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INSIDE

PUTTING DOWN THEIR ROOTS

• Grassroots Radio Conference in Illinois sparks ideas and excitement, as LPFM window nears. — Page 30



MIDWESTERN COSMONAUT

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DOGS + RADIO PROMOTIONS

• What more could you want? — Page 42



Ben Downs: AM Needs Technological Help

The Broadcaster and NAB Board Member Cites Migration Paths for the Oldest Radio Service

BRYAN-COLLEGE STATION, TEXAS — Ben Downs is vice president and general manager of Bryan Broadcasting, a radio group of five stations he also owns with business partner and company President Bill Hicks. Downs is in his third term as a member of the NAB Radio Board and is an advocate for technological improvements for AM.

NEWSMAKER

Of Bryan Broadcasting's five stations, four are AMs. The FM broadcasts in HD Radio and also has an associated multicast channel. The company employs some 60 people.

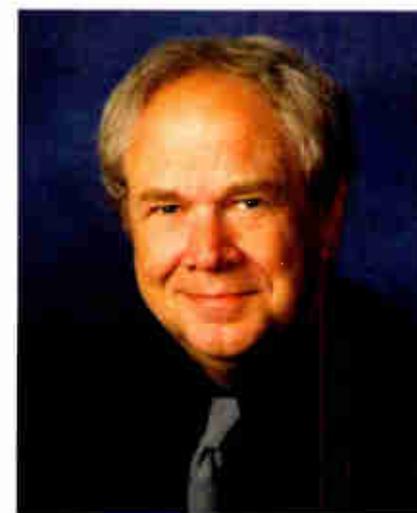
Downs believes in having fun in radio. He's been his town's Santa for nearly 30 years. "I have staff who, when they were children, told me what they wanted for Christmas," he says.

The chairman of NAB's AM Task Force got his start in radio at the age of 14 in 1968 as a part-time announcer in Hope, Ark. He changed transmitter tubes

and worked on cart machines. He says he still tweaks with transmitters because he "likes to touch the gadgets." Downs will moderate an HD Radio panel at this month's Radio Show in Dallas.

The Texas A&M graduate recently spoke with Radio World News Editor/Washington Bureau Chief Leslie Stimson about issues affecting radio, especially improvements for the AM band.

RW: How would you describe the economic health of commercial radio as we
(continued on page 3)



Ben Downs and business partner Bill Hicks own five stations — four AMs and one FM — in Bryan-College Station, Texas. Downs is in his third term as an NAB board member and chairs its AM Task Force.

Streaming's Profit Potential on Trial

Managers Weigh How Much of a Role To Give to Various Digital Tools

BY JAMES CARELESS



Produced by RAB and NAB

Radio audio streams should be real money-makers for broadcasters, because their listeners are the station's most loyal fans — or so goes the logic.

Kathleen Bricketto, Beasley Broadcast Group vice president of interactive, equates this kind of listener to a diehard football fan.

"[They] are the 70,000 people who

reach into their pockets to buy season tickets," Bricketto said. To not market to these faithful listeners, she said, "directly is akin to the Miami Dolphins releasing a Dan Marino retro team jersey, and not marketing

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World Radio History

DOWNNS

(continued from page 1)

ease into fall? Were smaller radio markets affected differently during the downturn?

Downs: Things are really different at the small radio market level. I think we're Market No. 190 or so, and one of the advantages of that is that local advertisers can actually afford to advertise on our stations. And local selling, as anybody will tell you, is really more relational selling. When you're dealing with national accounts, it doesn't matter what you've done to benefit the advertiser. Whoever the latest media buyer is will toss you overboard to save a buck. In small towns like this a national account really has no idea if you've gone the extra mile for a local franchise. But the people in the town know that you bought lunch for a work crew or they know that maybe you helped them out with a public service event that they had going on at their restaurant.

RW: So you may not have experienced the same degree of economic turmoil ...

Downs: We didn't. Since 2009 we've shown fairly good increases year-to-year; 2009 was better than 2008 ... 2010 was better than 2009. We're blessed ... Don't get me wrong; we don't take it for granted. But if, for example, the local car dealer is a member of the Rotary Club, and the Rotary has a special event you supported with free PSAs, they're going to remember that when they place their local advertising buys.



Downs turns on the 200 amp breaker to a new Harris HPX 30 kW transmitter for analog FM and HD Radio for KNDE(FM).

BSW's got the new Air4? This is the HAPPIEST day of my life!



Downs has been the local Santa for almost 30 years. 'I have staff who, when they were children, told me what they wanted for Christmas.'

RW: In the face of more competition from Pandora and other Web-based audio services in the car, what does radio need to do in order to remain relevant in the digital dashboard?

Downs: It's about content. Katy Perry sounds the same on my radio station as it does on Pandora as it does on a station in San Diego. But what matters the most is how you wrap around the music. If that listener only wants to listen to music and doesn't necessarily want to be engaged in what the locals are talking about, then there are other places to get that. ...

[A]re these other platforms important? Yes, they are. I understand you have to be where the listeners are and that's why we have our streaming apps all in one place, radioagieland.com.

I understand the dashboard is suddenly cluttered and we have new competitors. And anytime you get a new competitor it's going to pull some of your listeners away. The fact is that we can change none of that. And so we need to do what we do best, and that is have people in the studios looking out the same window as the listener driving her kids to school, and talk about those things.

You have to be talking about what your locals want to talk about, and let them do some of the talking as well. We're very interactive. We bring people on board. ... [W]e have an exten-

(continued on page 5)

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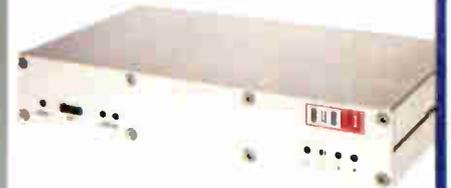


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John Battison Was SBE Member No. 1

He Worked at Ekco, Met Major Armstrong
And Laid the Groundwork for the SBE

BY JAMES O'NEAL

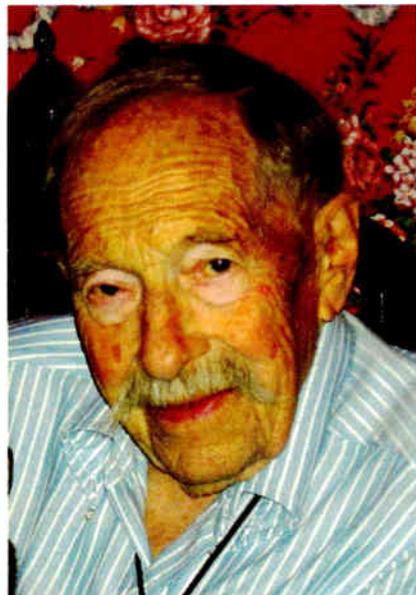
Editor in Chief Paul McLane writes: As we prepared to send this issue of Radio World to press, we received word of the passing of John Battison, founder of the Society of Broadcast Engineers.

He died at age 96 in Columbus, Ohio, on Aug. 28 — coincidentally, the 90th anniversary of the airing of the first paid radio commercial; in a sense, then, Battison was older than the industry he served. Yet he was a visible industry presence even late in life, at industry trade shows and through his work in publishing.

The following obituary is by Radio World contributor James O'Neal.

John Henry Battison was born in Wembley, England on Sept. 11, 1915 and grew up in London. It was there at an early age that he began his lifelong interest in broadcasting and electronics.

As a youngster, Battison constructed a mechanical television receiver in order to view John Logie Baird's 30-line



John Battison

images being transmitted then by the BBC. Battison's recalled that his fascination with receiving these early television transmissions frequently resulted in

a form of truancy.

"I was quite often too 'ill' to attend school on those days when the television broadcasts took place," Battison admitted.

After completing his early education, Battison joined the research staff of

He initially was employed at KMBC in Kansas City and later moved to CBS Television, where he worked with Dr. Peter Goldmark in that network's color television development program.

In 1955, Battison elected to launch his own television station and moved to New Mexico to establish KAVE(TV) in Carlsbad. Battison constructed the station and operated it in concert with

With the help of his family, Battison sent membership invitation letters to nearly 5,000 radio and television chief engineers to help launch SBE.

Ekco, a pioneer U.K. radio and television manufacturing firm, and remained with the company until England became caught up in World War II. Battison's interests also included aviation, and for six-and-a-half years he helped defend his homeland as an RAF fighter and bomber pilot.

TV INNOVATOR

Following the war, Battison decided to seek a career in American broadcasting, immigrating to this country in 1946.

KAVE radio. In addition to engineering duties, he frequently appeared on camera and behind the microphone at both operations.

Later, Battison was employed by the American Broadcasting Co. to help plan and design a number of that network's owned-and-operated radio and television stations. He interrupted his U.S. career in 1968 to travel to Saudi Arabia, where he served as the chief engineer of Saudi Television. He would return to

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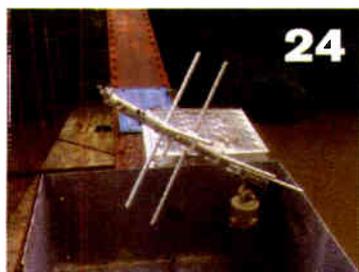
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DOWNNS*(continued from page 3)*

sive texting system back and forth. We use HipCricket's system. That allows people to text in and we text back.

RW: *The host or somebody in the studio is monitoring the texts coming in?*

Downs: Yes, during the morning show the morning show hosts see it. In the evening we're putting interns and part-time employees in there to help with the volume of young people who communicate pretty much just by text these days.

We use it in a big way to engage people for our contesting. When we gave away some tickets to Twilight, we took the 95th texter. Within five minutes we had something like 4,000 texts come through.

RW: *Getting back to the dash, is HD Radio a factor in helping radio remain relevant?*

Downs: When people are showing that kind of data down to your dashboard you can do a lot with it. You can really enhance the experience — everything from album art to scrolling lyrics. Right now, if you're not using HD and you don't have your RDS turned on, all the listeners are seeing is dial position. And it positions us as somehow technologically inferior to [services like] Aha and Pandora, who have this full-color information about what you're listening to.

I don't like being positioned as being inferior. I want people to look at me, and say, "Oh wow. This station is just as cool as Pandora."

RW: *As the operator of a group of mostly AMs, what are your thoughts about helping AM thrive in the face of man-made interference and the increasing noise floor?*

Downs: When I'm trying to get my friend's attention, I say, "Take your basic bedside alarm clock radio and put it in the den tonight. Leave the lights on. Leave the TV on. Turn the radio on, and see how many local radio stations you can pick up. If you can get one or two, congratulations, you're better than most of us."

This noise floor that has been allowed to happen is basically rendering AM unlistenable. Every LED sign, every compact florescent light bulb, every flat screen and computer makes it harder to hear us.

It's a real problem, and it's quantifiable. As part of the NAB AM Task Force we found a study that did research from 20 years ago to 2007 in both Madrid and Mexico City. To get the same signal-to-noise ratio that we had 20 years ago today, we would have to quadruple the power of AM radio stations, in best case. There are some plac-

es they studied in Mexico City where the power would have to be increased 10 times — just to get to the same level of clarity that we had 20 years ago. That's how much noise is out there.

People don't understand that they're hearing the noise; they think the station's gone away.

Local selling is really more relational selling.

RW: *They'll just tune to the next station that has a stronger signal.*

Downs: It's a huge problem, and anyone who's tried to tune an analog dial on their clock radio at night knows that it's next to impossible to tune in an AM station clearly anymore.

RW: *Should there be an across-the-board power increase for AM?*

Downs: If we're going to spend that kind of money on new facilities and new transmitters and new components, I'd rather we spend it on something else. I'd rather we put our money in something that's not just a temporary fix. Because every time somebody buys a new CFI.. that noise floor keeps inching up.

RW: *Is there a migration path away from the AM band you see right now?*

Downs: There's not a good way to patch the whole band. Right now there are a lot of things that need to happen. For one thing, we need to be able to say the letters "HD" in your magazine without all the HD haters lighting up their flame machines.

We need the FCC to give us some sort of sign that they would encourage solutions for AM. ... Right now all of the oxygen in the room is going to TV spectrum issues — auctioning spectrum and re-packing TV [spectrum]. It's difficult to get a signal from the FCC that they would like to work with us on this problem. I'm sure they would but there's only so much time in the day.

(continued on page 6)

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DOWNNS

(continued from page 5)

There are several migration paths. ... My particular favorite is the relocation of AM stations to what's currently the low VHF TV frequencies.

RW: What about TV Channels 5-6?

Downs: I don't think the Broadcast Maximization Committee's proposal will move forward because they proposed all-digital only, no analog. Also it required the few existing TV stations that remain on Channels 5 and 6 to move involuntarily. There are some that cannot move. I think that's why there's been so little traction for Broadmax.

However, they did a tremendous amount of heavy engineering lifting there. And they found a home for every AM station that pretty much replicated their coverage area, on the FM band. It was spectacular work. Broadmax may not be the answer, but somewhere, between Channel 2 and Channel 6, there is enough empty spectrum to locate all of the AMs.

Every time some new idea is brought up, there's always a reason why the



Downs, front and center, at a 1974 remote in a field for WTAW(AM) in Bryan/College Station.

current rules wouldn't permit you to do that. I guess that's kind of the point. The rules would have to be changed. Between 2 and 6, if I can do my math properly in my head, that's 150 new FM channels. That's more than enough room to move the AMs that would want to move. I would ask to set aside part of them for use by AM.

But right now, because the focus is on TV, the people at the FCC want to

leave those options open. And I just hope that as the TV spectrum auction plays itself out, it doesn't lock out this option for AM radio stations. I'm not saying the whole spectrum should be available for FM, but in this world where we can program anything to do anything, set aside some of those frequencies for use by AM stations on the FM band. It clears up our problem with noise, it clears up our problem with getting an AM signal into handsets and it's an existing technology. No new science would have to be used to do

with lower power, or something along that line, that's an infusion of power and strength into the AM band. If you were to tell broadcasters who are operating at night on 25 watts of power that they could match their daytime power at night or in pre-sunrise time, that's a powerful thing. That would improve local service and, I think, extend the warranty period on AM radio.

RW: Would you consider putting one of your AMs on an FM translator? Or is that not an option for you?

Downs: It isn't. I just hired a consulting firm to confirm once again that there's nothing available here for me. And there isn't. We're blocked in by regular FM stations and the "no hopping" rule. Even the one or two that are available are a hundred miles away; you can't really hop them into your market anymore.

I had a translator that was offered for sale to me, in this market, for \$700,000 and they would throw in the FM station, which is far out of town. ... I think Bryan Broadcasting petitioned at one point to give daytimers priority on getting an FM translator but I don't think anything ever came of that.

RW: You chair the NAB AM Task Force. The Radio Technology Committee is working on several ideas from the report on technological fixes for AM. What can you tell us about the report?

Downs: The report pretty much covers everything. In the articles that I've seen written in the trade press, no one has come up with an idea that wasn't considered in the report.

I would like for the report to come out soon because I feel like that we need to have an industry discussion, and I think we need to involve as many people as we can in this decision-making process. I can't speak for the NAB, but the sense I get is that people would like to do more study on some pieces, like the HD-only, in the hope that the further study would make the solutions more clear. Maybe by doing some more research and talking to manufacturers, suddenly an option will pop out and be clear to everyone that this is what should be done.

RW: Ideally, something would make itself clear.

Downs: Yes, and whether that happens or not, no one knows. The NAB has chosen to do more than anyone else has. The NAB's position is that this is serious stuff and we have to look at it closely before diving into a solution. If we could find a perfect solution that doesn't require other licensees to move off the band, i.e. the TV guys, then that's what needs to be done. DRM, streaming, the translator situation, everything has

(continued on page 8)



Downs began in radio as a part-time announcer at KXAR(AM) in Hope, Ark. He was 14. This photo was taken on that first day with a Polaroid Swinger camera. Downs says he later found the microphone and purchased it; it now sits in his office.

that. Set up the radios, program them to land on X number of channels. Protect the TV stations that remain there 100 percent. There are ways to accommodate both these needs.

RW: What is an example of one of the more immediate things that could help AMs?

Downs: What would help the most number of broadcasters is a rethinking of the rules that considered Class A distance coverage to be a replacement for local coverage. I have a daytimer protecting a station 800 miles away from Bryan-College Station. To expect them to serve our community in morning drive time better than we would really is a fantasy.

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DOWNNS

(continued from page 6)

really been looked at, even some blue-sky things that there's no consumer base for yet.

RW: You hope it would be released soon, meaning?

Downs: I don't have a timetable. It's beautiful work and I would like for AM broadcasters to have a chance to take a look at it. It's very thorough; it's very well done.

RW: Is releasing the report something the AM Task Force needs to vote on?

Downs: Yes. [No vote or next committee meeting had been scheduled as of mid-August.]

RW: On the potential AM all-digital testing being discussed by the NAB Technology Committee, which reports to the AM Task Force, is it realistic to think that some companies might pick an AM station to turn off the analog for awhile to test all-digital?

Downs: I think so. You wouldn't need many but we're hoping there would be somebody who would be willing to do that. ... The studies that we've seen indicate that the digital-only version is much more robust and goes further and

with fewer dropouts than the hybrid version that we're using now. There's only been one test, really, done by iBiquity, so there would need to be more study done.

But I think we're going to find that all-digital is pretty good. It is a better signal that's less prone to dropouts, mostly immune to impulse noise. The signal is actually strong enough that it might help overcome that problem with

What would help the most number of broadcasters is a rethinking of the rules that considered Class A distance coverage to be a replacement for local coverage.

the law of physics that keeps AM out of handsets.

Right now you need a longer antenna to pick up AM than you can fit into a handset. There's the hope that once the testing is started we'll find that the increased density of the signal will overcome that and, while we may not have a perfect AM antenna in a handset, the ones that we can put in there will work well enough.

RW: AMs must think they're never going to get a chip in a mobile device. This might be a way of doing that.

Downs: It might be and, of course, migrating to the low VHF band as an FM station, would also get you into mobile devices as well. There's no new technology needed there.

RW: Would current FM receivers be able to pick that up?

Downs: Probably not, but there would be no new technology required. Right now, in Japan, the FM band is Channel 5 and 6. So the chips are already there to do that much of it. But if you wanted to dodge around and miss grandfathered TV stations or have a certain number of channels set aside, then obviously, there's a little programming that has to be done, but none of it is new technology. It's on the shelf.

RW: Switching to streaming, does the performance rights issue affect your company?

Downs: Sure. The only way that streaming works as a business proposition is if it's not very successful. The more listeners, the more difficult it is to make money. People value listenership online at a much lower rate than they do listenership over-the-air. If I'm successful and if I keep them listening, every time a song changes I owe more money. ...

Yet [advertisers] say, "Okay I want to be on the stream. Here's the average listenership. Here's what I'll pay you for it." It's very difficult to properly monetize that, at least at my level. ... But that said, I do believe once again that you have to be wherever your audience is and we stream everything we've got. We stream the talk, music and sports. But it's more of a promotional and programming decision than it is a financial one.

RW: Have you increased the HD Radio power on your FM?

Downs: Yes, to the extent that we can. We're awaiting the approval of asymmetrical sidebands. Going from -20 dB to -14 dB ... made a really big difference in building penetration and coverage.

(continued on page 10)



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Omnia

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World Radio History

DOWNNS

(continued from page 8)

RW: Why are you going to raise your HD power asymmetrically?

Downs: On one side we're clean and green to the full minus 10 dB. On the other sideband we're protecting an unbuild construction permit so we have to leave that at minus 14 dB.

RW: Are you planning to implement Artist Experience?

Downs: Yes, we are. I don't want someone to look at my product and think, "Well this isn't as good a product as the one right next to it on the dashboard." If I'm going to be competing with them, I'm going to look as good as them.

RW: You had mentioned you have two engineers. Are they full-time?

Downs: Yes, Chris Dusterhoff is the chief and Andrew Hicks is his assistant. We're a little old-school. If you're going to do radio right and if you're going to do more than average, then you're going to need more people. I can't do it all myself.

RW: How does your company handle engineering purchases?

Downs: We plan what we're going to [purchase]. We go to the conventions

and look at it and touch it. Then we come back and argue about it. Whoever has the best argument gets to win. Truthfully, we go through your magazine as well.

RW: Do you have any equipment purchase plans for this year?

Downs: We have two little Class A FMs that we're turning on. I'm buying everything needed for a new FM, a contemporary Christian music station here in town. We also were successful in Auction 84, and we're getting ready to put another FM station in a nearby community on the air.

RW: When will you turn them both on?

Downs: The first one is licensed to Kurten, next to Bryan. The first one will be coming on, I hope, in about a month. I'm getting an antenna pattern study done now. ... The one that's out of town, that will probably be on in about six months. We'll be streaming them and running HD as well.

RW: How old were you when you started in radio in 1968 in Hope, Ark.?

Downs: I was 14. Governor Mike Huckabee and I worked there [at AM station KXAR] together as high school students.

Later, I came to Texas A&M as an

electrical engineering student. Second-year calculus came along and changed my mind. I couldn't get above a C and I couldn't take it again.

I can still fix your transmitter, Leslie, but it's a lot simpler just to put the backup on the air and ship the module back to the manufacturer these days.

RW: Were you wiring studios?

Downs: Yes, and changing 4-400 tubes.

RW: Do you remember the first transmitter you changed a tube for?

Downs: Sure, a Collins 20 V-3. But I can't remember my blood type.

RW: Do you still do any engineering work?

Downs: I'm still pretty good at fixing transmitters and so if something goes

wrong I will not tell our engineers until I've had a chance to go play with it. The fact is I did not get into this business to deal with spreadsheets all day long. I do like to touch the gadgets. I do like to do a little on-air stuff when I can.

RW: You've been married for 36 years. How did you meet your wife, Lilly?

Downs: We were both engineering students at Texas A&M at the same time. We had dated several times before she actually put together that the guy she was listening to on the radio at night was actually the guy she was dating. She would bring me a quarter-pounder with cheese and fries every day that I was on the air, Monday through Friday, at 6 o'clock. ... That was back when people could come in and sit in your studio with you.

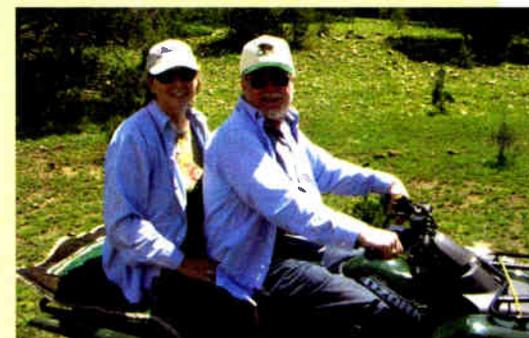
NEWSROUNDUP

AUTOMATION PATENT SUIT: The decision by the U.S. Patent and Trademark Office to grant a second reexamination request for two patents at the center of a radio automation patent infringement suit will likely extend the case into 2013. DigiMedia purchased the two patents from Mission Abstract Data and has been sending letters to radio stations, telling them they need to sign a licensing agreement if they have a music automation system. Broadcasters have been fighting the claim and asked for the second reexamination. The USPTO ordered all claims from patent 5,629,867 be reexamined again in light of "substantial new questions of patentability."

APPLE 'SWITCHING' PATENT: The U.S. Patent & Trademark Office granted Apple a patent for "seamless switching between radio and local media." By using metadata from RDS, broadcast listings or published third-party schedules, the device can "determine when an upcoming broadcast segment or media item is not of interest to the user," states Apple in the patent. Broadcasters fear the technology can be used to skip ads, in favor of content already stored on a device.

RAB: Responding to the Apple patent item above, the Radio Advertising Bureau says listener preferences have always prevailed. RAB President Erica Farber said, "Of course one would hope a listener would continue to listen to an individual station or program uninterrupted; however, we can't stop a listener from listening to a single station." Farber said that as technologies continue to emerge and provide consumers "with boundless options, it is clear the radio listening experience will remain an integral part of audio consumption." An NAB spokesman declined to comment and Apple did not get back to RW about its plans for the patent or whether the technology developer is considering including over-the-air radio capability in a future device.

JOHN FURR: Broadcast engineer and businessman John Furr died after a brief illness at 68. After working in several stations in south Texas and a long stint as director of engineering for Clear Channel Communications in San Antonio, Furr worked as a broadcast consulting engineer as owner of Paradigm Associates, according to his friend and colleague Cris Alexander. Furr started Au Contraire Software Ltd., which produces broadcast engineering software; his partners in that business were his wife Paula, and Cris and Phyllis Alexander. Furr was also a station owner. Furr is survived by his wife Paula, shown in the photo, and his daughter, Amanda.



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ROC YOUR WORLD

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The ROC is paired with the JetStream,
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When Logitek introduced its first ROC console back in the 1990s, it marked a revolution in audio console design. One of the industry's first router-based digital consoles, the original ROC boasted simple wiring and access to multiple sources at each fader.

Over the years, the router-plus-console Networked Audio concept has become the standard in console architecture. Although the original ROC was retired years ago, Logitek has continued to develop systems for both TDM and AoIP audio networking. The new ROC takes the best of the original design and pairs it with the latest technology and styling.

Available in multiples of 6 faders (up to 24), the ROC is housed in an attractive table-top enclosure. Durable Penny & Giles faders, OLED source indication and intuitive controls make the ROC a natural for on-air, production rooms or even in temporary studio setups. Two monitor feeds, front panel headphone connection and user-assignable softkeys will please even your fussiest operators.

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STREAMING

(continued from page 1)

to fans inside the Sun Life Stadium at game time.”

Despite promises of enormous potential, however, radio stations are finding it hard to sell ad space on their audio streams.

Michael Theodore, Internet Advertising Bureau's vice president of training and development, will moderate a session at the fall Radio Show on Sept. 19 called “Digital Autopsy: What's Hot and What's Not,” exploring various digital initiatives.

He said advertisers don't always feel confident that they'll get a full return for what they pay.

“Radio broadcasting has always been a medium that is over-indexed, yet underspent on ad dollars,” Theodore said. “This is even more true with radio audio streams. Advertisers often feel they don't have the measurements they demand to justify putting money into radio streams — even though the listenership and the value are there.”

Along with Bricketto the digital panel will feature Tripp Eldredge, president and CEO of Direct Marketing Results; Deb Esayian, Emmis Interactive co-president; and James Bottorff, Bonneville Seattle's director of digital media.

CONUNDRUM

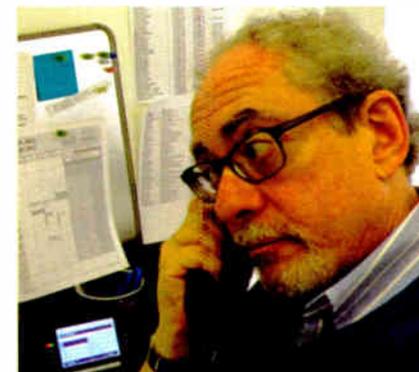
While stations offer rebroadcasts of their on-air content, Bricketto again emphasizes how committed listeners must be to seek out the audio-on-demand repeats and Web-only audio features available on station websites.

“They are like people who are repeat customers at a car dealership,” she said. “They are not just customers. These are people who have made your product a part of their lives.” Such people are “the 10 percent who drive nearly half of your listening,” said Eldredge. “They likely belong to your station's Facebook page and promote you to their friends and family. These are your most loyal fans, and their loyalty is a unique value to advertisers. These are the consumers who will actively choose products that are sold on your station, to show their support for you.”

So if streaming listeners are uniquely valuable to a station, the task is not just to convince advertisers to start selling, but also to educate radio managers on how to sell.

One way to make this point is by highlighting the value of local radio as an endorsement medium.

“The endorsement made to loyal listeners by on-air staff is one of the earli-



Michael Theodore

est forms of social networking,” said Bricketto. The power of such endorsements over radio streams is magnified, because the on-air talent essentially is preaching to the choir.

When your sales rep goes out to sell your audio streams, the last thing he or she should do is make them a free add-on to over-the-air advertising, Bricketto said. “Streaming offers real value to advertisers, and that value should and can be monetized.”

HOT/NOT

The session will delve into other digital possibilities and difficulties for radio broadcasters, not just streaming.

Michael Theodore said one of those possibilities is having brands sponsor

specific parts of the streaming website, as exemplified by the website of Spotify. “Radio stations should emphasize the value of audio streams in terms of the quality of listeners reached, rather than the click-through rates achieved,” he said.

Theodore also points to Clear Channel's success with its iHeartRadio.com content aggregation site, a force to reckon with in the growing digital market. “Broadcasters will have to decide whether to go head-to-head with this 800-pound gorilla on their own, or to team up with other broadcasters in order to compete.”

Eldredge is thinking about targeted selectivity toward audience members, and what this could mean in the future of broadcast. “In the analog broadcast world where numbers were everything, all listeners were essentially the same,” he said. “But in the digital world, we can really identify and find the very people our advertisers are trying to reach — and as a result we can deliver a much better result to them.”

As for Bricketto, she's focused on realizing the money-making potential of streamed radio audio, and helping broadcasters to profit right now. “Going forward, training is key for all sales managers,” Bricketto said. “Streaming audio is a powerful medium, a fifth day-part that all broadcasters need to believe in and turn to their advantage.”



Tripp Eldredge

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Trade up your current Omnia
*and get \$4,000 toward a new Omnia.11 FM HD

Contact your Omnia Dealer today

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*Qualified Omnia models for trade-in: Omnia Classic, Omnia Hot, Omnia 4.5, Omnia 05, Omnia 06.
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BY TOM OSENKOWSKY

On Sept. 19 at the Radio Show in Dallas, Milford Smith, vice president of radio engineering at Greater Media, will host a panel that includes James

RADIO SHOW DALLAS

Bradshaw, deputy chief of the Audio Division of the FCC Media Bureau, and three communications counselors: Ann Bobeck, senior vice president and deputy general council at the NAB; John Burgett, a partner at Wiley Rein LLP; and John Garziglia, a partner at Womble Carlyle Sandridge & Rice LLP.

What topics are likely to be on the minds of the engineers and managers in attendance?

"The proposed changes to the translator/LPFM rules are, as you know, wide-ranging and presage a new era in terms of additional LPFM service, particularly to the more populated markets, as well as the first time in nearly 10 years that any significant number of the translator applications from the 2003 deluge will begin to be processed," Smith said.

"There are a lot of outstanding questions as to possible new or changed power levels, protection to full-power stations, particularly regarding second adjacencies and the mechanisms by which such interference will be defined as well as just how to properly employ the so called 'grid' allocation system advanced by the commission"

Of particular significance to full-power broadcasters, he said, are worries about interference and the eventual availability of newly licensed translators for use in both AM as well as HD multicast simulcasts.

WAIVERS SHOULD BE 'RARE'

Asked what concerns the National Association of Broadcasters has about the translator/LPFM situation, an association spokesperson summarized its position on the issue:

"The FCC needs to make sure that FM stations, translators as well as LPFM stations remain free of interference. The FCC should establish clear rules, and not allow any LPFMs that might cause interference, because they would have to cease operations immediately and potentially lose their investment. And, FM stations believe that waivers for LPFMs to operate on second-adjacent should be rare and only approved under special conditions, such as when a third-adjacent channel is not available.



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"Right now, the path to such an acquisition is not clear."

On the subject of LPFM stations, Garziglia also writes: "Since broadcasters cannot own LPFMs, the FCC's expected opening of an LPFM window sometime in the next year or so has less attraction and less interest to broadcasters.

"Nonetheless, the opening of an LPFM window might be an opportunity for broadcasters to assist certain groups in their community such as a school or established community organization to acquire an LPFM station as a training ground for future broadcasters. After all, there are more than several great broadcasters out there that got their start at college radio stations. Expanding the opportunities for future broadcasters by helping with the inception of an LPFM station might be good both for the community and for the future of broadcasting."

CITY OF LICENSE

Attorney John Burgett said the biggest issue facing radio right now is how the commission intends to revise or clarify its policies regarding city of license changes.

"The FCC's Rural Radio Order

TECH SESSIONS

Wednesday, Sept. 19

9-10 a.m.

Technical Regulatory Issues for Radio
See article above

10:15-11:15 a.m.

Wireless Colocation
Lawrence Behr, CEO of LBA Technology Inc.

12:30-3:30 p.m.

NRSC Meetings

Thursday, Sept. 20

9:30-10:30 a.m.

HD Radio Update
Ben Downs, VP/GM of Bryan Broadcasting, moderates a panel featuring Paul Brenner of Emmis, Joe D'Angelo of iBiquity Digital and Glynn Walden of CBS Radio

11 a.m.-Noon

Implementing Artist Experience
Paul Shulins, Greater Media
1:30-2:45 p.m.

Hybrid Radio

David Layer of NAB moderates a session with Joe Harb of Qu

RADIO SHOW
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IF YOU GO

What: 2012 Radio Show

When: Sept. 19-21

Where: Hilton Anatole, Dallas

How: www.radioshowweb.com

How Much: Onsite member registration \$595; rates vary for non-members, students, spouses; see website for packages

released back in March 2011 significantly changed the manner in which the FCC reviews city of license changes by making it much more difficult for stations to relocate from rural areas into urbanized areas. The commission is poised to release a decision soon addressing the several petitions for reconsideration filed by broadcasters questioning the FCC's assumptions underlying the Rural Radio Order.

"I expect that the decision will tighten any loose ends which remain regarding stations' efforts to move in to urbanized areas and will attempt to 'clarify' what the agency will allow in terms of loss of service."

But in doing so, Burgett said, he

(continued on page 20)



At the 2011 show, MaryAnn Seidler, left, led a discussion on the engineer's role in building a multiplatform radio station with, from left, Jim Stagnitto, New York Public Radio; Glynn Walden, CBS Radio; Paul Shulins, Greater Media; Jim Roberts, Broadcast Electronics; Brian Janes, ESPN Radio; and Gary Kline, Cumulus Media

Interactive, Ben Husmann of Emmis Interactive and Nick Piggott of RadioDNS

3:30-4:30 p.m.

Engineering Management
Gary Kline, Cumulus Media

Friday, Sept. 21

9-10 a.m.

Preparing for Disaster
Allan Brace, Clear Channel

10:30-11:45 a.m.

Tips from the Workbench
John Bisset, Elenos USA and Radio World

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Offer ends September 28 or may be withdrawn earlier if Frank Foti returns from his vacation and gets wind of this.

World Radio History

In Dallas, More Radio Show Special

Here are more highlights of the agenda for the Radio Show in Dallas.

Career Day — The NAB Education Foundation and the Broadcast Education Association start things off. Tuesday afternoon.

Advertiser Luncheon — Advertising agency CEOs Bill Koenigsberg and Andrew Essex discuss the array of media options for advertisers and radio's role in enabling marketers to connect with consumers in a Q-and-A moderated by Tim Castelli, president of national sales, marketing & partnerships for Clear Channel Media and

Entertainment. Wednesday morning.

Opening Remarks — Erica Farber, President and CEO of the Radio Advertising Bureau, Gordon H. Smith, President and CEO of the National Association of Broadcasters and Q-and-A with CBS Corp. President and CEO Leslie Moonves. Wednesday afternoon.

Leadership Breakfast — How does radio retain its value in a shifting world? Lew Dickey of Cumulus Media, Jeff Smulyan of Emmis Communications, Joe Schwartz of Cherry Creek Radio, José Valle of Univision Radio. Remarks by Marci Ryvicker of Wells Fargo Securities, moderated by Lew Paper of Pillsbury Winthrop Shaw. Thursday morning.

Marconi Awards — Recognizing excellence in radio. Entertainment by Melissa Etheridge; hosted by Edgar "Shoboy" Sotelo Thursday evening.

Radio Luncheon — Tom Joyner is featured speaker; Dan Mason of CBS Radio is honored with the National Radio Award. Friday midday.



Neil Golden, senior vice president and chief marketing officer of McDonald's USA, right, spoke with Tom Joyner last year about ethnic marketing.



Sears Holdings Corp.'s Eddie Combs delivered the keynote address at the Advertiser Luncheon last year.

BATTISON

(continued from page 4)

the United States, where he became director of engineering at Ohio State University's broadcast center.

He spent part of his career as an engineering consultant, with a client list that included the American University, the governments of Lebanon and Uganda, and the governor of New Mexico. Battison also was director of education for the National Radio Institute in Washington and lectured at the Peking Institute of Broadcasting in China as an official guest of the government.

TAKING THE INITIATIVE

Battison may best be remembered for initiating a movement that led to the creation of the Society of Broadcast Engineers.

He was not pleased with a decision made in the early 1960s to merge the Institute of Radio Engineers with the American Institute of Electrical Engineers, and wrote an editorial encouraging the creation of a new organization to represent the interests of broadcast engineers.

In 1963, after no one volunteered to move this idea forward, Battison made time to lead this effort, despite many other activities and commitments. With the help of his family, he sent membership invitation letters to nearly 5,000 radio and television chief engineers. His actions led to the founding of the Society of Broadcast Engineers, with Battison becoming

its first member. The organization has now grown to some 5,500 members worldwide.

Battison authored 15 technical books and wrote more than 500 technical articles for publication. He served as technical editor for Radio magazine and was a frequent contributor to Broadcast Engineering magazine.

In 1998, Battison was named Engineer of the Year for radio by the National Association of Broadcasters. In 2006 he received the Society of Broadcast Engineer's Lifetime Achievement Award, which itself was later renamed in his honor.

Battison remained active in broadcast engineering activities until the time of his death. He was also an ordained Anglican priest and traveled 160 miles each weekend from his home in Loudonville, Ohio, to conduct services at Christ Church in Columbus, Ohio.

In his 1998 NAB award acceptance, Battison recalled meeting "most of the famous engineers who made U.S. radio what it is today, and many of the pioneer radio inventors including Lee de Forest and Major Armstrong, the inventor of FM. I built an Armstrong Super Regenerative receiver in the 1920s, so of course I already knew his name. When I met him, he was 'Major FM.'"

To read the full text of his remarks, including comments about the 10 percent rule, 9 kc separation and the late Leonard Kahn, visit radioworld.com/links. To share a memory of John Battison, write to radioworld@nbmedia.com.

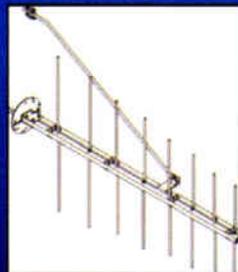
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MEET AXIA'S NEW, SMALLER IP CONSOLES. THEY'RE BIG WHERE IT COUNTS.

Plastic labels? Not on these consoles. High-res 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.

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

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

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

Event timer has manual and auto-reset options.

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

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

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

OLED channel displays have an audio confidence meter, too.

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

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

Avionics-grade switches with LED lighting.

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.

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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Translator/LPFM Issues in Spotlight

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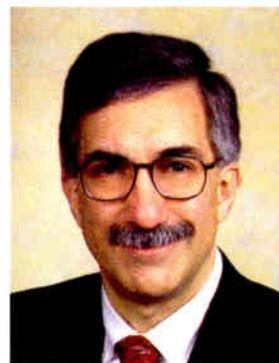
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Wednesday, Sept. 19

9-10 a.m.

Technical Regulatory Issues for Radio
See article above

10:15-11:15 a.m.

Wireless Colocation
Lawrence Behr, CEO of LBA Technology Inc.

12:30-3:30 p.m.

NRSC Meetings

Thursday, Sept. 20

9:30-10:30 a.m.

HD Radio Update
Ben Downs, VP/GM of Bryan Broadcasting, moderates a panel featuring Paul Brenner of Emmis, Joe D'Angelo of iBiquity Digital and Glynn Walden of CBS Radio

11 a.m.-Noon

Implementing Artist Experience
Paul Shulins, Greater Media
1:30-2:45 p.m.

Hybrid Radio

David Layer of NAB moderates a session with Joe Harb of Quu



At the 2011 show, MaryAnn Seidler, left, led a discussion on the engineer's role in building a multiplatform radio station with, from left, Jim Stagnitto, New York Public Radio; Glynn Walden, CBS Radio; Paul Shulins, Greater Media; Jim Roberts, Broadcast Electronics; Brian Janes, ESPN Radio; and Gary Kline, Cumulus Media

Interactive, Ben Husmann of Emmis Interactive and Nick Piggott of RadioDNS

3:30-4:30 p.m.

Engineering Management
Gary Kline, Cumulus Media

Friday, Sept. 21

9-10 a.m.

Preparing for Disaster
Allan Brace, Clear Channel

10:30-11:45 a.m.

Tips from the Workbench
John Bisset, Elenos USA and Radio World

RADIO SHOW
Produced by RAB and NAB

IF YOU GO

What: 2012 Radio Show

When: Sept. 19-21

Where: Hilton Anatole, Dallas

How: www.radioshowweb.com

How Much: Onsite member registration \$595; rates vary for non-members, students, spouses; see website for packages

released back in March 2011 significantly changed the manner in which the FCC reviews city of license changes by making it much more difficult for stations to relocate from rural areas into urbanized areas. The commission is poised to release a decision soon addressing the several petitions for reconsideration filed by broadcasters questioning the FCC's assumptions underlying the Rural Radio Order.

"I expect that the decision will tighten any loose ends which remain regarding stations' efforts to move in to urbanized areas and will attempt to 'clarify' what the agency will allow in terms of loss of service."

But in doing so, Burgett said, he

(continued on page 20)

SATELLITE SIGNAL LEVEL METER AND SAT IDENTIFIER

Our new "SAT-BUDDY" satellite signal level meter will measure 950 - 2150MHz L band signals. The unit powers the LNB, and provides digital signal measurement for carriers. The unit can



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Place the "LNB-Zap-Stop" in the coaxial cable line that runs from the dish, to the satellite receiver. Think of it as an "insurance policy" to protect



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The COVERSAT will prevent most signal outages caused by snow and ice. It is wrapped over the front face of a dish, creating a steep and slippery surface to prevent the accumulation of ice & snow. The cover is made to exactly fit the customers specified dish type. The HEATSAT satellite antenna



heater will completely stop signal outages caused by snow and ice. This reliable dish back-side electric heater keeps snow & ice from forming on the dish, by heating the reflector when snow and ice conditions are present. Purchase the HEATSAT to upgrade existing satellite antennas, and ask for it to be included with your new dish purchases.

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Invest a FEW-HUNDRED-DOLLARS into upgrading your satellite antenna-mounted LNB, to the new DAWNco "L series" LNBs, and watch for improved EbNo readings on your digital satellite receivers. DAWNco's latest generation of C and Ku band LNBs have best-in-industry specs for "1dB gain compression."

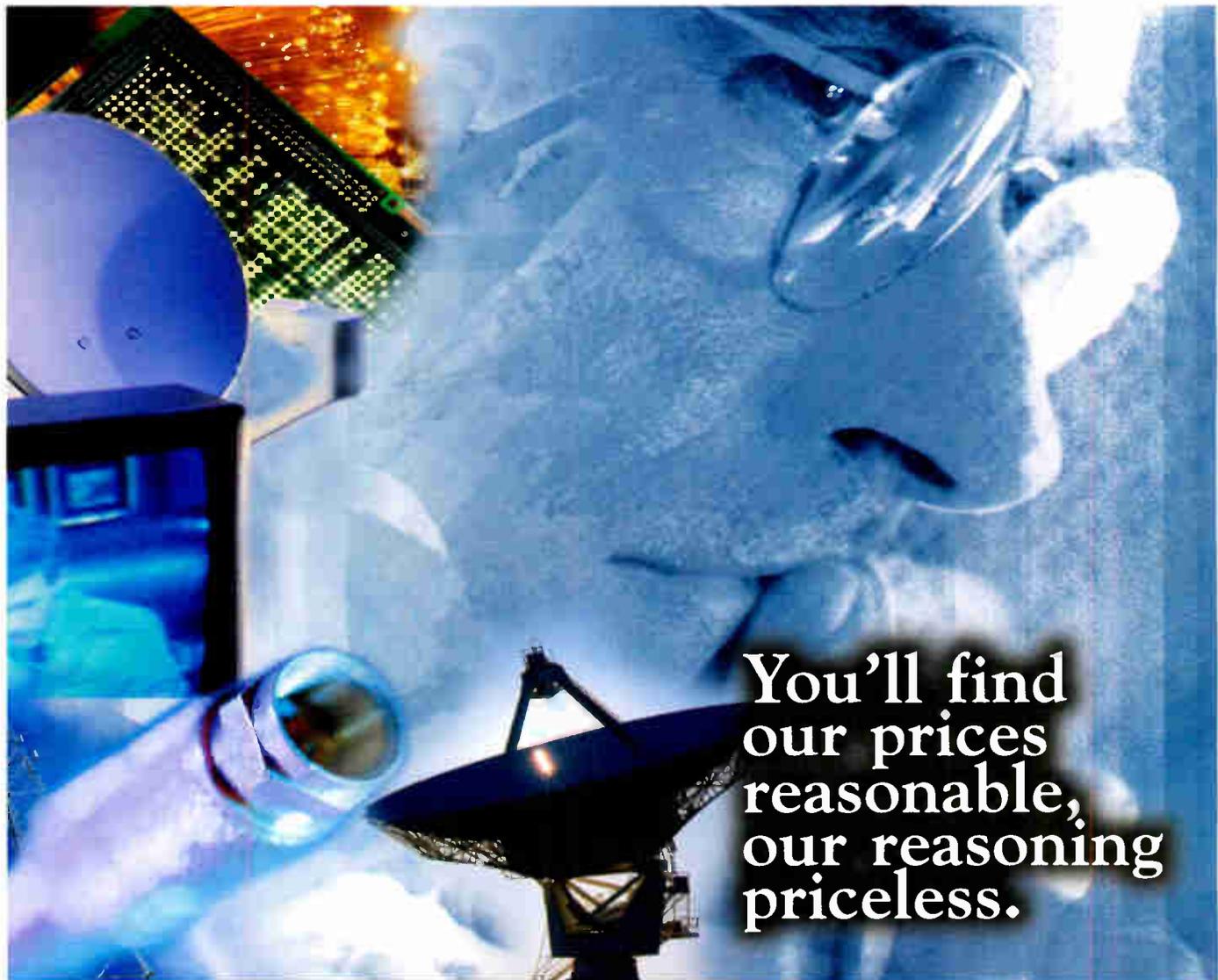


Install these units to make a real difference in the reception of HD and other MPEG4 or DVB-S2 satellite channels. Internal circuitry has been completely redesigned for reduced power draw, so that indoor receivers and power supplies will never be over-taxed. In order to prevent signal outages, when outdoor temperatures fluctuate, DAWNco's best LNBs feature a highly stable +/- 5 KHz rating.

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DAWNco

Reasonable prices, priceless reasoning.

Booth List: The Marketplace

This is the list of exhibitors for the Radio Show in Dallas as of late August. See on-site program materials for late additions or changes.

Exhibit Hours:

Wednesday, Sept. 19 1 p.m. – 6:30 p.m.
 Thursday, Sept. 20 9 a.m. – 5 p.m.
 Friday, Sept. 21 9 a.m. – Noon

305 Broadcast/Elenos	210	Emmis Interactive	325
AdMall	404	ENCO Systems Inc.	704
Advantage Systems Inc.	907	ERI-Electronics Research Inc.	605
AppCandy	614	Federal Communications Commission	508
Arbitron	226	FirstCom Music	225
Armstrong Transmitter	215	Harris Broadcasting	604
Army National Guard	609	iBiquity Digital Corp.	325
BIA/Kelsey	610	Intern'l Demographics/Media Audit	200
Bonneville Distribution	514	Internet Media Device Alliance-IMDA	709
Broadcast Electronics	700	Intertech Media	615
Broadcast Software International	217	Mainstream Network	616
Broadcast Supply Worldwide	808	Marketron Broadcast Solutions	811
Broadcast Works!	410	Media Monitors	810
Broadcasters General Store	223	Miller, Kaplan, Arase & Co.	716
BroadView Software	507	Moseley Associates Inc.	505
Christian FM Media Group LLC	216	MusicMaster	701
Clear Channel Satellite	515	Myat Inc.	611
Coaxial Dynamics	714	Naute! Ltd.	815
Comrex	208	NPR Satellite Services	711
Continental Electronics Corp.	504	OMT Technologies	501
Digital Alert Systems	919	OneDomain Inc.	905
DoubleRadius Inc.	607	Orad Hi-Tec Systems	707
		Powergold Music Scheduling	220
		Power-Link/Proof of Play	219
		Precision Communications Inc.	706
		ProAudio.com	510
		PromoSuite Software & Interactive	900
		Radiate Media	213
		Radio Revolution Network	500
		Radio World/NewBay Media	407
		RadioDNS	921
		Radio-Ready Cell Phone Showcase	415
		RadioTraffic.com	221
		RCS	715
		RF Specialties Group	902
		Second Street Media Solutions	212
		SESAC	228
		Shively Labs	705
		Specialty Data Systems Inc.	710
		SPX Communication Tech./Dielectric	806
		Stainless LLC	804
		Sun & Fun Media	903
		Susan G Komen for the Cure	406
		The Financial Exchange	211
		vCreative	405
		V-Soft Communications	708
		WideOrbit	805
		Worldcast Systems	506



Photo by Jim Peck

Bob Surette of Shively is seen 'at bay' on the floor of last year's Radio Show.

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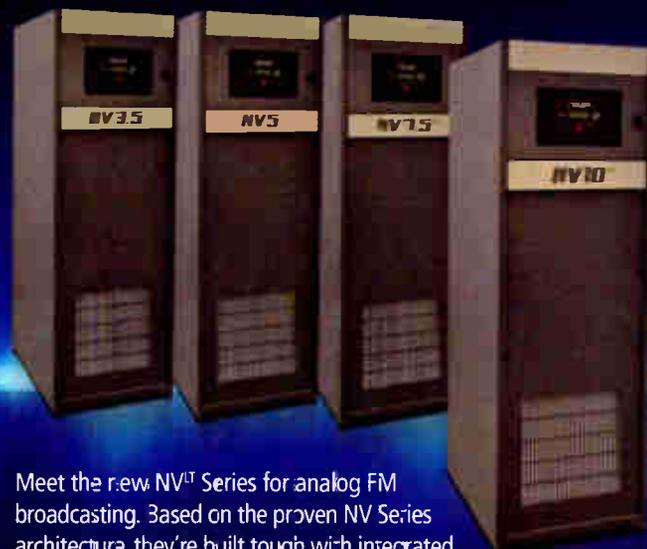
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TECH*(continued from page 16)*

expects the policies to become more complex and require more engineering assistance.

Broadcasters with FM translator applications dating back to the 2003 filing window, he continued, "should be thinking about which of those applications they want to pursue consistent with the national cap of 50 applications and the market-based cap of one application per market for the 156 markets identified by the FCC in its March 2012

Order. The commission is expected to issue a public notice soon setting deadlines for applicants to identify the applications they want processed consistent with these limits."

RF ENVIRONMENT

Jim Bradshaw of the FCC also expects a great deal of interest in translator and LPFM topics; and he points out another topic of interest.

"Section III, Question 7 on Form 303-S previously required completing an Exhibit/RFR Worksheet to demonstrate compliance with FCC Rules," he said.

"This has been replaced with a certification for those stations which have had no material change in their RF environment since the station last received a grant of license application or license renewal application. Only those stations that have had a material change in their RF environment require the filing of an Exhibit or Worksheet demonstrating compliance with RFR Rules."

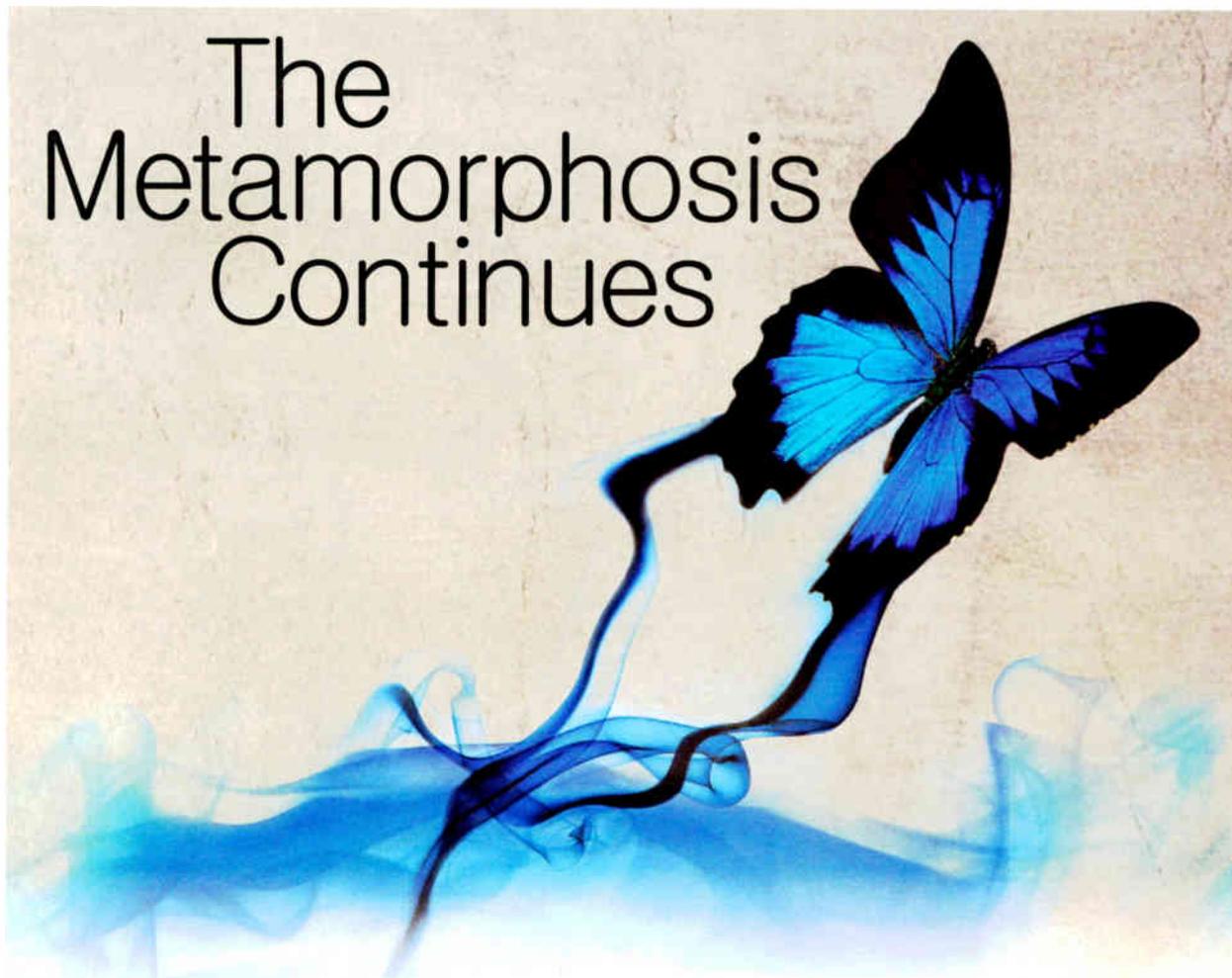
Further, EAS is likely to be part of the discussion. New EAS rules became effective July 1. These required most broadcasters to purchase new equipment and comply with CAP monitoring and

retransmission requirements.

Stations should have their equipment installed and operational. For those that do not, for whatever reasons, what enforcement action might the FCC take? How will the FCC treat stations where Internet access is limited or simply not available? What plans are in place for a next EAS national test? How far along are state and local plans?

Panel participant Ann Bobeck of NAB said the "vast majority of radio stations" have made the upgrade in equipment to CAP. "There are a few pending waivers at the FCC, due to equipment order delays or lack of access to broadband. Radio broadcasters will work with our federal partners in participating in the next national diagnostic EAS test."

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Attorney John Burgett said the biggest issue facing radio right now is how the commission intends to revise or clarify its policies regarding city of license changes.

Another possible topic of interest is the matter of online public files. NAB has filed suit challenging the commission's online political file rules as applied to local TV stations, saying the regulations are arbitrary and capricious. Though these do not yet apply to radio, most observers believe they eventually will, if upheld.

Also, the use of modulation-dependent carrier level technology is being studied by the National Radio Systems Committee, which is expected to release a report on it soon.

NAB Vice President of Science and Technology John Marino said, "Current experimentation with MDCL looks very positive. We understand that stations testing MDCL are showing transmitter electricity savings of up to 30 percent in some cases."

Radio World asked Marino when NAB might release the details of another report, one prepared for its board exploring technical and regulatory options for AM radio.

"NAB does not have any immediate plans to release the report," he replied. "It is the result of discussions only among members of our NAB Radio Technology Committee and at this time the report has not been fully reviewed or studied by others."

NEWSROUNDUP

REGULATORY FEES: The Commission set up an electronic fee filer so broadcasters can pay their regulatory fees; those are due Sept. 13. Fees for FY2012 range from \$725 for a Class A AM station serving a market of 25,000 or less people to \$11,500 for the FM Class B, C, C0, C1 and C2 stations serving markets of 3 million or more people.

FCC TECH ACT: The Society of Broadcast Engineers plans a lobbying push this month for the passage of legislation in Congress that would add a technical person to the staff of each FCC commissioner. Senate and House versions of the bill are still in committee. As part of its legislative agenda, the SBE has sought greater technical expertise on the commission for several years.

PERFORMANCE ROYALTIES: Pandora likes one version of a possible performance royalty bill, the one that calls for parity among digital radio audio services as far as streaming royalties. That's the gist of the measure introduced by Utah Republican Rep. Jason Chaffetz. However NAB, as well as Pandora co-founder and Chief Strategy Officer Tim Westergren, oppose a draft of a different measure circulated by New York Democrat Rep. Jerry Nadler. That bill attempts to include broadcast radio streams into the performance royalty mix. NAB says the draft "fails to recognize the promotional value of local radio airplay" and Westergren says the Nadler draft "would worsen an already flawed legislative mistake that is discriminating against new technology and hampering innovation." Responding, Nadler said "the solution is not to get to parity at the expense of artists," which is how he characterized the Nadler bill.

FM CHIP: Michigan Democrat Rep. Hansen Clarke is seeking a hearing on the idea of integrating FM chips in cell phones and other mobile devices. In a letter to Florida Republican Gus Bilirakis and California Democrat Laura Richardson, chair and ranking member respectively of the House Subcommittee on Emergency Preparedness, Response and Communications, Clarke asks them to hold a hearing on the chip issue, stressing their emergency communication capabilities. In June, the House Subcommittee on Communications and Technology touched on the FM chip issue during a hearing.

CONTOUR 200i AIR: Pure's Contour 200i Air is now available for U.S. consumers. The music streaming system is Pure's first Apple AirPlay product. Users



can play their music wirelessly via a PC, Mac, iPad, iPhone or iPod Touch without having to dock the device. Contour 200i Air also includes a dock for charging the iPad, iPhone and iPod, as well

as music playback. Pure's Contour 200i lists for \$269 and is available from www.Brookstone.com, www.Pure.com and www.amazon.com.

EAS: FEMA's IPAWS office addressed an unplanned outage in its EAS feed in early August. The Required Weekly Tests have continued as scheduled after the June 30 equipment deadline so that station engineers can confirm whether their EAS encoders/decoders can definitely decode a Common Alerting Protocol-formatted alert. However on Aug. 6, the alert did not

go out for at least two time zones, Central and Mountain. Neil Graves of the IPAWS Engineering Office said in these instances IPAWS goes through a series of diagnostics and troubleshooting to determine what went wrong and then re-transmits the message manually. Posting on the SBE-EAS Listserv, Graves said the RWTs were designed as a temporary solution, meaning this functionality wasn't built into the IPAWS-OPEN application, but resides on a computer outside of the FEMA/DHS networks. FEMA is looking for a more permanent solution.

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You'll Get Caught Up in This Cable

What Happened When We Did a Blind Test of Various Speaker Wires



istockphoto/Simon Alvinge

WIRED FOR SOUND

Read more Wired for Sound articles at radioworld.com

BY STEVE LAMPEN

Working for Belden, I get emails regularly from people who are "testing" speaker cables. I am happy to send them samples to listen to. I make it very clear, though, that our company doesn't "listen" to anything except the customer.

So it doesn't surprise me that many high-end audio folks say that these "standard" cables can't be very good because they are too cheap. I would agree with this at least in one way: If you paid \$10 a foot for your speaker cables, then you'd *better* hear a difference.

LISTEN CLOSELY

Three years ago, I was delighted to be arm-twisted into helping my friend Gary Mach, retired chief engineer of the University of Wisconsin-Green Bay,

put on a presentation at the Broadcasters Clinic and Upper Midwest SBE Regional Meeting in Madison, Wis.

The Clinic is arranged by the Wisconsin Broadcasters Association and Chapter 24 of the Society of Broadcast Engineers; it's on my list of the most influential local broadcast shows. I try very hard not to miss it. A very good show in New York was being held at the same time that year, and I had been invited to go to China on business; but, no, I told them all, I had to go to

Madison, Wis.

For Gary's presentation, I was just the "color" commentator and didn't really help. But they wanted me because they intended to test seven kinds of speaker cable.

Gary brought a nice pair of JBL 4310 speakers driven by a Crown XLS 202 power amp, with source material coming from a Sony RCD-W500C CD-recorder/player. Volume was controlled through a Behringer MXB-1002 mixer.

He played part of "Rodeo" by Aaron Copland, as performed by the Dallas Symphony Orchestra, and a piece of John Philip Sousa's "The Stars and Stripes Forever," played by the Washington Winds. Both of these pieces were "audiophile" recordings.

If you paid \$10 a foot for your speaker cables, then you'd better hear a difference.

The crew — Bob Surette of Shively Labs and Bill Hubbard of UW-Green Bay — changed out six-foot lengths of cables while the audience of about 70 people listened, again and again, taking notes, unaware of which cable was being used.

At the end, we revealed what types of cables the audience had been listening to. There were:

- Belden 8477 12 AWG speaker cable
- Belden 8782 24 AWG zip cord
- Romex house wiring
- Car jumper cables
- Barbed wire
- 300-ohm antenna twin-lead
- 3/8-inch steel hanging cable

And the winner was ... 300-ohm twin-lead.

Yes, that was voted the best-sounding cable by the audience.

Second place? The car battery jumper cables. Talk about low resistance! Think of the slew rate! Damping factor!

The actual large-gage Belden speaker cable came in second — from the bottom.

(I was especially happy to see that barbed wire was included in the test. I once saw a demo at a tradeshow showing 10 base-T, or 10 megabit-per-second Ethernet, running down four pieces of barbed wire. And now I had seen it run as speaker cable. I told the audience

(continued on page 26)

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harris.com

HARRIS
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World Radio History

Some Hunters Just Can't Aim Straight

Also: An IR Thermometer Proves That Not All Heat Is Bad

I was speaking with David Sanford with Texas-based Samco Antennas about RPU antennas recently. Our discussion migrated to vandalism at stations.

WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

David said his company's antennas are not immune to this problem. Samco makes a Geostationary Operational Environmental Satellite (GOES) yagi antenna, pictured in Fig. 1, used by the U.S. Geological Survey in monitoring streams and rivers. Data is transmitted from sensors in the body of water by satellite to the USGS facility for display and analysis.

It seems that tower lights and transmission line aren't the only target some misguided hunters like to use, as you can see in Fig. 2. What's amazing is that with more than half the GOES antenna blown away it still worked. Got an interesting photo from the field to share? Send it to me at johnpbisset@gmail.com.

Samco makes a rugged and reliable RPU yagi that isn't top-heavy and will work well with Will-Burt Hurry-Up masts. Contact your favorite dealer for more information, or head to Samco's website for data sheets: www.samcoantennas.com/products.html.

John Huntley is chief engineer and director of IT for the four-station Cumulus cluster in Rockford, Ill. He writes that he has been using a Fluke 62 Mini Infrared Thermometer for a few years without any problems. You'll find a variety of Fluke meters at the Grainger website. Click on the Radio World Links page at radioworld.com/links to see what's available.

John's unit has a spot/distance ratio of 1:10 (where at 10 inches distance, you measure a 1-inch spot). John reports that this instrument works just fine in the presence of 5 kW at 1440 kHz.

Our recent article in RW reminded John to check his ATUs and phasor again. He verified there were no heating problems with the RF connections or components. John did verify a capacitor failure in a phasor using his IR thermometer a few months ago. The AM directional readings were wrong and the IR thermometer found the hot capacitor.

Winter's not that far away; John says he makes sure he has the instrument with him to check the generators at the transmitter sites for coolant heater failures. He concedes that while a hand works fine (a touch test for heat), some-

times he will use the IR thermometer to check for heat in the radiator from the *outside* of the cabinet.

His two gensets are fueled by propane; they are liquid-mode, temperamental in starting without heat in the

not ideal for rigid line unless you file the cut. The tubing cutter slightly flanges the cut ends inward as it cuts, meaning the bullet will not insert fully.

This is what John found: The bullet was only making contact in a ring.

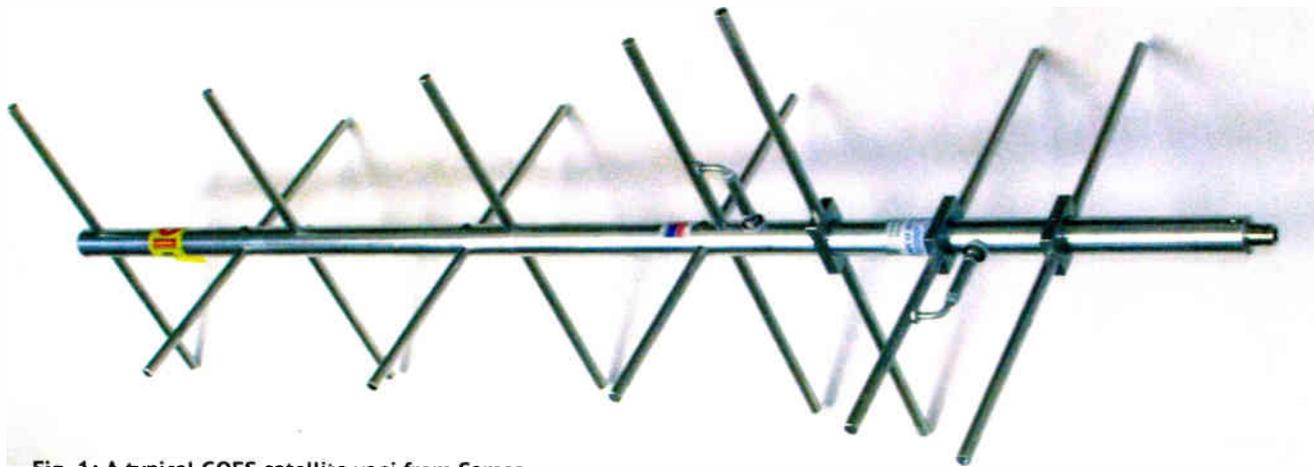


Fig. 1: A typical GOES satellite yagi from Samco.



Fig. 2: Damage to the antenna caused by a 'marksman.'

coolant and engine block. A liquid mode genset has a vaporizer that uses heat from the coolant to change the propane to vapor. So it's important the heaters are functioning.

John also used his IR thermometer recently to check for heating of bullets on 3-inch rigid non-flanged line within the transmitter building. He found that the inner conductor on the line to a dummy load had been cut with a tubing cutter. Tubing cutters are convenient but

John assumed correctly that the rest of the plant was plumbed the same way. His non-contact IR thermometer verified that there were problems at each connection, all measured from outside the line.

John scheduled an outage and was able to cut back an inch or so on each end of the rigid line inners. He used a fine-toothed, hand-driven, reciprocating cutter (better known as a hacksaw). He then smoothed the rough edge with

a file. After inspecting his bullet couplings, John replaced two bullets that had lost their springiness in the 12 years since installation.

I spoke with John about how he made straight cuts. His answer: Patience, taking the cuts slow. He also uses a trick I learned years ago: Wrap and tape a clean piece of 8-1/2-x-11 copy paper around the rigid line where you want to make the cut. When you line up the two

ends of the paper, you have a cut guide. Carefully trace the edge of the paper, all the way around the rigid transmission line, using a fine-point marker like a Sharpie. Remove the paper and cut along your marked line.

It's important that you rotate the rigid line as you slowly take small bites of the pipe with the hacksaw, until the cut is well established. Saw all the way through, rotating the pipe as you cut. Then remove the burs, as John mentioned, using a file. A Scotch-Brite or similar pad helps make for a clean connection. Just don't buy pads that are impregnated with soap!

John posed one last question to *Workbench* readers: How old are the smaller hoses on your gensets?

He reports that several genset mechanics recommend replacing even the good silicone hoses every five years or so. When do we usually discover hose problems? When the genset is needed but unavailable.

John Huntley can be reached at john.huntley@cumulus.com.

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.

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

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*Optional 19" rack adaptor holds up to three units.



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LISTENING TEST

(continued from page 22)

I thought the barbed wire might have sounded a little "sharp." The crew mentioned that barbed wire had significant skin effect, since there were often pieces of skin left on the cable.)

GOOD ENOUGH

Now anyone who is even vaguely connected to the high-end community would point out that this was not a double-blind test. In a big convention hall, acoustics are not ideal. And surely nobody was in the "sweet spot" for the speakers. In that way, this was not "critical listening" to any extent.

But still. A professional crowd essentially was not able to tell "good" cables from "bad" cables. Pretty much anything that gave us continuity worked well enough.

Besides, where would you go to buy 300-ohm twin-lead? Maybe that's why we stopped making it. ... We're jacking up the price because it's the world's greatest speaker cable. And that twin-lead, at 300 ohms, sure had low capacitance (less than 5 pF/ft. in many designs).

Hey, maybe ... I'll get back to you!
The Broadcasters Clinic is Oct. 9-11



'You've been listening to ... car jumper cables!' Bill Hubbard and Bob Surette at the demo.

this year. Visit www.vi-broadcasters.org.

Steve Lampen, 2011 SBE Educator of the Year, is a technology manager and

product line manager – entertainment products for Belden. His book "The Audio-Video Cable Installer's Pocket

Guide" is published by McGraw-Hill. Reach him at steve.lampen@belden.com.

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

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

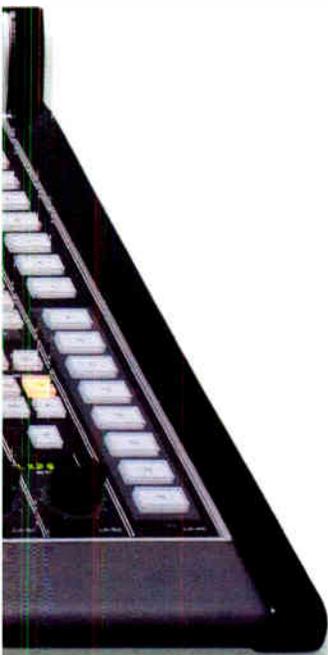
THE LX-24 CONSOLE CONTROL SURFACE FEATURES

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

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

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



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EVERY BLADE FEATURES

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

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

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



Optimism Infuses Grassroots Conference

As LPFM Filing Window Approaches, Community Radio Convenes in Midwest



A sign on the front steps of the Urbana-Champaign Independent Media Center welcomes community radio enthusiasts from across the U.S.

Manager Cathy Melio, grassroots radio stations are often characterized by a "volunteer-powered, consensus-oriented, community-involved model" and generally feature an eclectic range of programs.

I traveled to Champaign-Urbana by train from Chicago and made my way to the conference site. Housed in a historic post office in Urbana, the Urbana-Champaign Independent Media Center is a large, all-purpose space containing a tiny studio for community radio station WRFU(FM), along with public computers, production and art studios, a library and meeting rooms.

Functioning post office boxes still line the walls across from the radio station and the main room features grand pieces of three-dimensional artwork overlooking the cavernous space.

I arrived just in time to catch a screening of the film "Corporate FM" followed by a question-and-answer session with director Kevin McKinney. When I'd spoken with McKinney via email in April, I'd asked him if he was a radio activist; he demurred, saying that he associated that term with hippies "who only [care] about LPFM."

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FIRSTPERSON

Norman Stockwell makes himself heard at a 'Get on the Air Clinic' at the GRC Conference.



BY JENNIFER WAITS

Some 150 community radio practitioners and supporters convened at the Urbana-Champaign Independent Media Center in Illinois in late July for the annual Grassroots Radio Conference.

Formed 16 years ago, the Grassroots Radio Coalition is a loose-knit group involved with and concerned about community radio. The GRC held its first conference in the summer of 1996, spearheaded by station leaders at KGNU(AM/FM) in Boulder, Colo., and WERU(FM) in Blue Hill, Maine.

According to a treatise written by former KGNU Station Manager Marty Durlin and former WERU General

Although McKinney acknowledged that he likes the idea of low-power FM, he explained that, "Any 'penny-whistle' sized signal is too small to do what commercial FM should be doing ... I don't see it unifying a large enough population to shape and establish a unique style of a city's music and culture." Since much of the Grassroots Radio Conference agenda was focused on LPFM, I was eager to see how the film would be received.

"Corporate FM" focuses primarily on commercial radio and the effects of consolidation, as well as what the director sees as the role of private equity firms in the reduction in the number of local

(continued on page 32)

Drops jaws. Not audio.



Broadband Internet is everywhere. Which makes it ideal for live remotes.

Unfortunately, the internet is also notoriously erratic. Even if you're lucky enough to get a good connection, it might deteriorate during your show. So you dial back the bitrate, sacrificing sound quality to play it safe.

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AUDIO LOGGING



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

GRASSROOTS

(continued from page 30)

owners. Community and college radio aren't really mentioned. McKinney said during the Q&A that he thinks that community media works to provide the "spark" that commercial stations can then pick up and share with larger audiences, whether that spark is a new band or an underreported news story.

In his film, McKinney argues that commercial radio has the power to reach a much larger audience simultaneously, but that consolidation, voice tracking and the loss of local owners have led to a decline in the impact of radio stations within their communities. The audience was receptive, and several people (including some LPFM supporters) said they could relate to sad, first-hand

accounts of fired commercial radio DJs depicted in the movie.

LOW-POWER AHEAD

The following day, the main portion of the conference kicked off with a range of session options — from nuts-and-bolts panels about fundraising, audio editing and open source tools to broader youth media, policy and social justice tracks.

Since it's been a year and a half since passage of the Local Community Radio Act, the conference also was infused with optimism and enthusiasm about the approaching application window for new LPFM radio stations.

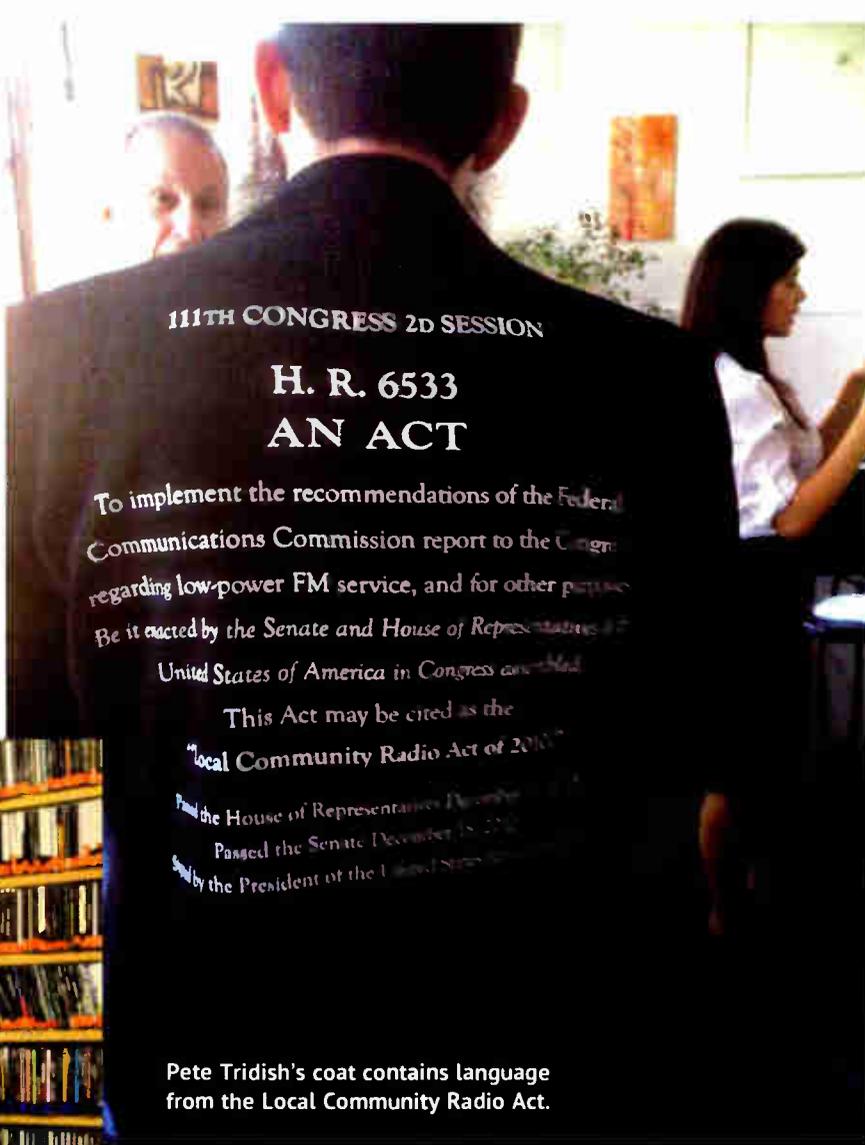
Prometheus Radio Project, which advocates for "participatory radio," has been working to inform communities about the LPFM filing window, which



Former WEFT DJ Paul Riismandel in the station record library.



WRFU Studio is one of the many facets of the Urbana-Champaign Independent Media Center.



Pete Tridish's coat contains language from the Local Community Radio Act.



A student DJ at WPGU(FM) makes use of current community radio technology.

the group anticipates will be as soon as spring 2013.

In addition to providing information and tools on its website, Prometheus has been hosting seminars around the country. As part of this outreach, Prometheus brought a crew to Champaign-Urbana to demystify the LPFM application process and to help provide a road map for stations hoping to get on the air.

The five-part "Get on the Air Clinic" outlined not only the steps that organizations will need to take in order to apply for a LPFM license, but also the basics of engineering and broadcast equipment as well as tips about station operations. Related sessions delved into broadcast law and

(continued on page 34)



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World Radio History

MARKETPLACE

RIDING SHOTGUN: The iShotgun is the newest member of the MicW i-Series of professional microphones. It is a super cardioid shotgun for use with smartphones and other devices including iPhones, tablets and DSLR cameras.



The iShotgun design fits well with the small dimensions and low weight of such devices. It is easy to attach to the

phone or camera, and is suitable for mobile journalists and audio professionals.

According to the company website, the mic has been tested with the iPhone 3, 4 and 4S; iPad 2 and 3; iPod Touch; Mac book; Samsung Galaxy; Motorola XT series; Canon 5D, 7D; Sony Alpha 6 and 7 series; and Nikon D7000.

Mic W Audio is the recording microphone subsidiary of BSWA Technology Ltd. in Beijing. The company's iSeries received a Radio World "Cool Stuff" Award at the 2012 NAB Show.

Info: www.mic-w.com

MAKE BELIEVE MUSIC: Sony Creative Software has released a royalty-free production music package called the Production Music Collection. Though marketed for video production, the tunes are suitable for any broadcast production duty. The package has more than 1,600 tracks. Each track



Sony Sound Series: Production Music

has four cuts: a 10-second, 30-second, 60-second and full length. Files are 24-bit, 44.1 kHz.

They are available in a variety of themes: ambient, country, electronica, jazz, news, pop, rock urban and world. A searchable database is included.

Individual tracks may be purchased online for \$49.95.

Info: www.sonycreativesoftware.com



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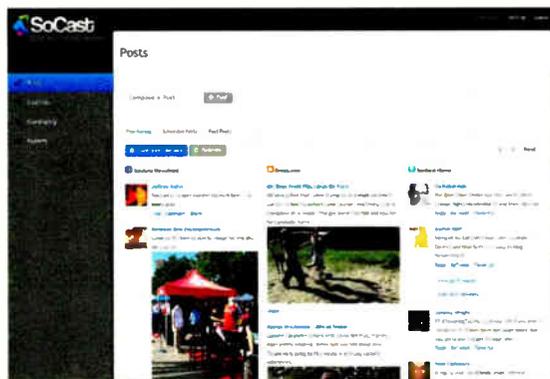
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GET SOCIAL: Social media company SoCast has an upgrade to its SoCast SRM platform, a social monitoring module.



SoCast SRM provides social media tools for radio stations. Those tools include a player, personal dashboard, social community building and engaging tools, marketing apps and analytics tools.

The new Social Monitoring module works with the SoCast SRM platform to track community interaction, songs played or "liked," messages about songs, DJs or the station.

The analysis tool works in real time.

Info: www.socastsrm.com

FLEXIVA GOES LOW: Harris Broadcast Communications expanded its Flexiva transmitter models with 50, 150, 300 and 500 W offerings. It ear-

GRASSROOTS

(continued from page 32)

the relationship between LPFM and social justice movements.

Danielle Chynoweth, a member of the Prometheus outreach team and a board member at the Urbana-Champaign Independent Media Center, said that Prometheus had been gathering information about groups wanting to start stations and was "looking for a face-to-face way to provide support and training." She estimated that 35 to 40 conference attendees were from groups that are hoping to apply for LPFM licenses.

Attendees at the "Get on the Air Clinic" sessions came various states, and many expressed hope that they would be able to create new LPFM radio stations. I was struck by the range of people who were enthusiastic about LPFM — from a man who hoped to start up a LPFM station in an Illinois library, to a large group from a community center in Minnesota, to a man who operates an online-only Christian radio station.

In the first session, Chynoweth talked about radio as a "means for us to make a transformation" and said that the United States is on the cusp of the "birthing" of the "next generation of community radio."

WHEN IN TOWN ...

During my long weekend in Champaign-Urbana, it was also a priority for me to tour as many local radio stations as I could. I carved out time to poke around the on-site station WRFU (which was largely unoccupied) and also drove to Champaign to see commercial college radio station WPGU(FM) and community radio station WEFT(FM).

Owned by Illini Media, a non-profit that also owns the University of Illinois' student publications,

lier introduced medium- and high-power options that span to from 1 to 40 kW.

The company also recently introduced the Intraplex IP Link 100 codec for low-cost, studio-based contribution to IP networks.

This fall Harris also demonstrated a new electronic data interchange solution to support IP-based distribution of radio broadcast content over multipoint DAB transmission networks. This development enables low-cost, targeted content delivery to many transmitters across large geographic regions.

"An EDI module distributes content from the central headend to multiple transmitters, each with a receiving EDI module built into its Apex M2X exciter," Harris stated. "This creates the industry's only integrated EDI interface on the market for DAB transmitters, eliminating expensive external components."

Info: www.broadcast.harris.com



A 20 kW Harris Flexiva system

WPGU is an intriguing place — student-run, but not the typical freeform college radio station. The music library is entirely digital and station managers schedule the playlist.

Unlike WPGU, which had no physical music library, WEFT's walls were lined with CDs. WEFT had a cozy, more casual feel to it with sticker-covered shelves and funky artifacts. While touring the station, WEFT DJs even pre-empted their regularly scheduled programming in order to allow for an impromptu interview about the GRC conference.

Visiting stations in person gives much more of a flavor for each station's unique personality. It's another way to connect with and learn from other people working in radio.

In keeping with that sentiment, a big aspect of the Grassroots Radio Conference is building connections across stations. During the sessions I attended, each member of the audience offered up an introduction so that everyone had a sense of who was in the room and what they could add to the conversation.

As I trekked out of town at the end of the weekend, I was reminded of the power of gatherings like GRC. I sensed a spirit of camaraderie, not only between stations, but also between veterans and novices. Although there were certainly discussions about the challenges of radio (after outlining various pitfalls in a legal session, broadcast attorney Michael Couzens joked, "Does meatpacking seem safer than radio?"), I left this year's GRC feeling optimistic about radio's future.

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

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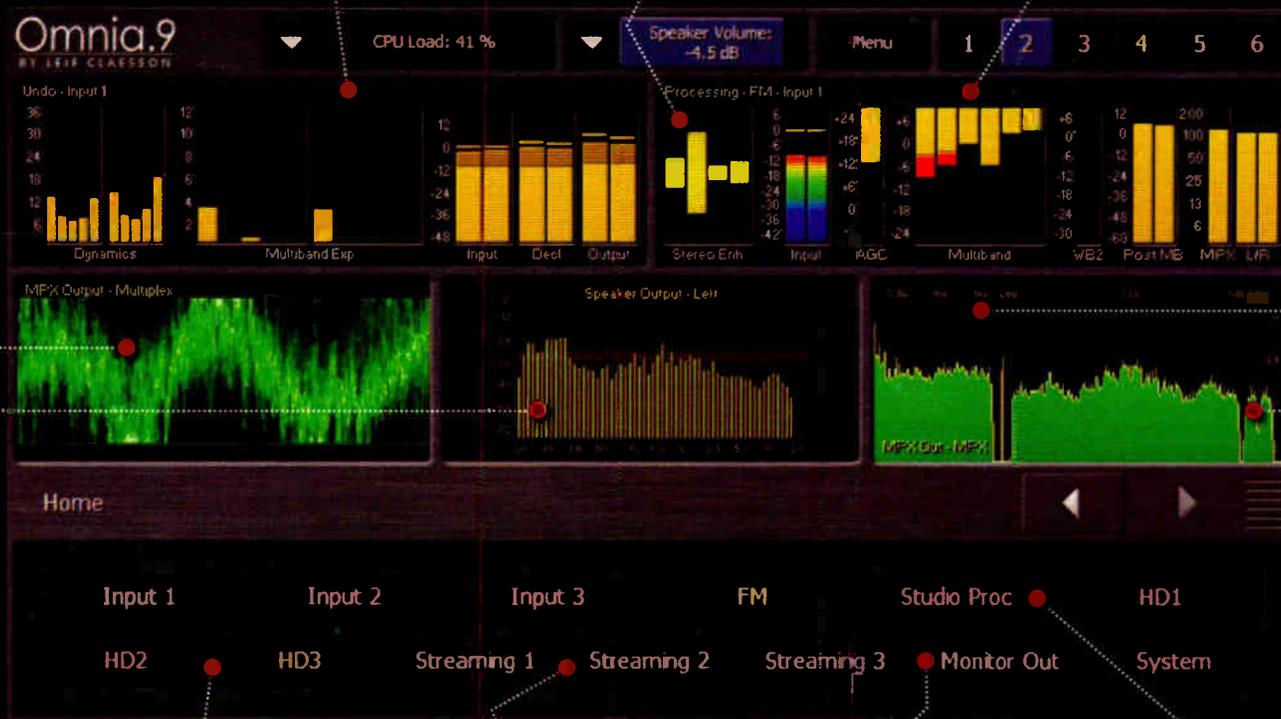
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Leone Rides the Cosmic Airwaves

Iowa DJ Reflects on 32 Years With Titan's KGRS(FM)

BY KEN DEUTSCH

In 1981, Ronald Reagan was president, the Dow Jones Industrial Average was just cracking 1,000 and Prince Charles married a pretty girl named

SMALL-MARKET RADIO

Diana Spencer. It was also the year Cosmo Leone was hired by Dave Steinle at KGRS(FM) in Burlington, Iowa, as a nighttime deejay.

Now, almost 32 years later, he's still at "The New Mix 107.3," but in the ensuing years has moved up to the morning show and added "program director" to his business card.

"I only had two conditions when they offered me the job," said Leone, 54. "I asked to spend Christmas 1980 with my family back east, and I wanted to fly home again for my fiancée's graduation. By the way, that fiancée is now my wife and we've been married 30 years."

Leone, named "Cosmo" after his grandfather (not Kramer from "Seinfeld"), grew up in the golden era of top 40, listening to WABC(AM) New York's high-powered personalities like Dan Ingram and Chuck Leonard, as well as young Big Apple sportscaster Marv Albert. "He was a great play-by-play guy, and I love sports. I've



Just a wild and crazy guy: Leone poses with the staff of local hair and tanning salon Shear del Sol, at their grand opening.

been able to call a lot of games on the air, including my daughter's high school basketball games."

Leone was going to junior college at Nassau Community College

where he worked at the campus station, WHPC(FM). He also worked as a "gopher" at WPLJ(FM), a big-time rocker in NYC. He did not have the experience to get on the air there, so

he started sending out tapes and Titan Broadcast Management called him and said they needed someone energetic. His original dream was to be a sportscaster, and he called himself a "radio geek who went to bed with the transistor radio."

LISTEN TO YOUR CITY

While some on-air personalities covet jobs in ever-larger markets, there was something about small-market radio that appealed to Leone. For him, it's all about "thinking local."

"I have a connection to the community and that's the thrill of the job for me," he said. "Chuck Leonard once said that if you're doing it right and you're not there on a particular day, you've screwed someone's day up. That means that people depend on you and they almost make you feel guilty if you have to miss work. I do have a life outside of the radio, but this job is very important to me."

And Leone is nothing if not ubiquitous in his adopted hometown. He's on the air four hours every weekday. He's at every large public gathering, including Burlington's Steamboat Days, a music festival from which the station broadcasts every year.

"Whatever is going on, we're there," he said. "You have to be seen and heard."

One of Leone's important community contacts is Tim Manderscheid, branch manager for Fleck Sales, a beer distributor in the area.

"Cosmo is a lot of fun to be around, full of energy," he said. "This will be the sixth year we'll be partnering with the station for the Toys for Tots drive. Cosmo, the local sheriff and I stay overnight in a trailer at a mall and Cos broadcasts until the next day when the trailer is usually filled up with donated toys. And hey, that's really fun being outside when it's about 20 below zero."

Manderscheid noted that during the event two years ago, Leone wanted to collect bicycles to hand out to needy kids. He put his appeal out over the air and the trio managed to collect 176 bikes. Manderscheid is also involved in another local charity event with KGRS that benefits Crime Stoppers.

Leone has a small but efficient team, about seven people in all, who handle everything for KGRS and its sister station at Titan Broadcasting, KBKB(FM), "The Bull."

Past station owners include Harris Corp., LWM Inc., Jacor, Clear Channel and John Weir (to name a few). But L.J. Pritchard bought these stations four years ago, and Leone says he loves having a local owner now. "It's nice to go down the hall and get an answer, rather than going through numerous emails."

(continued on page 38)

GR

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

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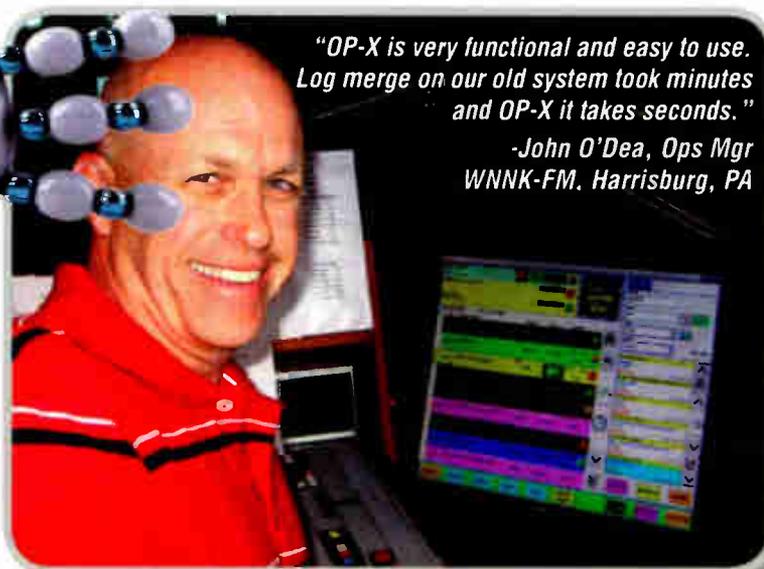
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- Engineers will enjoy Op-X because it's easy to install, maintain, and has automatic backup features.



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World Radio History

LEONE

(continued from page 36)

While some weekend and evening shows are voice-tracked, most broadcast hours are live. But ask anyone who works long hours with a small staff about balancing job and family.

"There was a time when I was doing too much, back when I first took over as program director," said Leone. "But I found out that if you don't delegate and be a great time manager, you won't have much of a life."

One member of the staff has known Cos longer than anyone else. Tim Brown met Leone in 1990; Brown pulls the long noon to 6 p.m. shift on the air.

"You wouldn't know it by looking at his messy desk," said Brown, "but he is very organized when it comes to planning station promotions, programming the station and planning bits and features for his morning show. I've learned a lot."

And Brown thinks he has discovered the reason for Cosmo's popularity.

"Beneath that tough exterior, he's a very sentimental guy. He's a softy. Actually, his listeners probably already know that as he shares just about everything in his life on the show. That's what makes him relatable."



Leone with Tim Brown at Steamboat Days, a music festival held in Burlington every June.

EYE ON THE OTHER GUY

Even a small market like Burlington, listeners have many choices.

"Our main competition is a group of six stations, but we have a heritage of 36 years and we're totally tied into the community," said Leone. "The idea is that we go in and sell who we are and if we take care of our own ship and don't worry about the other guy, we'll succeed."

And what about other forms of competition?

"When I was growing up there were no home video games, no CDs or DVDs," he said. "You had to go to a theater to see a movie. Now there are way too many choices out there now, so if you're not really local and tied into stuff, it's not making an impact on someone's life. They will find something else to entertain themselves."

Even after over three decades at the same station, Cosmo "Cos" Leone is still having fun.

"There is nothing like being on a mic live at a radio station," he said. "It's like being the Wizard of Oz. We're the guys behind the curtain."

Ken Deutsch is a former deejay who says he almost used the air name Beethoven Smith until minutes before his first show, when his program director told him it was a stupid idea.



Celebration in honor of Leone's 30 years of broadcasting with Mix 107.3 KGRS. Back: Drew Kirby, Tim Brown, Mark Hempen. Front: Nikki Poetting, Cosmo Leone, Landon Vance and LJ Pritchard

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Cosmo with Mark Hempen, on-air talent and sales manager, doing a live remote broadcast from Farm King on Black Friday. Farm King is an area chain farm store with a huge toy department.

MEET THE NEW AXIA xNODES!

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Everybody knows that Axia introduced broadcasters to IP-Audio in 2003. 3,000 studios and 30,000 connected devices later, the competitors who said "it'll never work" are now eating their words. How do you follow up that sort of success? If you're us, you open up a case of Monster and go back to work. So we did.

The result: Axia xNodes, smart new AoIP interfaces that transform your audio devices into an intelligent network. Use them to turn analog, digital or mic-level signals into routable IP-Audio, with associated GPIO logic. They're so advanced, they won two major awards at their NAB debut.

WHAT CAN YOU DO WITH THEM? HERE ARE A FEW IDEAS.

- » **BUILD A ROUTING SWITCHER.** One stand-alone xNode is an 8x8 (4x4 stereo) routing switcher. Connect 8 xNodes to a switch and make a 64x64 routing switcher. Need more I/O? Connect more xNodes. Like all Ethernet-based networks, Axia systems are naturally scalable, up to 10,000 stereo signals (plus logic).
- » **ADD MIC'S TO THE MIX.** xNodes make awesome multiple Mic preamps. They have ultra-low-noise, ultra-high-headroom, studio-grade preamps with selectable Phantom power. Put your Mics in, bring your analog line level out. And that IP-Audio network jack? Ready to be used whenever you upgrade to a full IP-Audio network.
- » **STL OVER IP.** Today's cluttered RF spectrum makes IP a great alternative. Put an xNode at either end of a fiber run, OC-3 circuit or a pair of inexpensive Ethernet radios to send eight channels of uncompressed audio to your TX – and get eight channels of audio backhaul too.
- » **MAKE AN A/D/A.** Take one analog and one AES/EBU xNode and rack-mount them side by side. Voila! Eight precision A/D converters and eight precision D/A converters, in just 1RU. Studio-grade, 48 kHz, 24-bit Delta-Sigma A/D and D/A converters, with 256x oversampling, make difference you can hear.
- » **SAY SO LONG TO SOUND CARDS.** PCI, PCIe, USB3, FireWire... who needs 'em? Load the Axia IP-Audio Driver onto your PC workstation and connect it to an xNode to get eight professional, balanced outputs and eight inputs. Use an industry-standard DB-25 breakout cable for pro XLR connections. You'll get studio-quality audio and save some green, too.
- » **SLIM DOWN YOUR SNAKE.** Connect two analog or AES xNodes with a single Ethernet cable for an instant 8x8 bi-directional snake and bid the multi-pair bundle goodbye. Add a few more xNodes on each end for a 16x16, 32x32 or 64x64 snake. Use off-the-shelf media converters for long-haul fiber connections.

xNODES ARE SMALL. Mount them on your wall, under the counter — mount 'em on the ceiling if you like. Optional rack- and wall-mount kits provide plenty of options.

CONFIDENCE METERS on every xNode mean you'll never have to wonder where the audio's at. Audio presence and levels are both displayed at a glance.

INFORMATION OVERLOAD? Not here. Sharp, high-rez OLED displays put all the information you need right on the front panel, without the need for a distracting multi-colored lightshow.

xNODES WORK WITH BOTH LIVEWIRE AND RAVENNA AoIP networks — making them compatible with IP-Audio gear from over 40 major broadcast companies.



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RI45 OR DB-25? xNodes give you I/O both ways, so you can choose whichever industry-standard breakout cable you prefer.



FAST, ONE-BUTTON SETUP. Hit the switch and plug 'em in — your xNodes will be streaming audio in under 30 seconds.

DUAL ETHERNET PORTS for redundant network links. The overnight jock kicks out a connection? No problem; the other one takes over so your programming never skips a beat.

xNODES HAVE AUTORANGING INTERNAL POWER SUPPLIES, but can use PoE (Power over Ethernet) too. Perfect for those out-of-the-way places where a power cable is inconvenient. Hook 'em both up for redundant, auto-switching backup power.

VERY VERSATILE. 5 different xNodes handle nearly any signal type. AES/EBU, Analog, Microphone and GPIO xNodes are perfect when you've got a lot of one audio type to work with. But what if you need a little of everything? This is the Mixed Signal xNode. Think of it as your utility MVP, with a switchable Mic/line input, 2 dedicated analog ins, 3 analog outs, a digital AES/EBU input and output, and 2 GPIO logic ports.

TWO xNODES MOUNT SIDE-BY-SIDE, so you can create your own custom mix of I/O types within a single rack space. Pair up an AES/EBU xNode with a microphone xNode, or match a GPIO xNode with an analog unit. Or combine a couple of Mixed Signal xNodes for the ultimate mix of mic, analog, AES3, Analog and logic I/O.

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Make-Believe Marketing vs. The Real Deal

Advertising Measures Should Show Actual Results If You Want Them to Work

**PROMO
POWER**



Mark Lapidus

A highly intelligent, successful general manager recently informed me that radio stations don't need to advertise their own product. Having heard this line with increasing frequency in the last five years, I was prepared with my standard retort: "If advertising a product doesn't deliver a result, how does your radio station manage to sell so much airtime?"

I usually receive a predictably incredulous stare followed by this kind of response: "That's different. Retail advertisers are actually selling products and services. We are selling entertainment and information. People are always searching for entertainment choices, so we get sampling just by being on the air. Besides, we're very active on Twitter and Facebook and we do a ton of events. Just last week, we did a huge blood drive, two bar appearances and a concert. Lots of people come into contact with us that way."

Behind every good lie, there is a veneer of truth regarding every level of this logic. Radio stations — especially those with great signals — do get sampling. However, that kind of sampling is short-lived, erratic and often based on the need to simply find an alternative to something the listener doesn't enjoy, like a commercial break that's too long, a song he or she doesn't like or a boring talk segment.

If you're in the game long enough, you come to learn that a station can undoubtedly grow an audience through

great programming and regular sampling. The question is more about how long you have to be around to get enough sampling to grow. (It doesn't hurt if your station has a unique, memorable format.)

Regarding social media as a marketing tool, yes, it can drive tune-in — the bigger the quantity of fans, the more likely you will drive action.

However, those who focus on social media to drive tune-in without pushing out any real content run the risk of lessening their own effectiveness when they bombard fans with tune-in messages.

Also, while the reach of Facebook and viral nature of Twitter will go out to an audience significantly larger than those who subscribe to your social media outlets, it is typically a tiny number of people compared to the size of the city in which you broadcast.

How about so-called event marketing? Does it help? I've long felt that pressing the flesh is vital to building brand loyalty. Over the years, your on-air personalities can meet a lot of people. However, this, too, is highly unlikely to drive a perceptual change in ratings, because it happens so gradually. I've got to add that event marketing is not real marketing either.

SO WHAT IS REAL MARKETING?

Real marketing reaches massive numbers of a target audience with high frequency, with the goal of driving tune-in and ratings.



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First: Whether it's broadcast or local cable insertion, the visual/aural impact of a great TV spot will drive action. Television will work if you think of it the same way as your radio advertiser thinks of using you ... there must be enough reach of the target audience with high frequency.

Second: Dive into the great outdoors: billboards, transit, stadiums and portable trucks. Again, you've got to effectively cover the territory, or run the risk of wasting your money.

Third: Be sure to do your homework. Hire an agency that can show you the actual results they've produced for other advertisers in this medium.

Radio stations need real marketing because of the number of entertain-

ment options and distractions in the 21st century. You don't just compete with other broadcasters. You are now vying for attention with Internet stations, websites, social media, mobile phone conversations, texting and streaming video.

For those of you thinking about launching new formats without marketing budgets, please consider how much time you have in your hourglass. Companies eventually demand ratings results, and if you don't budget enough money for marketing your new product, you may pay the price with the end result being your company saving your salary.

Mark can be reached at marklapidus@verizon.net.



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



1876: Alexander Graham Bell's commercially viable telephone.



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



1920: Every home is working toward having a telephone!



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



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



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



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WMZQ GOES TO THE DOGS



Intern Chavone Richardson takes charge of the promo table. In between giving away goodies, she encourages everyone to enter the ticket raffle and handles the photo ops.



Michael J gets some puppy love from one of the puppies available for adoption from Lost Dog and Cat Rescue Foundation.

Radio personality Michael J, second from the left, of Clear Channel station WMZQ(FM) in Rockville, Md., spends a sunny afternoon at an Annandale, Va., pet store promoting the 2012 WMZQ Fest and supporting pet adoption.



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World Radio History

Telos Hx2 Brings Callers Close

Syndicated Program Finds Hybrid Solves a Problem Most Call Shows Don't Know They Have

FROM THE FIELD

BY CHRISTOPHER SPRINGMANN

"Our old telephone hybrid just works fine, so what's the problem?"

No problem, just replace it, because your callers, reporters and engineers, plus the unrelenting world of technology, demand that you do. Today's telephone device-of-choice is very un-POTS and often powered by Apple or Google, not AT&T.

Laura Mir, Radio World contributor and broadcast engineer, persuaded me to acquire a Telos Hx digital telephone hybrid interface with her review of the Hx1 (Radio World, March 8, 2011) gushing that: "users will appreciate a bright, intelligible audio quality ... compared to existing digital hybrids, this enhance-

ment was immediately noticeable ... caller(s) also reported better-than-average return program audio clarity."

Sold!

But wait, there's more. My "Life, Love & Health" team now considers

the larger Telos Hx2 dual-hybrid perfect for our small "talk show." Unlike our old single-line Telos One, the Hx2 features an LED "status symbol" display for incoming calls, which makes life much easier for a single operator. Quite honestly, we generally do call-outs for interviews, but the call-in option is invaluable. Conferencing two callers together on the Hx2, often with a guest

Secondly, there was the ease of operation of the Hx units which allowed them to be deployed into the field, at reporters' desks and at remote bureaus without the need of having an engineer nearby or extensive training. That fed another element — an attractive price point for single and multiple purchases. As you know, "price point" is a familiar phrase in radio.

Finally, though it wasn't applicable in our situation — compatibility with existing Telos hybrid wiring and control



in studio and/or from a remote NPR studio via ISDN, has given us a "bigger sound." We've added live talk show excitement as we bounce around the country, as in, "Now joining us from her home in Atlanta, Dr. Susan Glutz, a plastic surgeon; and from Houston, her patient, Carole ..."

Our tabletop installation features a Mackie Onyx 1220i FireWire mixer that slides nicely under an open On-Stage Stands tabletop rack stand, leaving the faders exposed, while effectively managing cables, too, a bonus. A Pro Tools workstation records the tracks via FireWire, although we always run a backup into an Edirol R-44 four-track SD card recorder, just in case.

But I wondered, how do other Telos Hx users gain value from their units? Was our experience and use typical? And was there something we could learn from them?

So I spoke to several broadcast engineers, "ops" professionals and independent producers about their acquisition of the Telos Hx1 and 2 digital telephone hybrid interfaces. Their reasons are as varied as their markets and broadcast/ netcast mediums; however, there were several recurring themes on why they made the decisions that they did.

Most noted that there was a big quality improvement in cellphone call processing plus excellent handling of POTS calls.

connections, i.e. Axia Livewire.

Interestingly, most users took for granted the Hx's gate and limiter feature, AGC and dynamic EQ processor, and ducking feature, preferring to stay with factory settings. Rack it, cable it and get to work.

Telos is currently shipping about 100 Hx1 and Hx2 hybrids every month, more than 3,000 units in two years, according Kirk Harnack, vice president of Telos Products, who supplied me with the names of the Hx1 and Hx2 users I interviewed.

LAZY PHONERS

Stephen Colón knows all about "lazy phoners" — reporters who tie up valuable production staff time with requests to initiate telephone interview calls, record both sides of the conversation, then download the file to the server for access.

That frustrating, recurring problem became a win-win opportunity for the technical director of American Public Media's "Marketplace," as he persuaded management to purchase 15 Telos Hx1 digital hybrids.

"We needed to make a change in the way we managed our reporters around our facilities and around the world and, with an increase of reporters, we needed to find a reliable system that will work really well for everyone," said Colón.

(continued on page 46)

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World Radio History



TELOS

(continued from page 44)

That meant replacing aging Telos One units and a mash-up of consumer-grade hybrids with the Telos Hx1.

Colón's buying decision was also driven by the fact that Hx1 hybrids were designed to handle cellphone calls, POTS lines, plus VoIP. That was good news considering that mobile devices have essentially replaced landlines for on-the-go reporters and callers, too. Reporters now record interviews on their laptops, edit with Adobe Audition and send the results to the "Marketplace" content management server.

The bottom line for Colón? "The reporters are happy, more autonomous and responsive with their own Hx1 unit plugged into a laptop at their work desk or home," said Colón. "The learning curve was minimal, which meant fewer tech calls for me. And the Hx1 is simple, with three buttons: answer a call or connect after dialing; caller on hold; and drop. It's simple and quick. Much better than the Telos One."

Gibson Prichard of NewsChannel5

The Hx2 call quality is noticeably improved ... particularly when the call originates on a mobile phone, as is often the case.

— Gibson Prichard

WTVF(TV) in Nashville, saw the Telos Hx2, the dual-hybrid version, as a solution to an increasingly common challenge. Prichard, WTVF's chief engineer and chief technology officer, said that "We use the Hx2 for reporter phoners, in cases where we can't get a microwave or satellite live shot for interviews."

And when might that be? "In case of severe weather or a natural disaster, we need to hook up with emergency management personnel in the field, and need all the options we can get. The Hx2 is tied to the station's PBX, which will transfer the two-lines to appropriate staff or talent," he added.

The Telos Hx2 replaced a Gentner single-line digital hybrid which has since been drafted into service for a voice-over booth, servicing reporter's interview phoners.

"The Hx2 call quality is noticeably improved over the Gentner," observed



Christopher Springmann drives his rig. The Telos Hx2 is in the rack above the mixer.

Prichard, "particularly when the call originates on a mobile phone, as is often the case. Also, the AES output option fit nicely with our Harrison TVDSL-9632 multichannel TV audio console. The Hx2 is mounted in a rack just an arm's length of the audio operator."

Handling cellphone and POTS calls well, especially in emergency situations, was also a priority for Jeff Batten's acquisition of the dual-hybrid Hx2. Jeff is senior engineer for Clear Channel in Nashville, where he oversees five stations plus the Tennessee Radio Network. Now in his 40th season ("or about 107 'dog years,' same as 'radio years!'" he joked). Jeff always has an old school POTS phone handy, "so just in case the cell tower falls down, I can get a dial tone."

Batten acquired an Hx2 for Nashville's WLAC(AM) to replace a Telos 100 Delta hybrid, primarily for the Hx's superior handling of mobile calls. And much like WTVF's Jeff Prichard, Batten is concerned about having multiple communication pathways in emergency situations. "The way we're set up, if somebody had to go into the control room to record one of our weather guys, the [talent] could call in on one of the [Hx2] lines and the board op could bring in the local fire chief on the second line." Batten is anticipating

short-staffing problems, too. "Like, say we've got floods and there's only one guy in the building right now — he could actually host the show in the control room with the Hx2."

POCKET HX?

Steve Johnston, director of engineering and operations at Wisconsin Public Radio, racked his new Hx2 at a WPR bureau to provide two guest lines for talk shows, replacing a Telos One+One, while the listener-callers are handled by the larger multiline Telos One-x-Six.

"I don't consider it [the Hx2] enough for a talkshow but we use it to support the other unit," said Johnston, as he sat at the WPR console equipped with an Audioarts R-55e with three Superphone modules. A fixed mixer under the cabinetry handles the cross-connected mix-minuses for the caller output from the Telos One-x-Six and the two guest outputs from the Telos Hx2.

Colón of "Marketplace," who probably oversees more Telos Hx hybrid units than any engineer in America, has a short wish list for the unit: a backpack or briefcase-sized version for location work, typically at home, a hotel or airport.

I ran that request by Telos' Harnack who, not surprisingly, would love to add such a unit to the line. According

to Harnack, the challenges are daunting "... as there's no universal standard for digital phone systems typically found in hotel rooms. Designing a hybrid connection to work with all or most of them would be like designing a transmission that works in any car on the road," he added.

But Telos is working toward more solutions for IP-connected codecs, which Harnack describes as the future for remote interviews, sports and other on-location reporting. "Such IP codecs can be wired to the Internet or wireless via Wi-Fi or 3G/4G data modems. There are applications coming out for smartphones that allow a reasonably high-quality audio connection via IP codecs back to a studio, for example," Harnack offered.

I'm sure Stephen Colón will stay tuned.

Christopher Springmann is the producer of the syndicate "Life, Love & Health" health talk show.

Any tips or techniques you've learned and would like to share with the RW community? We'd like to include you in RW's Letters-to-the-Editor and a future article. Email us at radioworld@nbmedia.com.

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Air-1USB Is a Small-Format Performer

Audioarts Gets It Right With Second Bus in Small Mixer

PRODUCT EVALUATION

BY ALAN R. PETERSON

Sometime during my career, I suspect that the engineer running the universe ordained me as the Oracle of Very Small Mixers.

From the LPB Blue 5A more than a decade ago through products made by Arrakis, Harris, Mackie and perhaps more — if a mixer was tiny and had a valid use in radio broadcasting and production, it would eventually make its way to me.

Being an enthusiast of low-power and community radio, as well as finding the least expensive way to pull something off, I suppose it's a title I can live with.

Which is how the Audioarts Engineering Air-1USB radio console got my attention. A small, solidly-built radio mixer with a straightforward layout and USB audio I/O, the Air-1USB combines features desirable in a larger mixer with the engineering legacy behind Audioarts and Wheatstone — in an extremely compact chassis.

If you manage a multistation digital radio facility, a houseful of Air-1USB mixers probably isn't on your radar. But as I have said before in prior articles, if you are running an LPFM, a Web radio station, school station or a Part 15er, or a small commercial operation needing



to replace a struggling console that you hung on to for far too long, read on.

WOW, THAT'S SMALL ...

The Air-1USB shares a common trait with all the other mixers I have reviewed: It's danged small, at just a little over 15 inches wide and under a foot deep.

But the Audioarts engineers didn't take anything away from the design when they shrank it in the wash. The Air-1USB has two mic inputs, six line inputs and one USB Type B socket, speaker muting, selectable levels on inputs — really all of the things you see in competitors' consoles; *except* this mixer has two audio busses, a PGM 1 and PGM 2

line ("Audition" to you old-timers), just like the big boys have.

That means a separate bus for switching mics and telephones to record off-air callers. Console splits are possible for combo operation; feed the transmitter off PGM 1 and a separate streaming channel on PGM 2. The second bus can also feed an outboard effects box for oldies-style mic reverb, for instance.

The AIR 1USB design also addressed an issue common to many of the other boards I've reviewed: mechanical switches that did not feel as if they would last more than a few months. The Air-1USB instead uses fairly robust momentary contact pushbuttons for channel on/

PRODUCT CAPSULE

AUDIOARTS AIR-1USB USB Broadcast Mixer

Thumbs Up

- + Digital logic and durable buttons for channel on/off control
- + Two separate audio busses
- + Versatile switching matrix for input levels and cueing

Thumbs Down

- Ganged headphone/monitor select
- Rearmount headphone jack

Price: \$1,885

For information, contact Jay Tyler at Audioarts Engineering in North Carolina at (252) 638-7000 or visit audioartsen지니어ing.com.

channel off functions.

The switches don't carry audio on their own, but instead rock a 74LS74 flip-flop chip that gates a 4053 analog multiplexer IC, where the actual audio is handled. Again, like the big consoles do.

Audio connections are to the back panel via balanced 1/4-inch TRS jacks (see sidebar), and levels are switchable via board-mounted slide switches, accessible on the underside of the mixer. Note you cannot bolt down the mixer to the tabletop, lest you need quick access to the switches.

Some pretty good thought went into configuring those switches, too: offering cue-to-monitor (to put cue audio up on the studio speakers), split mon and split head for deciding *where* to place that cue signal, a mono sum switch for either bus if you are feeding a monaural AM station, and a USB-out switch cluster to pick whether PGM 1 or 2 is feeding the USB port.

Bring your own cue speaker. There is not a lot of room inside the Air-1USB to mount a capable speaker, but there is a jack to plug one in. Also bring your own relay for the tally lights. The Air-1USB gives you a closure socket, but nothing that can handle 120 VAC. Wire that up as an external circuit.

And even though the TRS jacks are clearly marked, label your wires and cables going in and out of the Air-1USB. There is one socket marked "Spare" that, for all I know, goes nowhere (a future feature perhaps?). Plugging into that will make nothing happen.

DIGITAL ANGLE

The USB port provides bidirectional transfer of digital audio, which is handy when interfacing the Air-1USB with an audio computer without tying up an

(continued on page 50)

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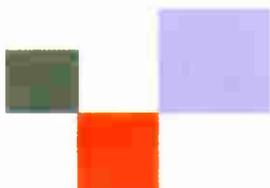
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AUDIOARTS

(continued from page 48)

analog input. The console is seen as a "sound card" under Windows and Linux (I did not check it under the Mac OS, but the manual tells you how).

One consideration would be to run the station automation system in and out of this port, but I would suggest this feature is better served for recording or production.

Many automation systems are multi-channel affairs with the main playlist on one fader, the cart wall on another, the cue+audition line on yet another, and so on. The Air-1USB puts the USB input on fader channel 8 only.

If you are running a simple uncomplicated playout system with only one output channel, then plug into the USB port. Otherwise, put each output from the computer on a dedicated fader for the flexibility you need when going live.

By the way, you may notice USB audio moving through at a lower level than you are used to, especially if your operators tend to ignore levels. According to the tech folks at Audioarts, the USB port is



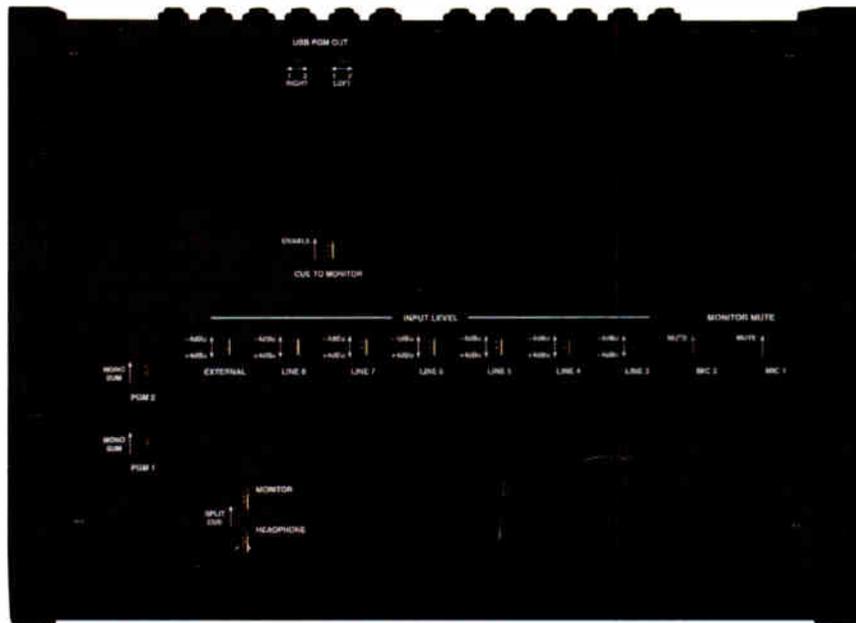
hardwired to accept 0 VU as -20 dBFS (SMPTE standard RP.0155).

For folks who believe in "using the entire meter," this may seem irksome. I consider it an opportunity to zero all the levels in the house to a single standard.

My test drive with the Air-1USB included components that might be found in a typical smaller studio: two dynamic mics, an automation computer (I used a Rivendell with a single-output motherboard soundcard), phone interface, a CD deck, a cord to connect an iPod and a production computer.

Handling a mixer this small could make one feel a little like Gulliver in the land of Lilliput, especially in the midst of full performance. But it's possible.

The full-throw faders were comfortable to use, with a real radio feel, not like



the gritty glide one finds in mixers made for the MI industry.

Watch your input allocation. Plugging something into Channel 8 disables the USB input.

The mic preamps are transparent and clean, based around SSM2017 chips, which you find everywhere. Trimpots are directly underneath the XLR sockets on the rear and easily tweaked.

The bargraph LED meter, while not large and commanding of attention the way old-style meters were, is sufficient for the studio operator. I do wish they came with a little extra headroom, as one might see on Mackie portable mixers or the Logitek Pilot. But, there's only so much room on deck.

More than anything, I welcomed that second PGM 2 bus. That is what sets the Air-1USB apart from a lot of the other small-format consoles on the market now. It was possible to handle and record a phone call while the music kept playing.

If I were to make one improvement here, it's that the monitor select key affects both speakers and headsets together. I would have preferred a separate selector for the headphones so I could listen to the caller in the cans, but still have an on-air confidence feed in the speakers at low volume.

And I guess a front-mounted headphone jack would have been nice. With all of the 1/4-inch plugs behind the mixer feeling exactly the same, it's easy for an

operator to erroneously pull the plug on the cue speaker, or worse, the external power supply.

To truly complete the Air-1USB as a little version of a big mixer, A/B input selector switches might be a consideration. The user would have a choice of sources that could feed one channel; i.e., switch between a CD deck and the newsbooth on the same fader.

But to do so would overcomplicate the mixer with another set of buttons and another layer of jacks, add expense, and prevent Audioarts from selling you a board that is probably a better choice for your operation (like the 12-channel Air 3).

Besides, look around the studio. If your requirements are satisfied by an Air-1USB, it means there are not a lot of source components to begin with.

As I've said, not everyone is going to need a small-format broadcast console. But those that do would do well to consider the Audioarts Engineering Air-1USB.

It comes in a little pricier than consoles you've seen me review before, but the addition of the PGM 2 bus and the more robust surface switches mean more versatility and potentially longer uptime in the studio.

Alan Peterson, CBT/CEA, is assistant chief engineer and production director for the Radio America Network in Arlington, Va., and a longtime contributor to Radio World.



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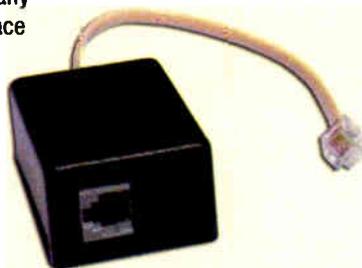
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Gary Liebisch
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BEFORE YOU MOVE AM, FIX ITS CONTENT

David Webster wrote an article summarizing a list of six ideas he believes would totally revitalize the American AM Broadcast Band ("How to Help AM Radio in Six Steps," Aug. 1).

As a RW reader and long-time associate with people in the broadcast industry, I cannot disagree more with several of his "steps."

Mr. Webster overlooked the most crucial "seventh step," omitting entirely the need to improve the content of AM radio.

Is it any wonder that AM is struggling, when all you hear across that band are snake-oil ads, conservative conspiracy theorists and boring sports-chatter 24 hours a day? Is there any one show syndicated on 250 different AM stations at any given time around the nation? Most people would gladly flip to FM for mere refuge after a few minutes of that gobbledy-gook.

Simply changing or upgrading to newer technology (including moving all the stations to a VHF chunk of the spectrum with DRM+) is not going to make AM radio any more popular with listeners (it wouldn't even be "AM radio" anymore after Step 2; it'd be a glorified digital FM band). Look at the disaster Eureka became. Few people bought the new receivers, and most stations aren't going to pony up the cash for a complete overhaul of their transmission facilities to operate on a brand-new band, let alone a new frequency, then need to tell people where to tune after they buy their new radios.

We already have the technology to make AM radio sound very, very good for any format. Yes, we could even add more power or more transmitters, but it all boils down to one thing: the programming.

Most people will not listen to an all-talk syndicate just because it was merely moved from a 50 kW AM frequency to an FM slot, or because it is simply broadcast in HD or DRM.

The dull programming doesn't suddenly become any more palatable (unless, of course, it's music — the one format that wrongly got axed from AM radio during the "Talk-Radioization" of AM during the early 1990s). Broadcasters "shooed" away radio listeners from AM, by forcing music onto FM while replacing that programming with syndicated, non-original programming.

This is the root cause of the downfall of AM radio. Listeners aren't stupid. It's the broadcasters that forced this manufactured "AM talk" mentality and who have conditioned listeners to associate a whole broadcast band with talk programming.

If broadcast content on AM can't be improved to become more enticing to a wider audience, it's not going to fly, no matter what broadcast technology is employed. Put a classic rock, top-40 or even a Pandora-style format on a 50 kW AM stereo or HD signal in any major metro area with local, live talents at the helm, and you will get listeners.

Throwing a bunch of technical improvements on top of the unchanged AM broadcast formats that exist today — an overload of tired and dull syndicated sports talk, political talk, infomercial and "news-talk" (not pure news) chatterbox formats — is not going to fix anything. It's just going to make the problem "clearer" to hear.

Darwin Long
Biologist
Biodiversity Research Institute
Buras, La.

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5	AudioScience Inc.	www.audioscience.com
15	Axia - A Telos Alliance Company	www.axiaaudio.com
26	Belar	www.belar.com
49	Besco Internacional	www.besco-int.com
49	Bext, Inc	www.bext.com
43	Broadcasters General Store	www.bgs.cc
37	BSI	www.bsiusa.com
3	BSW	www.bswusa.com
10	Burk Technology	www.burk.com
47	BW Broadcast	www.bwbroadcast.com
49	Coaxial Dynamics	www.coaxial.com
7, 41	Comrex Corporation	www.comrex.com
17	DAWNco	www.dawnco.com
49	Digital Radio Engineering	www.digitalradioengineering.com
49	FM Services	www.towermonitor.com
36	Gorman Redlich Mfg	www.gorman-redlich.com
38	Grace Broadcast Sales	www.gracebroadcast.com
23	Harris Corporation	www.broadcast.harris.com
53	Heil Sound, Ltd.	www.heilsound.com
6	Henry Engineering	www.henryeng.com
34	IEEE	www.bts.ieee.org
25	Inovonics Inc	www.inovon.com
8	Kintronic Labs Inc	www.kintronic.com
11	Logitek	www.logitekaudio.com
4	Marketron	www.marketron.com
21	Moseley Associates	www.moseleysb.com
19	Nautel Ltd.	www.nautel.com
18	NPR Satellite Services	www.nprss.org/rworld
42	OMB America	www.omb.com
13, 35	Omnia - A Telos Alliance Company	www.omniaaudio.com
45	OMT Technologies/iMediaTouch	www.omt.net
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55	Radio Systems Inc	www.radiosystems.com
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30	Rushworks	www.rushworks.tv
14	Shively Labs	www.shively.com
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9, 31	Telos - A Telos Alliance Company	www.telos-systems.com
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Friend S. Weller, CBRE
Chief Engineer
Utah Public Radio
Logan, Utah

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OPINION

READER'S FORUM

STOP BEATING THE AM HORSE

I read with dismay the article on AM going digital ("How to Help AM Radio in Six Steps," RW, Aug. 1). When the FCC has a virtually flawless plan in front of it, to move all AM stations that wish to move to the vacated Channel 5 and 6 spectrum, why are we beating on this AM dead horse?

AM spectrum was initially chosen because the technology of the day dictated that spectrum. From a practical perspective, nobody in his or her right mind would use that part of the RF spectrum today if they were initiating a broadcast-spectrum plan!

If it had been "practical" to move, as with the recent case of TV stations and their move with UHF, what's the problem moving all the AMs to newly vacated VHF spectrum? Simulcasting was done when the expanded band was created, so why not the same five- or 10-year movement plan to the Channels 5 and 6 spectrum? Countries like Brazil are considering it; why not us?

I have a theory why not. If the AMs were moved, as the FCC proposes, then the present FMs owned by major groups would see serious competition from the new, all-digital media. I noticed that not one word in the article said anything about the Broadcast Maximization Committee proposal. Why not? Digital AM seems to be a veiled attempt to "keep 'em down on the farm."

The NAB is pretty much owned by the large group owners and I suspect that the fear of such a new-and-improved product on Channels 5 and 6 keeps the NAB from endorsing and pushing for the improvement. It's time for the NAB to represent the *entire* industry.

I found the "Broadcast Maximization Committee" proposal at www.broadmax.org. It's worth a look.

I won't even begin to mention the future for the AM band and the possibility for expanded power for those who chose to remain ... that's for another day.

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

More on AM, page 53

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OPINION
How to Help AM Radio in Six Steps

COMMENTARY

BY DAVID WEBSTER



AM radio needs help, not just from the FCC, but from the industry. We need to stop beating the AM horse. The FCC has a plan, but we need to support it. We need to stop beating the AM horse. The FCC has a plan, but we need to support it. We need to stop beating the AM horse. The FCC has a plan, but we need to support it.

1. We should... 2. It is... 3. We should... 4. Just... 5. Let's... 6. Finally...

AM 'STEPS' A MISSTEP

The six points in "How to Help AM Radio in Six Steps" are quite interesting, but miss the mark in my view. I will comment on each of them individually.

One: I would lower the power on Class A and B stations, and raise it on the small ones. There is no need to hear WABC, WOR and the like halfway around the country. Medium-wave stations should be local and cater to local tastes and matters. Raising the power just makes for more adjacent-channel spatter.

Two: Moving medium-wave stations to new frequencies is fine, but make people buy new radios. Propagation on television Channels 5, 6 and 26 MHz are different than on medium wave. I understand that you are looking for "better sound," but this misses the point of listening to the radio: We want good programming and will listen to less than perfect sound if the programming is good.

Three: If Class A and B stations lowered their power, and smaller stations raised it up slightly, we wouldn't need band congestion thinning. Moreover, it would give the smaller stations a way to be heard at night and some of them could move to 710 or 770 kHz to get a clear shot.

Four: No nodes would be needed if point one were implemented. Good programming is what attracts listeners, not fancy, overprocessed audio. Do away with IBOC: it kills adjacent channels.

Five: Hams experiment with antennas all the time and computer modeling could come in handy to reduce skywave. Great idea.

Six: Listening to the radio online, not radio. I go back again to good programming: you give them something worth listening to and they'll come.

Roland Stiner,
Amateur Radio Operator NK2U
Carlstadt, N.J.

PHILADELPHIA, PENNSYLVANIA



left:

Morning show co-hosts Philadelphia Veteran Newscasters: **Larry Mendte** (left) **Al Gardner** (right) in the Air Studio

below:

Mitch Merman at the Editor's Desk

below left:

Taylor Miller in Master Control



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Randy Michaels, Founder and CEO, Merlin Media, LLC

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smart-phone apps all connected by the plug-and-play StudioHub+ CAT-5 wiring backbone.

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below, from left to right:

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