors were typing program logs, copywriters were typing commercials, salesmen were typing orders, program directors were typing memos. Of course, there were also tape recorders, mimeograph machines, phones and everywhere the radio station itself was playing on house speakers.

Somewhere down the hall in a four-by-four closet — usually near the main control room — there was a Teletype machine. It ran hot and loud 24/7, spewing out continuous reams of paper as it printed accounts of practically everything happening in the world.

It was a lifeline providing the latest forecasts, sports scores, stock prices and all sorts of news, from the "lighter side" (amusing little slices of life often used to end a newscast on an upbeat note) to 10-bell bulletins announcing disasters or deaths that would dominate the news. A staff announcer might "interrupt this program for an important news flash" read live or taken from the network, but *he* learned it first when he cleared the wire.

Announcers or newsmen would often save these bulletins as historic reminders or to enter in a child's scrapbook. I saved some with unintended typos or misprints. One of my favorites is a simple account of a special performance by Pablo Casals. It concluded with "His wife killed him as he left the stage." A correction was later posted changing "killed" to "kissed."

Larger stations had several Teletype machines, including both Associated Press and United Press International news feeds, plus dedicated machines for weather, sports or other services. These were likely monitored by news people who edited and rewrote stories for their own broadcasts, but in the small stations it was all up to the announcer on duty. (I remember one newsman who began each broadcast with "Now from the leased wires of the Associated Press, here's a roundup of this hour's news.")

It seemed like the paper ran out and the ribbons went dry at the worst times. There were usually rubber gloves available, but most of us just changed the ribbons as quickly as possible with our bare hands. Remember we were playing records that only lasted a couple of minutes. There were always purple

fingerprints everywhere.

The third station I worked for had a Teletype machine used exclusively for results from the nightly horse races. One of the strangest duties I ever had was to announce the win, place and show finishes and payouts for all nine races each night just before the midnight sign-off. I wish I had a recording from that time for it was a unique experience. I often imagined shady characters listening to my performance in some secret bookie's den with cigars, whiskey and stacks of money on the table.

When quieter dot-matrix printers became commonplace, the news Teletype came out of the closet. Now we can all see news dispatches wherever we are, but there was a time when that thing clacking away in a tiny 110-degree room spread the news, and the guy on the radio was first in line.

*Jeff Hunt  
Roanoke, Va.*

**FAST FINGERS**

I enjoyed Charles Fitch's reminiscence of Teletype machines. It's true; mentioning them to a younger person is like walking into Radio Shack and asking where the tube tester is.

The Teletype is best described as a kind of electric typewriter. I left high school with a C in typing class, at 33 words per minute. Then I spent almost six years with United Press International, using a Teletype, and by the time I was done there I was up to 70 wpm.

*Bob Cockrum  
Lubbock, Texas*

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**Friend S. Weller, CBRE**  
Chief Engineer  
Utah Public Radio  
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# Cuba Has Long Been a Radio Presence

## My Memories of the Airwaves War Between the Island Nation and the U.S.

### COMMENTARY

BY PHILIP E. GALASSO

A recent article by Hans Johnson about "Robert Williams' Odyssey in Cuba" (*radioworld.com*, keyword *odyssey*) brought back fond memories of listening to the AM band during those cold winter nights in New Jersey.

In 1966, my uncle gave me a non-working 1949 Delco table radio with a "magic eye" tuning indicator. I repaired the radio and set it on a bookshelf in my bedroom.

Much of that listening was mundane. I loved the hits on "Radio 8 CKLW," WKBW in Buffalo, N.Y., or WLS and WCFL in Chicago, often hearing music that was not played on top 40 radio in New York or Philadelphia. These were the days before sterile, homogenized playlists. If I wanted to relax, I would tune to WGN for the Talman Federal Savings program, which featured soothing music. Canada's CBC would offer a wide variety of programs, including "CBC Stage," a series of original radio dramas. A real challenge was picking an intelligible signal out of the "cocktail party" on the Class IV channels.

I soon discovered the radio war between the United States and Cuba.

#### SWAN ISLAND

In the 1960s, only two U.S. stations operated on 1160 kHz at night: KSL in Salt Lake City and WJJD in Chicago. To protect KSL, WJJD had to sign off at local sunset in Salt Lake City. But in New Jersey, I found a Spanish-language station with a strong signal on 1160. It was Radio Americas, which operated from Swan Island in the southern Caribbean.

Swan Island was claimed jointly by the United States and Honduras. It had a weather station and was a refueling stop for fishing boats. Radio Americas operated on 1160 kHz with 50 kW into a three-tower array beamed north and on shortwave at 6000 kHz with 7 kW. Programming consisted of music, news and commentary. The sign-off announcement was done in both Spanish and English. A reception report addressed simply to "Radio Americas, Swan Island, West Indies" brought a yellowing QSL card in an envelope with a Miami post office box return address. (I still have that QSL card.)

Some months later, the now-defunct Popular Electronics magazine ran an article about the station, mentioning a possible CIA connection. The article even featured a rate card, although I never heard any commercials on Radio Americas. At my New Jersey location,



Stockphoto/Maria Pavlova

**A Cuban man holds an old radio in Havana in 2011. Radio has long been a tool used by the governments of Cuba and the United States in their international standoff.**

the 1160 kHz outlet always had a better signal than the shortwave outlet.

In 1971, the United States ceded Swan Island to Honduras and Radio Americas fell silent.

#### 'LIBERACIÓN'

Tuning the low end of the band yielded several powerful stations from Cuba.

Radio Rebelde held down 590 kHz from a transmitter in the Regla section of Havana. Programming was mass appeal, with music and a lot of winter baseball. On 640, I could hear Radio Liberación, the former CMQ, with a similar format to Radio Rebelde. CMBC, the station that aired "Radio Free Dixie," could rarely be heard at my location, as CBF, key station of the French-language network of the CBC in Montreal, ran 50 kW there and the crude antenna that I used did not allow me to null out the Canadian signal.

At midnight Eastern time, the domestic services on 590 and 640 would sign off with the playing of the Cuban national anthem and a chimes interval signal would be heard for a minute or two. That was followed by a special all-night external service called "La Voz de Cuba" ("The Voice of Cuba"), which was the same programming that aired on shortwave via RHC.

By the mid-1980s, Radio Americas was long gone, but the radio war across the Strait of Florida heated up. In Miami, the longtime occupant of 710 kHz was WGBS, which carried an adult standards format in English. At night, WGBS beamed south to protect co-channel WOR in New York. In 1985, WGBS was purchased by Cuban immigrants. The format

was changed to news/talk in Spanish and the call letters became WAQI. WAQI could be heard quite well in Havana.

One of its commentators was Juanita Castro ... yes, Fidel's sister. She detested communism and came to Miami in the 1960s. The Castro regime was livid over her broadcasts and the powerful Regla transmitter was retuned from 590 to 710. Other transmitters on the island were also set up on that frequency and all of them carry Radio Rebelde. There is collateral damage in that war: WOR still receives severe nighttime interference from Cuba, especially during the winter months.

#### RETALIATION

When the U.S. government put TV Martí on the air, the Cubans quickly retaliated. An extremely powerful transmitter, believed to be near Havana, was set up on 830 kHz. Although the modulation was weak, the carrier strength was comparable to that of a local station. Programming was in English under the name "Tour Radio" and the station's accented announcers promoted tourism in Cuba. WCCO in Minneapolis, the dominant U.S. station on 830, reported interference in the suburbs of the Twin Cities.

I have not heard that station on 830 in a long time, although its Spanish-language version, Radio Taino, operates on 1180 kHz to jam Radio Martí. I can sometimes hear it under WHAM (Rochester, N.Y.) here in northeastern Pennsylvania. The programming ostensibly is intended for foreign tourists in Cuba and may include segments in English or other languages.

The Cubans still have a strong presence on the nighttime AM band. Radio Reloj ("Radio Clock") has a strong signal on 570 kHz and other frequencies. Programming consists of two announcers alternating the reading of news copy over a background of 1 second time ticks. On the minute, the announcer says "Radio Reloj," a time tone sounds, the announcer gives a time check, and a sounder consisting of the letters "RR" in Morse code is played. Sometimes, chimes that sound like a doorbell are substituted for the "RR" sounder. I do not know the significance of that.

Radio Musical Nacional can be heard on 590 with classical music, while Radio Rebelde blasts in on 600, 670 and 710. Radio Progreso (the domestic service formerly heard in Havana on 690) can be heard on 640 and 890 (where it often overrides WLS). Programming consists mostly of popular music, with children's programs in the early evening. Since these are domestic services, all of this programming is in Spanish.

*The author is a former chief engineer of stations in Wilkes-Barre, Pa.*

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