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World Radio History



NextRadio Push Begins in Earnest

Emmis says FM app delivered 85% retention rate in early going

BY LESLIE STIMSON

The NextRadio FM app has an 85 percent retention rate, which means consumers are “downloading, listening and coming back for more,” according to Emmis Communications, the broadcast group owner that developed the app at the request of NAB Labs and is hoping the industry will adopt it widely.

“Everyone can do this,” said Senior Vice President/Chief Technology Officer Paul Brenner. “Because the over-the-air tuner is FM, we can measure what they do with the app.” That includes tracking how many people liked a song or dropped it, for example.

The NextRadio app provides local over-the-air reception in smartphones with enabled FM chips, and adds interactive features, if stations opt to support them, such as buying and rating songs, social media coupons and geo-location services, all using the phone’s data channel.

Emmis has invited other broadcasters to participate in the enhanced display and interactivity opportunities. Stations can use Emmis’ Web-based TagStation to provide data services for broadcasts and deliver interactive elements to the app.

Nineteen radio groups (see sidebar) have signed on and will pay to deliver interactive services with TagStation; only a few

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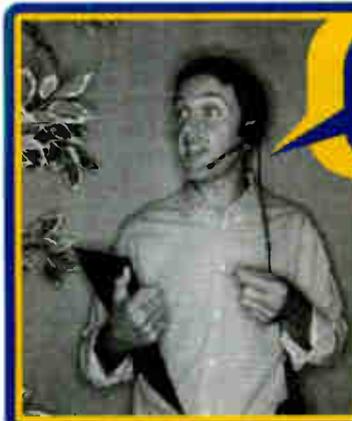
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want to be in 300 million phones. For the first time, we have a carrier going to manufacturers saying ‘Put it in and let’s focus on it.’ We’re convinced if our customers like this, this will spread to every carrier in America.”

At the NYMRAD event, Sprint Vice President of Product David Owens promised that “tens of millions of [Sprint] smart-



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hundred stations were delivering interactive elements as of early October.

Not on the list are industry biggies Clear Channel and Cumulus; they are in discussions with NextRadio and “are showing some interest in helping in this initiative,” according to Brenner.

EARLY ACTIVATIONS

Sprint launched NextRadio in its HTC One and EVO smartphone models. The app can also be downloaded on some older HTC models. Just after the Radio Show in Orlando, Sprint released a third phone with the pre-loaded NextRadio app and active FM chip, the Samsung Galaxy Note 3.

In Orlando, Emmis said users had tuned to approximately 3,300 over-the-air stations using the app; that number had grown to 3,700 just after the show. Emmis and Sprint executives told attendees of a New York Market Radio Association advertising event.

There had been about 35,000 NextRadio app activations as of early October. Sprint’s launch of the Samsung Galaxy Note 3 “gave us a bump in daily install rates,” Brenner told Radio World.

Sprint has said that its entire product line of smartphones eventually will have active FM chips and come loaded with the app. Emmis Chair/President/CEO Jeff Smulyan said, “We

phones” would have the feature. According to participants of a NYMRAD panel, the app can increase music sales and exposure, and apply revenue-generating capabilities to other advertising categories. RCA Records Executive Vice President/General Manager Joe Riccitelli described the power of the “buy” button on the app.

Just before the Radio Show, Sprint, HTC, NextRadio and participating stations using full TagStation to supply content for interactivity began a beta marketing rollout in eight cities: Austin, Boston, Chicago, Houston, Kansas City, Las Vegas, Los Angeles and New York.

SPRINT ‘PLEASED’

Sprint is “very pleased” with results of NextRadio, and the company has noticed that app users are listening for an average of more than one hour per day, according to Sprint Director of Product Development Mark Yarkosky. Brenner said one user in Hawaii listened for about six straight hours.

Just before the Radio Show, Sprint introduced special signage and other retail marketing materials related to the app, including a JBL headphone promotion. The box includes a NextRadio logo. Sprint has also developed a Web landing page (Sprint.com/landings/nextradio/) to promote the feature.

By the holidays the industry should see more Sprint phones rolling out that contain the NextRadio app, as well as a campaign

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PBS Revisits the Panic Broadcast

'American Experience' celebrates the 75th anniversary of a radio classic

"We know now that in the early years of the 20th century, this world was being watched closely by intelligences greater than our man's, yet as mortal as his own."

Those words opened the greatest fictional radio broadcast of all time, which aired 75 years ago this month and has been a source of fascination ever since, particularly among those who cherish our medium.

"War of the Worlds," the 1938 broadcast on CBS Radio by Orson Welles and the Mercury Theatre on the Air, is the subject of a video documentary that premieres Tuesday Oct. 29 on the outstanding PBS history program "American Experience." I recommend it highly.

Note that I said greatest *fictional* radio broadcast. The greatest of all time, most would agree, was Herbert Morrison's coverage of the Hindenburg disaster. But the same sense of compelling live drama, of news being made, propelled "War of the Worlds" into lore.

I grew up listening to "War of the Worlds" on an LP of old-time radio shows. I know its rhythms, its hisses and scrapes, its musical interludes and cast



Orson Welles explains and apologizes for that little Martian misunderstanding. Author Susan Douglas describes his 'charismatic smirk ... He had that charisma that comes from an absolute confidence in your talent. He was thrilled.'

of characters. I flat-out loved it.

The TV documentary, which I saw in

a review copy, tells the familiar story. Mercury Theatre had created a series of programs based on literary works like "Dracula" and "Oliver Twist"; for Halloween, Orson Welles sold his producing partner John Houseman on doing an adaptation of the H.G. Wells Martian tale from 40 years earlier, reset in the United States.

Formatted as a series of news bulletins interrupting regular programming, the Sunday evening show used vivid sound effects and voice characterizations to create mental pictures of creatures crawling out of ships and killing people with heat rays in and beyond Grover's Mill, N.J.

Famously, many listeners missed the show opening because they were enjoying ventriloquist dummy Charlie McCarthy cutting up with Edgar Bergen on NBC's "The Chase and Sanborn Hour," then tuned over to CBS and the Martians once Nelson Eddy began singing. The documentary notes the conventional wisdom that "up to a million people" were thus convinced, "even briefly," that the United States was being assaulted by monster invaders.

'CARBUNCLE'

Just how wide was this panic? I've always wondered.

According to accounts, callers "flooded" newspapers and police with calls, rushed out of their homes, begged power companies to turn off the lights, gathered in prayer.

I spoke with Susan Douglas, who

FROM THE
EDITOR



Paul McLane

appears in the program. She is an author and professor of communications studies at the University of Michigan. She said hard numbers are difficult to come by, but one study estimated that 6 million people heard the play, of which about 1.2 million were frightened.

"What we don't know is how many actually poured into the streets. And for the newspapers, this was a double dip for them; because some newspapers — those not associated with radio stations or that didn't own them — saw radio as competition, especially cutting into the evening papers. ... Some were like, 'See? You'd better watch what you listen to on radio!'"

This may help explain why newspapers ran 12,500 stories about the Martian broadcast over three weeks, certainly feeding the panic story and probably exaggerating it.

However, many people evidently were taken in. Mercury Theater member Richard Wilson saved letters received after the broadcast; in 2007 his estate donated them to the University of Michigan, where student A. Brad Schwartz rediscovered them and used them for his thesis.

The documentary brings these letters to life using actors. I didn't care for the stylized reenactments; but I found the words compelling. Some people really were scared (while quite a few congratulated themselves on *not* having been fooled). Regardless, how could we not smile hearing a letter-writer say of Welles, "He is a carbuncle on the rump of degenerate theatrical performance"?

MASTERS OF SOUND

The video also explores the reach and role of radio in people's lives. It emphasizes the economic anxieties of a nation during a time when even a president acknowledged "fear itself."

It reports that "Americans were highly attuned to the sound of crisis" and to eyewitness accounts of unsettling world events at a time when radio news divisions were finding their footing. It makes particular note of the Munich crisis weeks prior. "People were used to having their programs interrupted by news bulletins," Douglas told me. "People could hear Hitler's voice as he became increasingly incendiary about annexing the Sudetenland. ... You have a population on edge."

It also accounts how abashed some people felt after they learned they'd been fooled; and it explores the

(continued on page 10)

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NEXTRADIO

(continued from page 3)

featuring a “day in the life” of a Sprint phone user. That “day” will include FM listening, Brenner said.

However, radio needs to do its part, he continued.

“We’ve made the first payment to Sprint. Now we have to start the process of rolling out inventory,” Brenner noted, referring to the \$15 million a year for three years in spot inventory that the radio industry committed to Sprint. Brenner declined to clarify or discuss payment specifics.

Some industry executives appealed for more stations to take part. NRG Media President/CEO Mary Quass said, “We need to be on the devices people are using.”

Brenner said some 2,700 stations are visually represented in NextRadio through the TagStation content service.

Of that figure, 2,450 are using the basic, free level of integration, meaning they uploaded logos to display default artwork in the NextRadio app. The rest, some 260 stations, are using the paid version of TagStation to deliver album art and other interactive elements.

Engineers with whom Radio World spoke said the number of stations delivering interactive elements is still small

has been talking to wireless carriers about adding a digital radio component to a smartphone’s FM radio capability. Both iBiquity and Emmis call that a logical next step.

President/CEO Bob Struble told Radio World, “It’s critically important for radio to be on phones in general, because we’ll come to some point in the not-so-distant future when nobody

Because the over-the-air tuner is FM, we can measure what they do with the app.

– Paul Brenner

because of limits in money, time and resources. “Other things are bombarding us,” said one engineer for a major radio group.

Emmis is trying to get more industry support behind the effort. “We need as much content as possible if the FM smartphone initiative is to succeed,” according to Brenner. The small number of stations delivering interactivity is “the number one complaint by the NextRadio listener.” He reported listeners saying they “love the FM radio” but are “highly disappointed that radio cannot at least have album art and artist/title” elements to be on par with other listening apps.

On average, stations with album art or other visual and interactive elements get twice as much listening as stations that have solely the free logo, according to NextRadio.

HD Radio developer iBiquity Digital

carries anything but a phone. There’s no more portable radios. There’s no more Walkmen. There’s no more headphone radios. It’s all on the phone. So, if we’re not on the phone we’re going to be missing a significant piece of the audience.”

The wireless industry is watching to see how the rollout goes.

In early October, a wireless industry executive told a subcommittee meeting of the House Transportation and Infrastructure Committee that he sees the Sprint-NextRadio deal as a test case for whether other carriers would activate embedded FM chips in their smartphones.

Chris Guttman-McCabe, executive vice president of CTIA — The Wireless Association, was asked during a hearing on alerting why more carriers don’t include FM capability in their smartphones. He noted that the association’s

WHO’S DELIVERING INTERACTIVITY?

Nineteen radio groups, listed below, are going beyond the basic free level and supporting NextRadio with full TagStation content to deliver album art and interactivity, according to Emmis. Some, like CBS Radio and Hubbard, are delivering full data capability on all of their stations, while a shorter list are starting with some stations and growing to add interactivity to all of their stations over time.

- Beasley Broadcast Group
- Bonneville
- Bott Radio Network
- Carter Broadcast Group
- CBS Radio
- Cromwell Group
- Emmis
- Entercom
- Greater Media
- Hall Communications, Inc.
- Hubbard Radio
- Lincoln Financial Media
- Merlin Media
- Radio One
- Radio Training Network, Inc.
- Rome Radio Partners
- Univision
- Wilks Broadcast Group
- YMF Media LLC

32 handset makers and carriers compete against one other. “If that sells, and is successful, I have a sense that you’ll see it in many, many more phones; and if it doesn’t, you’ll see it in less. That’s how the market works.”

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RADIO SHOW

(continued from page 1)

Here are news highlights from the Radio Show and immediately afterwards.

FIELD: 'THE FUTURE OF RADIO IS BRIGHT'

While digital media entrants tend to paint radio as a dinosaur, Entercom Communications President/CEO David Field says traditional radio is anything but.

"The sky is not falling for broadcast radio. The ecosystem of radio is enhanced by competition. The success of one form of radio does not necessarily come at the expense of another," said Field. He spoke at the Radio and Internet Newsletter Summit preceding the Radio Show.

Field says traditional radio continues to innovate and that listeners remain attached to their local stations. He cited the recently announced Cumulus-Rdio partnership as an example of "major" innovation, as well as the Sprint-NextRadio deal on the FM chip. Further, roughly half of new cars will have built-in HD Radio receivers or technology by 2015, according to Field.

The future of broadcast radio is bright, said Field, mentioning the medium's "massive" reach. He says traditional broadcast radio is undervalued and that if it continues to innovate, it will grow. "We are living in the golden age of radio. Its best days lie ahead."

RADIO 'DOMINATES' TOTAL LISTENING

Field also noted a "massive" gap in percentage of listening share between traditional broadcast radio and Pandora. His criticism comes as Pandora opens

more local sales offices in top media markets and cites listening data in advertising pitches that compete with broadcast radio and its streams.

The Entercom executive said Pandora's claimed listening levels don't quite add up.

Just after the show, Pandora released September audience estimates, saying its total share of U.S. radio listening for the month was 7.7 percent, up from 6.53 percent for the same period a year ago.

Field says Katz Media Group estimates Pandora's share of total U.S. radio audience at closer to 4.4 percent, followed by other webcasters at 3.2 percent — while broadcast radio "dominates" audio listening at 92.4 percent.

Some of Pandora's listeners leave their streams on all day, Field said. "They may be out — yet that listening counts."

Broadcast radio has 20 times Pandora's listening, he continued, noting that Arbitron data showed radio's audience is 242 million.

Pandora claimed 72.7 million "active" listeners for the month of September, a 25 percent increase from a year ago.

IS APPLE ITUNES RADIO A 'PANDORA KILLER?'

Apple iTunes Radio launched just before the Radio Show. Many tech media outlets, like CNET, dubbed it a "Pandora killer."

Asked to comment about the Apple product during the RAIN Summit, Pandora Automotive Business Development Director Geoff Snyder said, "We're aware of what they're doing." He said Pandora, no stranger to competition, remains focused. "We're not going to change course."

Slacker Senior Vice President of Business Development Steve Cotter said, "We see it as a validation of what



From left: Lew Paper of Pillsbury Winthrop Shaw Pittman, Jeff Warshaw of Connoisseur Media, Larry Wilson of Alpha Broadcasting and L&L Broadcasting, Mary Quass of NRG Media and Lew Dickey of Cumulus Media. Discussion touched on 'crappy ads' and the need to be 'live and local.'

we knew six to eight years ago when this company started."

The best content is "going to win," predicted TuneIn Vice President of Programming Kevin Straley.

RAIN Publisher Kurt Hanson believes the launch will help the audio product category in general to grow. "Competition is good."

According to a GroupM Next survey of Internet audio users, respondents said iTunes Radio is "probably" more integrated and easier to use than Spotify; and they either hated Apple products or loved them. In fact, 34 percent of Internet audio users said they'd switch to an Apple streaming radio service from their current favorite (Pandora, Spotify, iHeartRadio or Slacker) based on Apple's brand name alone.

"This could be a game-changer, or not. We'll see," said the GroupM Next executives Steve Sherfy and Jesse Wolfersberger. GroupM Next is part of GroupM, a global media investment management organization.

IBiquity Digital President/CEO Bob Struble told Radio World, "I think iTunes Radio will be another brick in the wall of digital competition that we need to address. It's part of a broad set of new technologies that compete with us in the car, and in the home." He said it argues in favor of an upgrade to HD Radio "because people expect to have a certain set of features and services that cannot be delivered by analog radio. When you're listening to iTunes Radio you'll see album art. When I listen to analog radio I'm not going to see album art."

'VOICETRACKING IS DEAD'

"Voicetracking is dead. It's a waste."

So said Alpha Broadcasting and L&L Broadcasting CEO Larry Wilson during a Radio Show discussion by group executives about radio's future. He said stations need to be live and local to succeed, a sentiment echoed by several of

his fellow panelists.

NRG Media President/CEO Mary Quass agreed. "We've got to get people energized into the business. We need live overnight guys again."

Asked whether radio's ability to recover from the recession is hampered by the emergence of Apple iTunes Radio, Connoisseur Media's Jeff Warshaw said, "While any competition is a concern, we think one of the things that potentially insulates radio is having a live presence." That relationship with listeners is not easy to replicate, he said.

Wilson, who said he was an early adopter of Pandora, described the service as background music. "There's not a mic that opens and someone entertains and informs you," as traditional radio does.

A common theme among the executives, however, was that radio can't sit on its laurels but must figure out how to air compelling content without boring ads that turn off listeners.

Wilson said that while the industry gets "caught up in talking about the digital age, we're still terrestrial stations," and most revenue still comes from analog signals. "We're letting the product go downhill. We're running crappy ads. The commercials have got to be compelling."

As for radio's competition from online audio, Cumulus in particular sees the audio universe as expanding. Explaining the company's recent deal with Rdio, Cumulus Chairman/CEO Lew Dickey said, "We're thinking of Rdio as a complement to our business. We want to be able to play across the entire audio ecosystem."

'FRANKEN FM' DAYS NUMBERED

The days are numbered for so-called "Franken FMs," those low-power TV stations operating on analog audio carriers of TV Channel 6 signals at 87.7 and 87.9 MHz.

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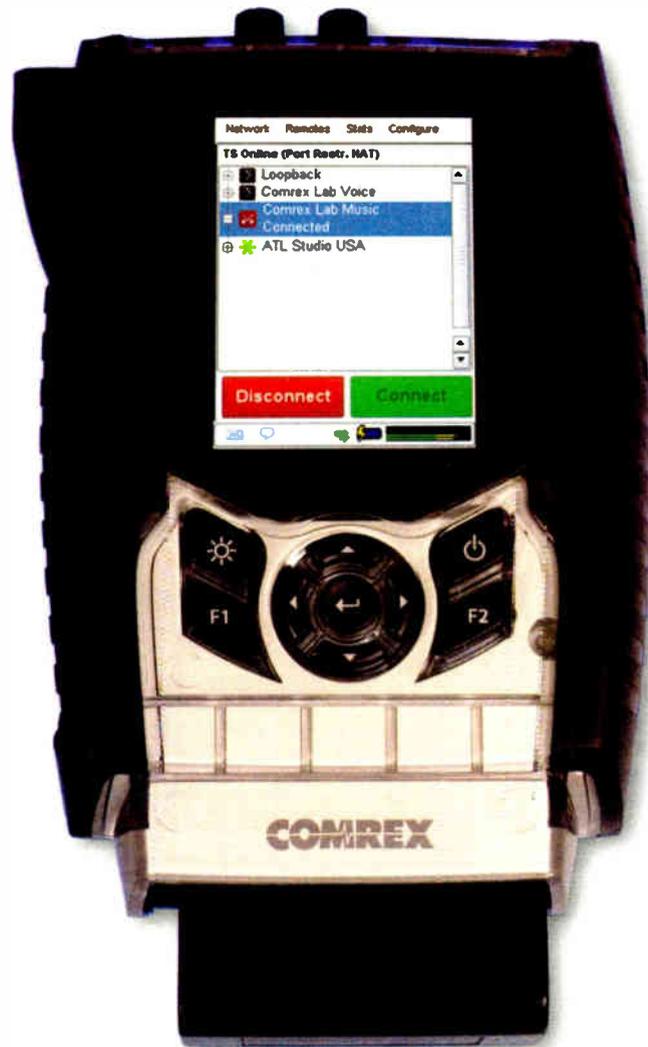
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RADIO SHOW

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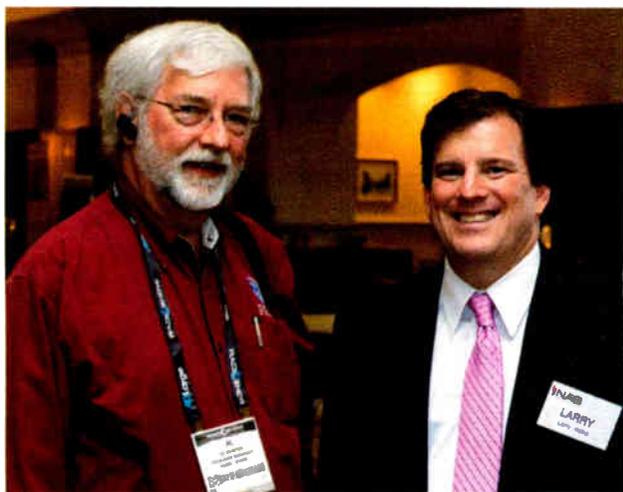
All analog LPTV stations, including those essentially operating as radio stations, have a limited shelf life; they're due to soon sunset. Analog LPTVs or TV translators operating on Channels 2 to 51 must end analog operation and convert to digital by Sept. 1, 2015.

The existence of a sunset date is probably why the FCC has avoided addressing concerns of radio broadcasters about whether these "Franken FMs" are permissible, according to Scott Flick, partner in Pillsbury Winthrop Shaw Pittman. Some radio stations, especially those at the lower end of the FM dial, complain that the LPTV "radio" stations cause interference.



Photos by Jim Peck

Fred Jacobs of Jacobs Media and Roger Lanctot of Strategy Analytics showed videos of consumers struggling to figure out how to turn on the radio in 'connected' cars.



FEMA IPAWS Program Manager Al Kenyon, left, was a panelist while NAB Associate General Counsel Larry Walke helped facilitate 'Radio Regulatory Jeopardy.'

"It's a problem that that's ultimately going to solve itself," said Flick during a "Regulatory Jeopardy" panel. He thinks some LPTV operators might seek a waiver to extend that deadline, but they "would need to meet a high hurdle" to get a waiver.

RADIO CONNECTED CAR GROUP FLOATED

As automakers and manufacturers of infotainment systems build the so-called "digital-dashboard," radio should make sure broadcasters have their say.

So argues Jacobs Media President

Fred Jacobs. He floated the idea of an industry consortium to protect radio's place in the dash. "Radio needs a voice" in connected car discussions, he told a room full of attendees at a session in Orlando.

"We're hoping this gets some lift and becomes a reality," Jacobs told Radio World afterwards.

Jacobs Media and Strategy Analytics project there will be 140 million connected cars on the road globally by 2017. The companies said

that as new infotainment systems come online, consumers can be confused about all the options available to them.

Fred Jacobs and Roger Lanctot, associate director of Strategy Analytics' Global Automotive Practice, showed video clips of consumers struggling to turn on the radio and tune stations on a variety of in-dash big-screen infotainment systems. Jacobs and Lanctot urge broadcasters to test-drive connected cars and let OEMs know that radio wants to be a part of the connected car's future.

Another takeaway of the session: "Rethink HD Radio," Jacobs said. "Most OEMs believe the technology is a major player in the connected car, especially because of the big data pipe."

Shortly after the show, Ford announced it had acquired Livio, which makes products and software tools to support smartphone/car connectivity. Its products include Livio Keys, a software package that helps app and content partners work with OEMs for promotion and marketing in the car. Another, FM Traffic Button, involves software code that's added to an embedded app on

the in-dash display; no smartphone is required to feature traffic reports from Clear Channel's Total Traffic Network.

The purchase allows Ford and Livio to share technologies, intellectual properties and engineering talent. Their stated goal is to work toward an industry standard for in-car connectivity and smartphone-to-vehicle communications.

CONNECTED CARS: GAME CHANGER

The so-called connected car is an unsettled frontier for the delivery of mobile services. Each automaker is using a different technology and user interface to deliver radio and other entertainment to new, big-screen displays, and this can be confusing for buyers.

Connectivity has become a major factor in car-buying decisions, and dealers spend a lot of time explaining the new systems to consumers, even after purchase. Executives from automotive, receiver and Internet audio services discussed the state of in-dash integration at the RAIN Conference.

Currently, a driver "connects" to a car using either an embedded in-dash solution or by tethering a smartphone to the vehicle, with the phone controlling action on the display. Research company eMarketer predicts there will be some 40 million "connected" cars by 2014, and calls coming advancements a "game changer."

"Once everyone can hit a button in their car and turn on Pandora just like a local station, then we'll see the impact to traditional radio," GroupM Next executives Steve Sherfy and Jesse Wolfersberger predicted at the RAIN Summit.

Automakers and their suppliers say they are creating solutions for consum-

ers to access entertainment the way they want to. Pioneer, for example, takes a technology — whether traditional broadcast, satellite radio, HD Radio or Internet radio — and develops a hardware or software interface, according to Ted Cardenas, vice president of marketing for Pioneer's Car Electronics Division. With its aftermarket AppRadio service, Pioneer brings Pandora into the vehicle, too.

And what does it mean for Pandora to be "in the vehicle?"

Pandora Automotive Business Development Director Geoff Snyder says the service is available on approximately 100 car models. Other consumers listen via a phone connected to the vehicle by Bluetooth wireless or USB port. The Pandora app provides metadata to the radio display, and the "skip track," "thumbs up" and "thumbs down" controls are transferred to the dash. Using the app makes it easier to control the display, "as opposed to someone using the Aux jack," said Snyder.

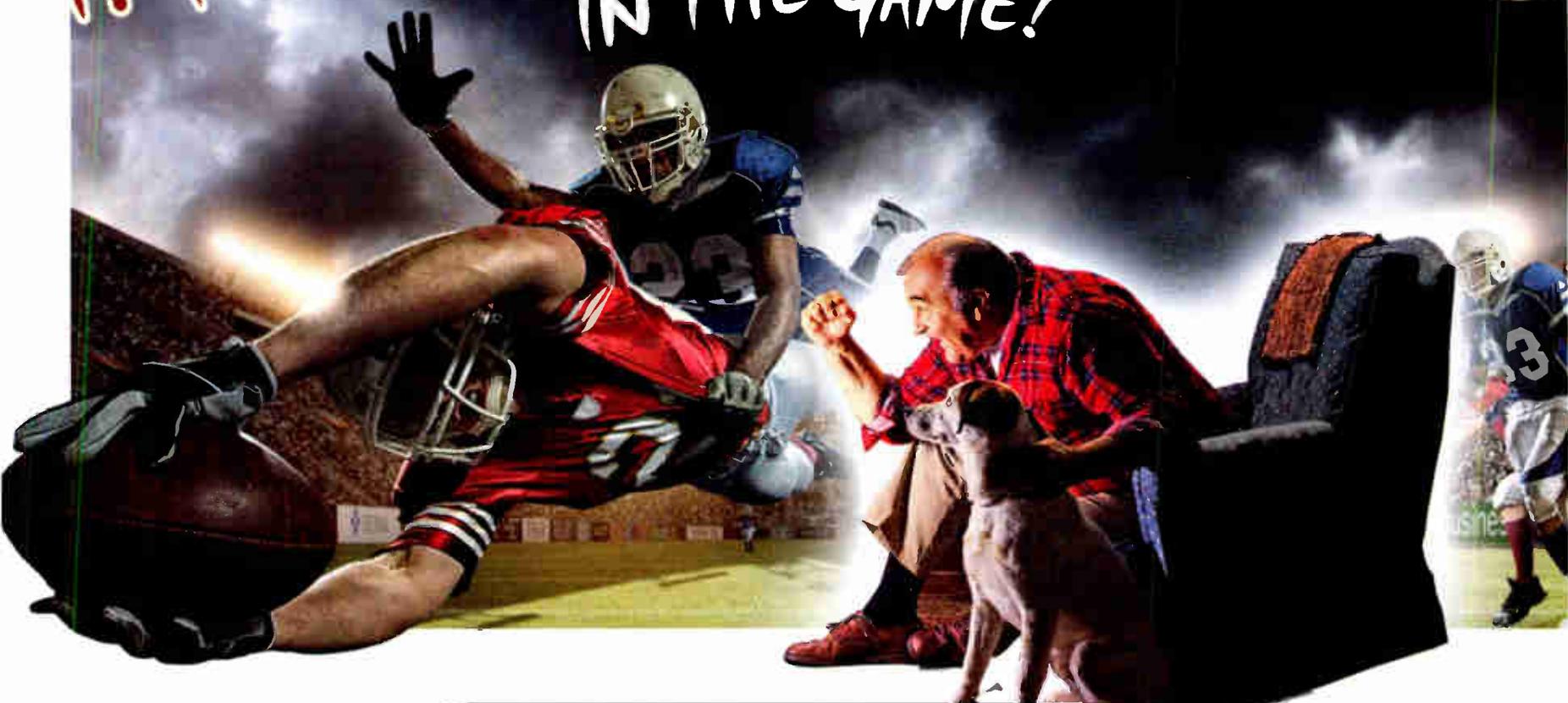
Ford is in the process of launching its Ford AppLink in Europe and the Asia-Pacific region, according to Scott Burnell, the global lead for business development and partner management in Ford's Developer Program. Ford Sync with AppLink enables drivers to voice-activate apps from behind the wheel. The capability has been on some Ford models available in the U.S. since 2010.

AppLink is the ability to extend command and control of an app running on a mobile device to the human interface of the vehicle, he explained. "It's the ability to take actions and habits you already have outside of the vehicle and extend those to the vehicle in a more appropriate way," said Burnell, with buttons "mapped" to voice commands and some actions locked out for safety while the car is moving.

(continued on page 10)



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RADIO SHOW

(continued from page 8)

When planning products, how do companies take into account different consumer preferences, like those who don't want to integrate their phone into the dash? "Maybe you're not committed to handing over control to a smartphone," said Cardenas. That's why Pioneer's AppRadio comes in two versions: with and without a CD player. However, noting that it's been more than 20 years since CDs were introduced and cassette products are still being made, "the compact disc isn't going away anytime soon," he predicted.

HD RADIO RECEIVER SALES NEAR 15 MILLION

The HD Radio rollout is still showing momentum, according to iBiquity Digital.

Digital receiver sales are approaching 15 million, and some 12 million of those are in new cars or are auto after-market units.

About 35 to 40 percent of new cars sold in the United States this year include HD Radio technology. Many of those automakers offer HD as standard across their vehicle lineups. Where the capability is not standard, it's offered as part of an optional package or trim level on most premium or navigation radios.

Company President/CEO Bob Struble predicts penetration will rise to half of all new cars next year. "That growth



Photo by Jim Peck

HD Radio developer iBiquity Digital displayed five cars to show implementations on infotainment systems. On hand were these 2014 models: Lexus IS 350, Lexus IS 250, Toyota Corolla, Mitsubishi Outlander and Chevrolet Traverse.

rate, we think, is going to continue to rise into the foreseeable future."

As the installed base of HD Radio receivers rapidly increases, so has listening to HD2/HD3/HD4 programming.

There are 1,475 multicast channels, according to Arbitron and iBiquity.

According to the latest spring 2013 Arbitron Radio audience estimates, more than 4 million people listen to

an HD2, HD3 or HD4 channel over the air or online in an average week, an 11 percent increase over fall 2012 listening estimates. That's an 11 percent increase over fall 2012 listening estimates, when 3.6 million listened to a multicast channel on-air or online. Arbitron considers both HD signals heard over-the-air and online to be "digital" and does not break them out separately.

MARTIANS

(continued from page 4)

charisma and mischievous personality of the 23-year-old Welles.

Overall I thoroughly enjoyed the "American Experience" documentary.

I learned about the interactions between Welles, Houseman and writer Howard Koch. I was reminded of the story of Koch picking out Grover's Mill on a map with his eyes closed.

I appreciated the descriptions of fervid show preparation in the week prior to broadcast; the delivery of a wax disk recording of Thursday's rehearsal to Welles at his hotel in the early morning of Friday and his declaration that it was "abysmally dull," which led to massive rewriting; and the influence of a radio show Welles had heard hours earlier by Archibald MacLeish called "Air Raid" that used news bulletins in dramatic fashion.

The filmmakers provide an account of actor Frank Readick preparing to portray reporter Carl



National Archives

Welles and John Houseman were photographed during a rehearsal of 'Horse Eats Hat,' 1936.

Phillips by going down to the CBS record library to listen to the eyewitness account of the Hindenburg accident. And there's a wonderful story told by Peter Bogdanovich about Welles' use of mic technique, standing at a podium in Studio 1 on the 20th floor of CBS in New York, holding 10 actors and a 27-piece orchestra silent at one particularly compelling moment.

The TV show is loaded with delightful archival photos and film clips. Radio history buffs will have a field day trying to identify classic radios on display. And the documentary reminds us of the power of sound when wielded by people who know what they're doing — as Douglas puts it, "working in a medium that denies sight."

The producers describe the 75th anniversary of "War of the Worlds" as a timely reminder of the power of mass media. "During times of enormous cultural fragility and uncertainty," Douglas said, "people turn to trusted media sources and can be powerfully influenced by them. Still."

Arbitron released the figures before it became "Nielsen Audio" after the show.

NEW APP, WEBSITE FOR HD RADIO

iBiquity Digital redesigned the HD Radio promotional website and launched an HD Radio Guide app for iOS and Android.

The redesigned *hdradio.com* simplifies the message to consumers and broadcasters "so they get the same experience of what HD Radio offers," and not from solely a corporate perspective, iBiquity Senior Vice President Joe D'Angelo told Radio World. The site uses geo-location to list primary and multicast stations available in a user's area.

The HD Radio Guide App is designed to help consumers learn about content and discover HD2/3/4 stations. Using the interactive station guide, consumers can connect with stations through SMS, phone and social media networks. The app includes a guide to receivers including "buy" links. To get the app, text APP to 25859 or download it through the iTunes App store or Google Play Android Market.

Separately, iBiquity partnered with Toyota to give away a 2013 Scion FR-S sports car equipped with an HD Radio receiver. Participants have until Oct. 29 to enter. U.S. residents can enter at *hdradio.com*, by downloading the HD Radio Guide App or by liking the HD Radio Facebook page.

Next issue: AM revitalization.

NEWSROUNDUP

APPLE: Apple iTunes Radio is heading to a number of English-speaking countries in 2014, including the U.K. and Canada, before making its way to Australia and New Zealand, Bloomberg reported. Competitor Pandora made its first overseas forays to Australia and New Zealand, we've reported.

LPFM: In early October, the partial federal government shutdown continued, putting the LPFM application window timetable in doubt. Low-power proponents were trying to figure out a plan to propose to the FCC once the commission reopened, and all of its online databases were available. The window had been set to open Oct. 15. The commission said that if its databases were overwhelmed upon reopening by a glut of filings, it would issue further instructions.

O'RIELLY: The Senate Commerce Committee postponed its Oct. 3 vote on several nominations, including one to okay Michael O'Rielly as a GOP FCC commissioner. Though Congress wasn't closed in the government shutdown, lawmakers and their staffers were finding it difficult to do their jobs. The delay means the five-seat FCC will have only three commissioners for at least little longer.

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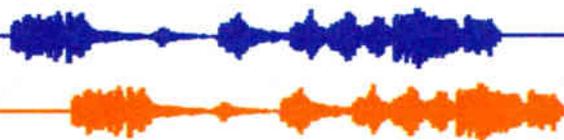


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A Tale of Two Sample Loop Connectors

Or, how to make sense of off-kilter antenna readings

WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

Consultant Tom Osenkowsky recently received a call from a contract engineer. His client's two-tower AM directional antenna produced erratic antenna monitor readings. The engineer wondered which phasor controls to adjust in order to bring the array back within licensed values.

Tom urged him to take a set of monitor point readings in the two deep nulls during both "good" and "bad" antenna monitor readings. The engineer did so, noting no change in the field.

This indicated to Tom that the problem was in the sampling system that was feeding the antenna monitor, not in the RF feeder system. His hunch was verified by examining the sample loop connectors. Connector 1 was sealed using multiple layers of electrical tape. Connector 2 was sealed properly, using



Fig. 1: A corroded RF connector, sealed only with electric tape.



Fig. 2: A manufacturer's weatherproofing kit guards against corrosion

the manufacturer's heat shrink weatherproofing kit.

The differences are obvious when you compare Fig. 1 and Fig. 2. Cutting corners and not using the coaxial cable manufacturer's weatherproofing kit can cause the kind of damage seen in Fig. 1. Not only does the work need to be repaired, but this negates any money-saving rationale for the electrical tape process in the first place.

Thankfully for the station, the contract engineer sought advice *before* adjusting the phasor. By replacing both connectors and sealing them properly following the manufacturer's instructions, the engineer returned the antenna monitor readings to normal.

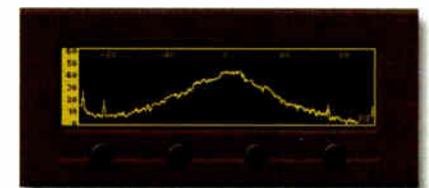
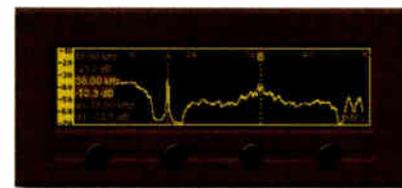
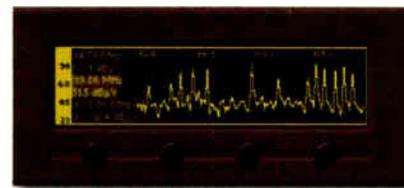
Tom Osenkowsky can be reached at tosenkowsky@prodigy.net. Thanks, Tom, for a great troubleshooting tip.

Another phasor adjustment tip: Check the couplings that connect the variable capacitors or inductors before making adjustments. Most phasor controls have "turns counters" that give you a reference of where the inductor or capacitor is set; and sometimes the setscrews on these couplings

(continued on page 14)



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WORKBENCH*(continued from page 12)*

get loose.

The result is a nightmare. As you adjust the components, the loose setscrews permit the variable component shafts to turn erratically. In a situation like this, the indications on the "turns counter" become worthless.

So what do you do? A common phasor maintenance procedure is to rock the controls while a second engineer observes that the

Fig. 3: LED lighting sources illuminate dark spaces.



coupling is not slipping as the adjustment knob is turned. (Of course, turn off all RF power to the phasor for the procedure.)

You should perform this procedure before making any major phasor adjustment. Tightening all hardware inside the phasor and antenna-coupling network also makes sense.

Phillip Vaughan is chief engineer of Southern California's K-FROG. In past issues, we've shared engineers' ideas on how

to illuminate dark locations using LED lighting. Phillip recently installed some new studio furniture, but due to the configuration he found very low visibility behind the equipment.

He decided to buy a 12-volt supply and some stick-on LED strips; he reports that it works beautifully. Now all Phillip has to do when working on equipment inside the furniture is flip on the switch for the 12-volt supply feeding the LEDs.

Next project, Phillip is planning on adding some of these inside the back doors of his equipment racks in the rack room.

Fig. 3 shows a portable battery-powered LED light, with a built-in hook. LED technology has exploded in recent years, with more efficient lighting options.

Phillip Vaughan can be reached at philv@kfrog.net.

In switched-mode power supplies (SMPS), the switching element is typically a MOSFET. Paul Sagi, writing from Kuala Lumpur, Malaysia, was repairing a piece of pro-audio gear that needed a new MOSFET. The old one had failed from overheating. These supplies also use a series RC snubber and Paul could not find the proper values of R and C from his parts supplier, so it was time to improvise.

Paul chose other values of resistance and capacitance having the same RC time-constant, same power dissipation rating and same voltage rating. The new combination worked well enough and the new MOSFET ran cool.

Paul has provided links to pages that explain some things about how to give a MOSFET a proper snubbing. They can be found at radioworld.com/links. Thanks, Paul, for a treasure trove of links.

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

Author John Bisset has spent 44 years in the broadcasting industry and is still learning. He handles West Coast sales for the Telos Alliance. He is SBE Certified and is a past recipient of the SBE's Educator of the Year Award.

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Whether you are streaming now or getting ready to, there's no better investment you can make in your station than to ensure those streams sound great. That's exactly what Aura8-IP does.



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Satellite Uplink Peak and Spectral Control

The key here is keeping signals under control. Aura8-IP is perfect for the job, keeping an eye (or ear) on the peaks as well as ensuring the spectral range stays consistent.



IFB Conditioning

Clear communications between director, engineering and talent is key to presenting successful sports and multiple-report shows. Aura8-IP is perfect for cleaning up IFB.



Automation Streams

Wheatstone enjoys technology partnerships with the leaders in broadcast today. Use the AGC in Aura8-IP to keep your automation streams clean and under control.



STL Pre-Processing and Protection-Processing



There are a lot of dedicated STL systems out there. Or, if you have a WheatNet-IP, it's the perfect solution. No matter HOW you handle STL, let Aura8-IP handle processing to ensure the audio is optimized for it.

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ARC Plus Provides Remote Control From ... Mozambique

Burk's Version 3 firmware gets a thumbs-up for world-travelling engineer

USERREPORT

BY CHARLIE WOOTEN

Director of Engineering and IT
Clear Channel/Panama City, Fla.

PANAMA CITY, FLA. — For many years, the stations that comprise the Panama City, Fla., market cluster for Clear Channel had a variety of remote control systems. Some of these systems eventually were discontinued and not supported by the vendors anymore.

In 2002, capital was approved to replace these aging systems with a common platform. Burk Technology had introduced the ARC Plus; the system was selected to be that platform. Before the ARC Plus units were delivered, it was determined that there were some problems with the new product and Burk decided to delay deployment.

HAPPY RETURNS

Burk offered to send new ARC-16 systems and equip them with all of the capabilities we needed at the three FM and one AM transmitter sites until the ARC Plus was "ready for prime time." We agreed, ARC-16s were

The screenshot shows the Burk ARC Plus web interface. At the top, it displays 'BURK TECHNOLOGY' and 'ARC Plus'. The interface is divided into several sections: 'Channels', 'Meters', 'Status', and 'Command'. The 'Meters' section shows a table with columns for '#', 'Channel', 'Value', and 'Units'. The 'Status' section shows a table with columns for '#', 'Value', and a green indicator. The 'Command' section shows a table with columns for '#', 'Lower', and 'Raise', with buttons for each channel.

#	Channel	Value	Units
1	Plt Volt	11.8	KV
2	Plt Cur	2.85	Amps
3	Pwr Out	97.6	Powr
4	Temp	78.1	Deg
5	Chan 5	4	mV
6	Chan 6	0	mV

#	Value
1	FILAMENT ON
2	PLATE ON
3	AUTO POWER ON
4	SITE POWER OK
5	NORMAL POWER
6	ON NORMAL POWER

#	Lower	Raise
1	Filament OFF	Filament ON
2	Plate OFF	Plate ON
3	Lower Ch3	Raise Ch3
4	Lower Ch4	Raise Ch4
5	Lower Ch5	Raise Ch5
6	Lower Ch6	Raise Ch6

Burk ARC Plus Web

installed and it was agreed we could keep these and return them for full credit when the ARC Plus systems were delivered.

In 2009, the UPS man delivered a stack of Burk boxes containing the newly revised ARC Plus systems for all of my sites. As promised, Burk took back the ARC-16 systems for full credit and I installed the ARC Plus units in their place.

Installation was easy after the first site was finished and the learning curve for installing the systems and programming the alarms, status, command and metering was fast. Initially, some of my sites did not have high-speed Internet connectivity so I could not take advantage of the IP connectivity and I used the telephone interface at those sites. My WDIZ(AM) site and the WEBZ(FM) transmitter site had DSL with static IPs so I was able to have both IP and telephone connectivity with the new ARC Plus units immediately.

Version 1 and 2 of the firmware utilized Java and could be a little testy at times according to the speed and other factors; however, now that the new Version 3 firmware is loaded, I am also able to access the ARC Plus units at my other sites, WPAP(FM)/WFSY(FM) and WFLF(FM), using the low-speed connectivity of the Clear Channel SATL satellite system ... something I could not do successfully with the earlier versions using Java.

The new Version 3 firmware is rock-solid via both IP and telephone. I should note that telephone connectivity was fine with Versions 1 and 2.

SOFTWARE

Another advantage of the Version 3 software is that I can monitor and control my sites through my iPhone's browser. The ARC Plus has a built-in Web server and it allows me to read all meters, check status channels and control the transmitters at all of my sites. It also automatically changes my AM site's daytime and nighttime pattern and power.

I might add that I do some international travel related to ham radio DX contests and DXpeditions and I have sat in my hotel in Croatia, the island of St. Martin and on Midway Island (literally in the middle of Pacific Ocean) and checked my transmitters using the Web interface. It is likely that by the time you read this, I will have already been to Mozambique on another DXpedition in October, and I am confident that I will have been able to check on my sites from there as well.

If you have an ARC Plus and you haven't upgraded to the Version 3 firmware, I would strongly recommend it. It will make things even simpler with the ARC Plus.

I have found the ARC Plus system to be very reliable. I have UPS power at each of my sites so that it may call out in the event of a power failure to let me know that the power has failed and that the generator is online and the transmitters returned to the air.

Setting up the ARC Plus is simple and requires no scripts, drawing diagrams or special programs except for a simple self-explanatory program to do the initial setup for the site. One can have a site up and running in less than an hour.

If you are considering a replacement for your current remote control system for the transmission facilities, I would strongly recommend that you take a hard look at the Burk ARC Plus. I think you will like it.

For information, contact Matt Leland at Burk Technology in Massachusetts at (978)486-0086 x703 or visit www.burk.com.

The screenshot shows the Burk ARC Plus iPhone app. It displays a table with columns for '#', 'Meters', 'Value', and 'Units'. Below the table, there is a 'Status' section with a list of items and green indicators.

#	Meters	Value	Units
1	Plt Volt	11.8	KV
2	Plt Cur	2.85	Amps
3	Pwr Out	97.6	Powr
4	Temp	74.7	Deg
5	Chan 5	4	mV
6	Chan 6	0	mV

#	Status
1	FILAMENT ON
2	PLATE ON
3	AUTO POWER ON
4	SITE POWER OK
5	NORMAL POWER
6	ON NORMAL POWER

The ARC Plus iPhone App

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World Radio History

Audemat Sticks the Remote for STIC

French nationwide traffic information network requires reliability

USERREPORT

BY GUY LE MARC
Chief Executive Officer
STIC

PARIS — I can understand why signal monitoring and network supervision is a useful tool for any broadcaster or broadcast service provider.

However, for us, the information transmitted is of such vital, sometimes life-saving, importance that the ability to have reliable round-the-clock monitoring and alarm management is absolutely essential.

BORDEAUX

I am the CEO of STIC, a Paris-based system integrator specializing in the provision of services and networks relating to 107.7 FM — the highway traffic information radio service broadcast on a single frequency throughout France. We operate an extensive network with transmitters installed on average every 7–10 kilometers (4–6 miles) along a 5,000-kilometer (3,000+-mile) stretch of highway.

We provide our broadcast customers with turnkey solutions — everything from the transmitter itself to the buildings where they are installed and through to the tower and antennas.

Our latest project involved installing a 107.7 FM network along the A63, a recently opened 120-kilometer

(75-mile) stretch of highway linking Bordeaux and Bayonne. This required the installation of a single-frequency network encompassing a network head-end and 10 synchronous transmitter sites — all of which would require close supervision.

The information provided by the 107.7 FM broadcast is of strategic importance and we are required to provide 99.99 percent service availability. Therefore the selection of suppliers is of critical importance to us to ensure that we can meet this requirement.

For the A63 project, Audemat made us a proposal incorporating both a hardware-monitoring platform — the FM Monitoring Silver and a software server package called the Broadcast Manager — which could aggregate the information from each transmitter location and provide us with a global overview of the network.

CONSIDERATION

After careful consideration and research we selected this Audemat solution as the most appropriate for the A63 installation and the only one on the market that provided all the functionality we required. We went live in February 2013.

We have an FM Monitoring Silver platform at each of the 10 transmitter sites and these are all linked via an IP connection to the Broadcast Manager package running at our network operations center. The FM Monitoring Silver units con-



A typical STIC site setup. Note the Audemat Silver in the middle of the rack. WorldCast also provided the Ecreso Goliath transmitter amplifier at the top of the rack.

tinually monitor the performance of the network and broadcast and can stream or record the audio as required.

The units also feed other information to let us know what is happening at the site. For example, using the contact closures, we are able to monitor the door contact at any given site and be alerted to the presence of any unexpected visitors!

We have found the system easy to use and have programmed it with our predetermined levels of acceptable performance.

If any monitored parameter exceeds the acceptable limits, an alarm will be triggered.

The alarm is not only shown on the Broadcast Manager display but we have been able to configure the system so that all relevant, available personnel are notified immediately via SMS or email of the alarm condition and a repair or maintenance team can be sent to the site to rectify the issue as soon as possible, minimizing or avoiding any disruption to the network.

INSTALLATION

Since its installation in February, the Audemat system has proven reliable, and we are pleased with the features it offers and how easy it is to operate.

With such an extensive network, we appreciate the ability to have a centralized overview of multiple sites and to still be able to drill down to view an individual parameter at a particular location.

This ability combined with the targeted and scheduled alarm management capabilities allows us to operate efficiently and maximize the use of our resources while still enabling a lightning-fast response to problems.

An added benefit was that we were able to order transmitter amplifiers from Audemat's partner company within the WorldCast Systems group, Ecreso, which meant that we had an integrated and compatible system.

The equipment is installed in largely un-airconditioned spaces but we have had absolutely no problems since day one with 24/7 operation.

For information, contact Tony Peterle at WorldCast Systems in Florida at (305) 249-3110 or visit www.worldcastsystems.com.

BUYERS GUIDE CONTINUES NEXT ISSUE

Due to overwhelming response to our Signal Monitoring, Remote Control, Test & EAS solicitation, this Buyers Guide continues next issue — Nov. 6. Look for it.

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Bright idea.

All of our consoles have LED button lamps. They'll stay lit for — well, practically forever. Let's just say, your kids won't have to change bulbs, either.

Big Shot.

Your station super-sizes everything? No problem; iQ can scale from 8 to 24 faders. Handles even the most zany morning crew, talk show - or anything else you think up.

Control at your fingertips.

See these buttons? You can program them (or the button modules available for Element consoles) to perform routing salvos, system-wide scene changes and more. Because great power requires control.

Smarter phones.

Not only are hybrid controls built into iQ for direct-from-the-board control, the iQ6 phone system connects with just one Ethernet cable.

Network everywhere.

No need for cheesy A/V mixers - RAQ lets you put a networked, professional console anywhere, at a price that'll make the even stingiest GM smile.

Double your pleasure.

Did you know that one QOR.16 console engine will power 2 RAQ or DESQ mixing consoles? Makes your money go further on news bullpens, production pods, ingest stations, etc.

Step to the side.

Dirt and liquids: a console's most hated enemy. Element foils 'em with premium, side-loading conductive-plastic faders: dirt drops past, not in.

Who's da boss?

Clients rave about them, talent loves them: over 5,000 on the air makes Axia radio's favorite IP console.

Built to last... and last, and last.

Element modules are machined aluminum with wear-resistant Lexan inserts for long life. We've even designed custom-molded guides to prevent tears around the fader slot. No "ouchies" here.

Unlimited vision.

Some console makers give you "switched meters" to save costs. iQ does away with that annoyance: high-rez OLED displays meter all 4 buses at once.

A low price shouldn't mean "cheap".

Other companies cut corners on their low-cost consoles. Axia packs in as much as possible. Real conductive-plastic faders, machined-aluminum work surfaces, anodized rub-proof markings, aircraft-grade switches. At a price less than some analog "bargain" consoles.

Rack 'em up.

Turn your Radius 8-fader console into a rack-mount powerhouse. Great for OB vans, performance studios, concert remotes and more.

Good timing.

Unlike those other guys' small consoles, DESQ has an event timer and an NTP-capable clock — built-in, not extra-cost. Because time is money (pardon our pun!).

Small but mighty.

DESQ packs big console power into just 18" square. 6 faders, 2 buses, automatic mix-minus, Show Profiles and more. Perfect for standalone or networked studios.

Axia makes the switch.

No "plug-n-pray" unmanaged switches here; Axia builds our own custom zero-config, built-for-broadcast network switch right into our PowerStation and QOR console engines.

Show-off.

Element lets you store up to 99 Show Profiles - "snapshots" that recall channel sources, bus assignments, EQ settings, even fader positions. So every jock can have their own customized console.

Speak your mind.

Element consoles have comprehensive talkback features. You can talk directly to remote studios... even individual talent's headphone feeds. Even our most cost-effective boards let you talkback to callers and codecs.

Handsome devil.

Our meters aren't just good-looking; they're designed specifically to convey the most information possible at just a glance. And Axia consoles support VU and PPM metering styles - something you might not find on consoles that cost a lot more.

Big power, small price.

Radius loads you up with 8 faders, 4 mix buses, automatic mix-minus, onboard EQ and voice dynamics and more — for just \$5990 USD. Shh... don't tell the accountants.

CHOOSING AXIA FOR YOUR NEXT CONSOLE IS EASY. SELECTING ONE MIGHT TAKE AWHILE.

When we introduced AoIP to radio in 2003, some folks thought we were off our nut. Today though, broadcasters agree: picking Axia is the right choice. With over 5,000 on air daily, broadcasters have voted Axia the world's most popular networked console.

Who can blame them? Axia fans say that Livewire™ networking is the most intelligent, flexible IP-Audio system in the industry. And that our huge number of partners, with over 75 broadcast products from phones to transmitters that connect to Axia networks,

makes life much simpler. They also appreciate our 5-year warranty and 24/7 technical support (not that they need it).

In fact, we calculate that thanks to our huge selection of frame, module and mixing engines, there are at least 32,209,982 different ways to order an Axia console. With that many options, you'd better get started now! Mmm... don't you just love that new-console smell?

AxiaAudio.com



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

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World Radio History

TECHUPDATES

NAUTEL IMPROVES ADVANCED USER INTERFACE

Nautel continues to add to the capabilities of the company's Advanced User Interface transmitter control and monitoring interface. The AUI is provided either directly via a touchscreen on the front of the transmitter or remotely via a computer screen. Functionality includes built-in commercial-grade instrumentation; 100 percent remote access; SNMP support; an instrument-grade audio spectrum analyzer; comprehensive monitoring and control; event logging; email notifications; preset capabilities and enhanced support services.

Nautel says that it recently announced new instrumentation via the AUI which allows real-time measurement of MER — Modulation Error Ratio. The measurements follow the NRSC standards for measurement and require no external equipment, the company says. Real-time MER provides the ability to diagnose issues such as interference with MP3 carriers near the analog signal due to FM analog signal overmodulation.

MER measurement is available on Nautel NV and NX Series transmitters with software release 4.0 or higher. It may be viewed in the AUI Constellation View display on the front panel LCD touchscreen or via the Web.

For information, contact Nautel in Nova Scotia at (902) 823-5131 or visit www.nautel.com.



WHEATSTONE DEVELOPS A WALL OF METERS

Wheatstone isn't usually associated with signal monitoring and measurement devices but the IP audio revolution changes things.

The company says that in today's connected world of AoIP, it's nice to know what's going on with audio on a network. Not just the audio at local sources and destinations, either, but all audio at every point in a network.

That's why Wheatstone has developed a new app, IP Meters GUI. Designed for the WheatNet-IP network, IP Meters GUI gives users ongoing metering of audio levels, signal density, FFT readings and more.

IP-MTR64 Meters GUI is customizable and allows for display of an array of metering and analysis on the monitor of any computer connected to the WheatNet-IP Intelligent Network. In addition, the meters have silence detection, so it can be determined at a glance if an audio stream has gone down and where.

Each meter in the IP "wall of meters" can be set up as a horizontal, vertical or eyebrow bargraph meter. Dozens of meters can be displayed at any time on the wall. Users determine where and what to meter: console inputs, mic outputs, the satellite receiver, studios, web streams, etc. In addition, a separate analysis window allows focused viewing of one audio stream in a variety of informative ways, including FFT, 3D plot, oscilloscope, energy vs. frequency, spectral dynamic range and more.

Style of metering can be curved, horizontal or vertical bargraph for mono or stereo, and for reading peak levels, average levels and peak over average levels. Size, background color and text labeling for each cell is customizable. Multiple layouts, complete with source selection, metering choices, colors, labels, and analysis settings, can be saved and recalled for use in various situations.

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



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- HD SIS and PAD Data
- BER (bit error rate) Measurements
- User Assignable Email, Relay & Display Alarms
- RJ-45 Ethernet Interface with Remote PC Software

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FMCS-1

All-in-One FM Modulation Monitor

Now includes Peak Weighting! (with software update)



- Direct Sampling of FM RF Carrier
- Frequency Agile on both Antenna & High Level RF Inputs
- AM & Sync AM Noise Measurements
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- Digital FM Demodulation with 100dB 75 μ s SNR
- Variable BW Composite Filtering
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INOVONICS FEATURES INTERNET RADIO MONITOR

Inovonics says that its recently introduced Model 610 is the first dedicated hardware solution for the monitoring of streaming online radio quality and performance. Much more than a consumer-grade "Internet radio," the company says, the 610 provides balanced analog and AES digital outputs, self-logging alarms that constantly check for audio loss, stream loss and Internet loss, and an easy-to-use tuner that decodes audio and displays live metadata for MP3, Ogg Vorbis and AAC formats.

Rear-panel alarm tallies provide local alarms and online notifications alert



personnel with reports, email and text messages when any of the alarms occur. Front-panel LED metering displays left and right audio levels plus local alarm triggers. The OLED screen with jog wheel provides control and editing of tuning and monitoring parameters, and the 610's built-in Web interface allows complete set-up and control of the unit from a PC, tablet or smartphone.

The 610 has two-way connectivity ensured with a built-in Dynamic DNS utility. SNMP is planned with the next firmware update. The 610 will stay locked to a stream, even in the event of power cycles, making it useful when feeding a translator. List price \$990.

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

SAGE CAN GO INTERNATIONAL

Sage Alerting Systems' emergency alert message insertion system, the Sage Digital ENDEC model 3644, features multi-language capability and support for international profiles of the Common Alerting Protocol.



The Sage ENDEC supports internal text-to-speech conversion of CAP alerts in English, several Spanish dialects and French Canadian.

It supports language-tagged audio files in any language, used for human voices alerts as well as server-based text to speech.

The ENDEC uses the U.S.-flavored Emergency Alert System CAP messages, the Canadian CAP-CP and pure CAP formats, and is compatible with a number of alert servers, the company says.

For international users, the ENDEC is available in a higher-density format, supporting the equivalent of four ENDECs in a 1U high rack package.

Sage says that the four interfaces can be any combination of AES/EBU digital or balanced audio output, with the four alerts running independently of each other.

This allows eight model 4644 ENDECs to fit into the space of a single model 3644.

For TV, when paired with any of variety of UTF-8 capable video/text insertion equipment, the ENDEC can also insert text data from the CAP message in any language.

For information, contact Sage Alerting Systems in New York at (914) 872-4069 or visit www.sagealertingsystems.com.

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Contain explosive language with **Program Delay Manager**, radio's most advanced profanity delay. Seamless delay exits and builds mean minimal disruption for your listeners. Advanced web features let you control PDM from anywhere. And our patented **PD-Alert™** system emails time-stamped audio every time the Dump button gets pressed, so you'll know what happened instantly when a caller goes off.



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TECHUPDATES

DECODER EXPANSION FOR BELAR FMHD-1 AVAILABLE

A new decoder expansion board option is now available for the Belar FMHD-1 FM HD Radio Monitor.

This option allows the installation of up to three additional HD decoders to provide simultaneous audio output for multiple studios, PPM monitors and silence sensors as well as metering and alarms for each HD stream present.

New features have been added to the FMHD-1 in the latest software update. This free update is available on the Belar website and includes RDS injection level readings and composite peak weighting. RDS injection readings are displayed on the analog bar graph display along with pilot injection. Peak weighting, located under the composite menu, can be set for 3, 5, 7, 9, 15, 20, 30 and 45 cycles, as well as to "disabled."

Belar says that the FMHD-1 is a state-of-the-art HD Radio monitor designed to support the needs of today's broadcaster well into the future. It decodes the HD Radio signal and analog FM signal simultaneously displaying HD Radio status, data, time alignment and configuration information, as well as total, pilot, RDS, L, R, L+R and L-R metering and RF spectrums.

For information, contact Belar Electronics Lab in Pennsylvania at (610) 687-5550 or visit www.belar.com.



GORMAN-REDLICH UPDATES ALERTING EQUIPMENT

Gorman-Redlich Manufacturing Co. is offering a number of updates to its line of U.S.-made emergency alerting equipment, including the CAP-DEC 1 CAP-to-EAS converter and the CRW-S NOAA Weather Radio Receiver.

A welcome feature for users who are tired of paper printouts of EAS logs, the CAP-DEC 1 is available with the ability to store and organize logs electronically on the unit's internal storage device. This logging is accomplished through serial logging software developed by Daniel Bissett and connection of existing EAS equipment to one of the CAP-DEC 1 serial ports. Logs can be transferred later to alternate storage media or printed at the user's convenience. Units may be shipped from the factory with the logging capability included and set up, or field-upgraded by the user.

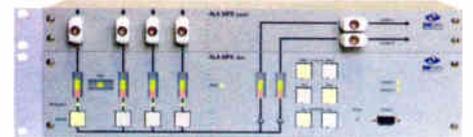
The field-tested Gorman-Redlich NOAA Weather Radio Receiver, whose first-generation model has been in service since 1979, is also getting an upgrade. The CRW-S will now add LED signboard support to its feature list. This augments the alerting ability of the system by working in tandem with onboard relays capable of triggering lights, sirens and PA systems. Also beneficial for remote installations where the unit is physically separate from the primary users, the CRW-S will display alert details in various colors to indicate degrees of event severity.

Gorman-Redlich says it still offers a full line of signal monitoring and EAS equipment in the form of directional AM antenna monitors and Emergency Alert System encoder/decoder equipment.

For information, contact Gorman-Redlich in Ohio at (740) 593-3150 or visit www.Gorman-Redlich.com.

2WCOM DEVELOPS AUTOMATIC MPX SWITCH

2wcom has launched the ALA-MPX, an automatic switch that analyzes MPX modulation sources and selects the best available source for FM transmission.



When used with multiple MPX sources, ALA-MPX gives radio broadcasters the means to build robustness into their transmission infrastructure, guaranteeing service continuity in the event of failure in any source, 2wcom says. ALA-MPX also assures the quality of the signal reaching the audience by switching to the best available source for transmission.

Up to three MPX sources — e. g. E1 (G703), IP, rebroadcast receiver — can be continuously evaluated, and audio received via satellite and multiplexed at the transmitter site can also be sent to a fourth input on the ALA-MPX, where it can be compared with the other sources. Each source is monitored by the ALA-MPX using a range of quality criteria and compared against the other available sources. Switching to the best source is automatic, but can be overridden to allow manual switching if required sources can be prioritized.

Designed to offer a high degree of versatility in a variety of configurations, ALA-MPX generates alarms that can trigger SNMP traps and switch up to 12 relays. Balanced connections are provided for all inputs and outputs, together with dual redundant power supplies. Configuration and monitoring is made easy through a Web interface and monitoring/analysis data is shown in graphical form to support at-a-glance decision-making.

For information, contact 2wcom in Germany at +49-461-662830-0 or visit www.2wcom.com.

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It's the question on everyone's lips: "What comes after ISDN?" The answer: Z/IP ONE, the Telos Zephyr for IP connections. Broadcasters fell in love with the original Zephyr for its rock-solid reliability and superb audio; Z/IP ONE brings those same qualities to IP remotes.

Is IP reliable? TV networks say so - they use it for HD video backhaul. And Z/IP ONE is packed with IP-codec "smarts" to ensure reliability, even over the public Internet. Agile Connection Technology adapts to network conditions, delivering audio quality as good or better than ISDN despite packet loss and jitter. Genuine, high-performance MPEG codecs from Fraunhofer for exceptional fidelity — no lame knock-off codecs. No latency build-up, re-negotiation or fiddly adjustments: Z/IP ONE just works.

There's more: Z/IP ONE incorporates SIP, N/ACIP, and IPv6 standards. The worldwide Z/IP Server connection service helps traverse NAT routers and tricky firewalls. And now, you can do great-sounding handheld remotes using LUCI® LIVE smartphone and tablet apps. All of which makes Z/IP ONE perfect for live remote broadcasts, whether concerts, talk show remotes, off-site talent — even full-time STL links or RPU backhauls.

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High-quality remotes are right in your pocket.
Z/IP ONE now connects to LUCI LIVE smartphone apps for wideband audio on-the-go.



BUYER'S GUIDE

TECHUPDATES

DAYSEQUERRA PROVIDES MONITORING AND HD ALIGNMENT

DaySequerra says that its M4FM-HD is a powerful and cost-effective FM analog radio modulation monitor.

Using a state-of-the-art quad-core Texas Instruments DSP, all of the M4FM-HD processing takes place in the digital domain. The company says that results in analog FM performance (SNR > 90 dB and THD < 0.01%) as well as simultaneous total, pilot, L, R, L+R and L-R, and all MPX-SCA modulation level measurements with better than 1.0% accuracy.

The M4FM-HD also has high-quality Class A biased audio outputs at +4dBu on XLR connectors for precise monitoring. The rear panel GPIO port provides opto-isolated input and relay-contact closure alarm outputs for loss of audio, carrier and RBDS, as well as audio peak.

The M4FM-HD can be controlled from anywhere via the M4FM-HD's integrated webserver, which is compatible with all browsers and operating systems. The



M4FM-HD can send alarm emails and stream audio to a phone.

The DaySequerra M4DDC Diversity Delay Control is a 1RU, standalone AM/FM solution and runs DaySequerra's new proprietary TimeLock algorithm to automatically maintain time alignment of the HD Radio MPS and HD-1 audio streams.

The M4DDC issues email alerts for loss of TimeLock, Level-Lock (optional), program audio, carrier or OFDM HD Radio Lock. There are five rear-panel alarm tallies.

The M4DDC receives the off-air broadcast, measures the timing difference between the MPS and HD-1 streams, and generates a correction vector necessary to realign the two streams.

The M4DDC also has a Level-Lock Control option. This proprietary loudness control automatically maintains average audio loudness differences between the HD Radio MPS analog and HD-1 digital audio streams to less than 3 dB. Its proprietary lookahead gain correction makes audio level adjustments that should be transparent to listeners.

For information, contact DaySequerra in New Jersey at (858) 719-9900 or visit www.daysequerra.com.

OMNIA DEVELOPS MPX TOOL AND MODULATION ANALYZER

Processor maker Omnia Audio has released something a little different, the Omnia MPX Tool/Modulation Analyzer. The company describes it as a comprehensive analysis unit which allows for the investigation and management of an operation's modulation and transmission characteristics. With an optional FM tuner, additional capabilities are added, which include the analysis of other stations in the market, the company says.

Features include modulation analysis tools such as FFT, oscilloscope, RTA; stereo decoding; remote control with streaming audio; HTTP server for control and logging; ITU-R BS.1770-3 Loudness metering; Omnia.Direct Digital Composite (AES); stereo baseband analog inputs and outputs; and dual analog MPX (composite) inputs.

The two-rack unit box's front-panel has an LCD touchscreen and headphone output. On the back panel is a gigabit Ethernet port.

Options available include an FM tuner which will support FM/HD Radio/DAB/DAB+ along with dual power supplies. The Omnia MPX Tool/Modulation Analyzer is expected to ship in early January.

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



DEVA SHIPS MOBILE FM RADIO ANALYZER

DEVA Broadcast says that its Radio Explorer II is a full-featured device designed to cater to all RF signal analysis requirements, a mobile tool that evaluates FM broadcast band congestion and stores important broadcast parameters in log files.



Its FTP system allows downloading and managing of the files through DEVA Device Manager Software. The front-end tuner is DSP-based for powerful processing of FM signals.

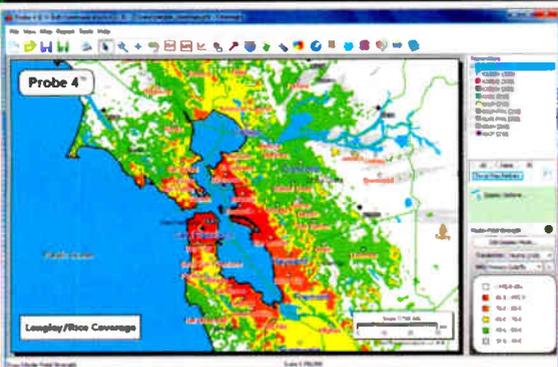
The Radio Explorer II is also suitable for field surveys and on-site monitoring of a station's complete signal, the company says. According to DEVA it excels in analyzing signal strength and quality after repairs or after installation of new equipment. It measures RF level, MPX deviation, left & right audio levels, RF field strength, RDS and pilot injection levels. Measurements are visualized on an OLED display.

Measurements can be visualized in Google Earth; the company says this functionality is critical when current information on FM band congestion and coverage is needed. In addition, the log file can be exported and saved as a transitional format for future analysis.

For information, contact DEVA Broadcast in Bulgaria at 011-359-56-820027 or visit www.devabroadcast.com.

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allows you to schedule the recording of a network or any other program for replay later as well as a basic logging system. Beside these additions the system schedules music, does voice tracking (ALWAYS hit the vocal), create a shell, live assist, exact time events, join satellite feeds, automated temperature announce, do unattended remote events and more. Call (406) 679-0527 or email krws@digitaldevelopment.net for a copy today.

WANT TO BUY
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CODECS

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

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

Willie Mays and Felipe Alou stealing second base, running time is 18:02, also looking for SF Giants games and/or highlights from 1958-1978 also taped off KSFO Radio. Ron, 925-284-5428 or ronwtamm@yahoo.com.

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

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READER'S FORUM

PAST AND PRESENT

Bill Mountjoy, in his letter to the editor on Aug. 14 (*Reader's Forum*, "Walk Down Memory Lane"), wrote that the Gates Model 51CS Studioette is so rare, its photo isn't found on the Internet. Fortunately for me, I can enjoy the view from my desk!

As we are celebrating our 60th anniversary at Utah Public Radio, we have on display our original Gates Model 51CS Studioette console, dating from our carrier current days of 1949, along with our original American DT-4 microphone. Please find now-and-then photos attached.

The photo from 1950, right, has Lee Frischknecht, the future second president of National Public Radio, sitting at the controls as a member of the Radio guild at Utah State Agricultural College (now Utah State University).



This shot from 1950 features Lee Frischknecht sitting in the control room at what is now Utah State University.



Here's one of those rare Model 51CS Studioettes.

Remembering where we've come from yesterday is part of knowing where we will be headed tomorrow.

Friend S. Weller, CBRE
Chief Engineer
Utah Public Radio
Logan, Utah

NOT A FAN OF IBOC

Please, give me a break! This is no better than giving iBiquity a free infomercial in Radio World ("AM Radio, Where Do We Go From Here?"). AM was never designed to handle digital transmission, period! All that IBOC does is clutter and jam an already damaged AM band. AM IBOC should have never been approved by the FCC

in the first place. AM IBOC splatters many channels down from the host frequency. It's a disaster.

Peter Q. George
President/General Manager
WXR(B)(FM)
Whitman, Mass.

MANY LPFMS DON'T PLAY FAIR

As I write, the LPFM window soon will open, flooding the FCC with applications. Communities with one or two local standalone AM stations, as well as the

station operators, need to "stand their ground" against LPFMs.

A huge number of low-power FM operators do not play fair, such as when they sell underwriter-donated time and make spots sound like full-blown commercials on the air. They try to pull away time from small churches and non-profit organizations that want to buy time on the local AM stations. This puts a burden on single, small-town AM operators like me.

Not all LPFM operators are like this, and I am not against the idea of LPFM at all. I know one, WRFN(LP), that is a wonderful station and follows the rules of serving its community. However, many that I have observed around the country are not running their operations on a level playing field.

In my community, we have three local "standalone" AM stations and one noncommercial, 1,000-watt FM station that is licensed to a college. The latter offers free airtime to locals citizens and teaches students the ropes of this industry; it is an up-to-date, well-done college radio station. In my 20s, I was student station manager there. The three local AM stations have a great relationship with the college station, as it serves the community and respects us small, standalone radio operators.

My community, close to a major metro market, does not need an LPFM in this mix. The LPFM might get into the hands of somebody who bends the rules.

Small-town America has seen too many of its local stations go dark for various reasons in the past 20-plus years. We don't need LPFM to finish killing off local AM radio, and what little revenue it pulls in to survive to be a servant to its community of license.

I feel that we AM owners-and-operators should take action to protect the senior band, because local AMs like us were here first.

Scott Bailey
President/General Manager
WMRO(AM)
Gallatin, Tenn.

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Saul Levine
Owner
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Los Angeles

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Russ Evans, host of 'Under the Hood,' Michelle Evans and Tom Hartnett of Comrex run through the feature set of the STAC VIP Phone Caller System. Show organizers estimated attendance at 2,400 people. Next year's convention is in Indianapolis.



Jose Valle, president of Univision Radio, chaired the steering committee for the Radio Show. He made a notable entrance, strutting onstage with a boombox to a blaring street beat. He described the changing needs of radio as defined by how people are now listening on a proliferation of various devices.



Nathan 'Briton' Smith of ADX Communications looks at a display of HD Radio receivers. As OEM and aftermarket receivers for vehicles proliferate, more are incorporating Artist Experience and other hooks to engage the listener.



The ubiquitous on-air light. These are made by Sandies.



Dawn Newberry of RCS chats with Dave Hultsman of Continental Electronics.



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