



RADIO WORLD

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INSIDE

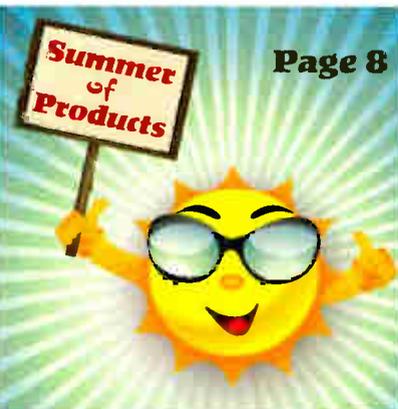
RADIO CAN CHANGE ITS SPOTS

• Commercials don't have to be boring.
— Page 18

HOW TO STREAM A PROFIT



• John Stephens explains the importance of quality encoders for Internet radio.
— Page 21



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The Connected Car Takes Its Place

FIRSTPERSON

BY VALERIE SHUMAN

The connected car isn't coming. It's here.

Discussions in the automotive industry ecosystem have moved well past debates about whether customers really want to connect their smartphones to their cars, and on to talks about the vehicle as the "most capable wearable" device.

Listening to conversations around the recent Telematics Detroit show felt a bit like picking up an early
(continued on page 6)

An iHeartRadio app is shown on a Mercedes CLA45 with a concept infotainment system and digital instrument cluster created by QNX Software Systems to showcase what automotive companies can do with the QNX systems.

Music Licensing: No Unity in Sight

Disparate platform treatment matches differences in opinions

BY LESLIE STIMSON

WASHINGTON — "Getting you all together and getting on one page will probably happen two days after the sun rises in the west."

So said Wisconsin Republican Jim Sensenbrenner after a House Judiciary subcommittee hearing on radio music

licensing. Several of the nine witnesses who appeared before lawmakers in late June complained that the complex licensing system is broken but the group offered no common ground on how to fix it.

"I'm seeing all of you wanting a level playing field, yet keeping the advantage

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NAB Joint Board Chair Charles Warfield, second from left, senior advisor to YMF Media, tells lawmakers at a House Judiciary hearing on music licensing that radio airplay is valuable and that the attendant station promotion helps artists, both new and old.

MUSIC LICENSING

(continued from page 1)

es you have," said California Republican Darrell Issa.

Observers told national news outlets afterwards that the chances of Congress passing music copyright reform this session are slim. Lawmakers themselves predicted during the hearing that, even if they could get everyone together in one room to come to a compromise, no one would be entirely happy.

Several issues make up the music licensing debate in Washington, such as the lack of federal copyright royalties for music recorded before 1972. (Such music is covered, if at all, by state law.) Pandora is trying to convince the Copyright Royalty Board to reduce its royalties. BMI and ASCAP want the Justice Department to update their decades-old consent decrees on music licensing.

"We're locked into a [copyright] model that might have been appropriate when the Beatles came to America, but not now," said BMI CEO Michael O'Neil at an earlier hearing on the topic. BMI seeks to replace the current copyright rate court with an arbitration model and believes consent decrees should sunset when their basis no longer exists.

An important and ongoing issue in the debate is that terrestrial radio pays royalties for songwriters, but not for the recordings they air. Performers, and their labels, want to end that exemption; broadcasters want to retain the exemption for multiple reasons.

The debate takes place as the music business has seen physical music sales decline amid the advent of downloads,

streaming and on-demand music. ASCAP President Paul Williams, himself a singer and songwriter, explained the dilemma: "People don't want to own their music any more; they want to stream it."

Representatives of record labels, broadcasters and digital streaming companies discussed the patchwork of laws and regulation underlying the music business and the resulting disparities. In a nearly three-hour hearing on possible changes to federal copyright law regarding music licensing, lawmakers repeatedly asked the nine witnesses what they would like reform to look like.

PRE-1972

There was some agreement on closing the loophole that denies artists performance royalties for pre-1972 recordings, though not on much else.

Indeed, Pennsylvania Republican Tom Marino called current music royalty schemes, which differ depending on which platforms play the music, "confusing and complex." He asked the witnesses to "think about sitting down with us as a group." Crafting reform legislation "is a monumental task, but we will attempt it."

Louisiana Democrat Cedric Richmond went further, saying, "If we solve this problem, you're probably not going to like it and it's probably going to be wrong. But you all should be in the room."

Some of the material presented was a repeat from a hearing on the topic in early June, when recording industry representatives said ASCAP sees 9 cents for every 1,000 streams on Pandora.

SoundExchange President/Chief Executive Officer Michael Huppe gave lawmakers an example of how music

copyrights are treated by platform now. SoundExchange collects and distributes digital performance royalties to artists and copyright holders including record companies.

When a consumer listens to a song by hearing witness Roseanne Cash, streamed over a cellphone, that generates between an eighth to a quarter of a penny per stream in royalties, Huppe said. The same song aired over SiriusXM, which is governed by a different rate, "would pay about 9.5 cents across streams." And if aired on AM/FM radio, there is no performance royalty. Each one of those is governed by different rules. That's "just not right," said Huppe.

The recording industry says it wants a level playing field, closing loopholes that it believes no longer make sense. Representatives repeatedly hammered home the fact that radio doesn't pay a performance royalty. SiriusXM believes that should change as well.

TREADING WATER

Radio Music Licensing Chairman Ed Christian said levying another royalty on terrestrial radio "would cripple a radio industry that has been financially treading water for years now."

"The radio industry is not some vast pot of riches that can be tapped as a bailout for a recording industry that has failed to execute a digital strategy," said Christian, who's the president and chief executive officer of Saga Communications.

NAB Joint Board Chair Charles Warfield, who is senior advisor to YMF Media, argued that radio airplay is valuable and the attendant station promotion

(continued on page 6)

What “000000” Means to You

The FCC seeks to apply some of the EAS lessons it learned in 2011

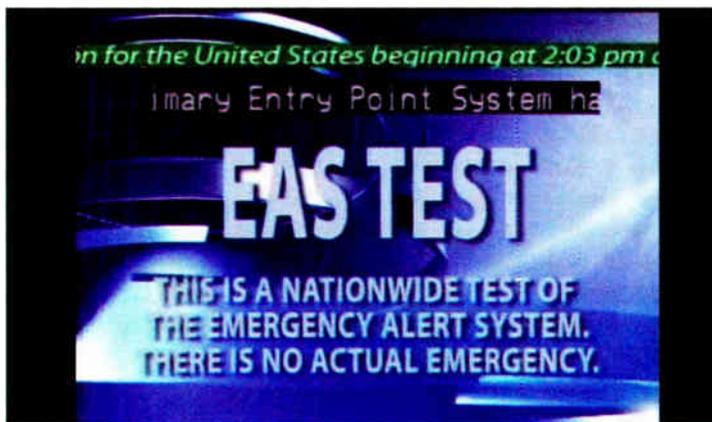
Some 2 1/2 years after the first national Emergency Alert System test, the FCC is ready to apply some of the lessons it learned.

“The actions we take today are the first in a series of steps to enhance the existing paradigm for the testing, exercise and use of the EAS in a way that maximizes its overall effectiveness as a public alert and warning system,” the commission wrote in a Notice of Proposed Rulemaking in late June.

The proposed rule changes, it continued, are needed to facilitate a second nationwide test. The Federal Emergency Management Agency wants to hold another one soon, ideally involving the entire Integrated Public Alert & Warning System, of which EAS is a part (as is the new Wireless Emergency Alert system that sends messages to cellphones).

An earlier FCC report described the national EAS distribution architecture as fundamentally sound but outlined problems uncovered by the test including poor audio quality, lack of Primary Entry Point stations, short test length and inconsistencies in EAS hardware programming. Some of these problems have been taken on by FEMA, not the FCC, to solve. But here’s what the commission wants to do soon:

Create a national location code for alerts issued by the president. — EAS equipment uses geographic location codes; but the rules don’t contain a code for the entire United States. The commission had chosen not to adopt



Viewers of Nickelodeon on Comcast Cable in Lancaster, Pa., saw this slide during the 2011 test, as captured on YouTube.

one, citing cost concerns for equipment users. For the test, the FCC and FEMA used the code for Washington, D.C. This led to problems with equipment rejecting the “out of area” alert and terminating the test early.

The FCC plans to require EAS participants, including radio stations, to be able to receive and process a national location code. The code would be six zeroes, 000000. This would make EAS consistent with Common Alerting Protocol standards and let FEMA use other codes for geo-targeted messages, should the president wish to address just a particular part of the country.

FROM THE EDITOR



Paul McLane

This change, however, also could make some “legacy” EAS equipment obsolete, or involve labor to update software in existing EAS equipment.

Facilitate use of a national EAS test code for nationwide tests. — FEMA initiated the 2011 test by delivering an Emergency Action Notification to Primary Entry Point stations. The EAN, as most readers know, is the “live” code that would be used by the president in a real emergency, but using it for a test involves risks, including possible confusion when viewers see video text crawls about a national emergency.

If they could use a National Periodic Test code instead, federal authorities would not have to conduct a public outreach campaign ahead of a national test. FEMA would like to use the NPT code next time it tests EAS.

The FCC agrees there should be a non-EAN option for EAS testing and that the NPT is the “obvious alternative,” so it plans to establish that option; but it isn’t sure how it should be deployed.

FEMA thinks this code should be handled in the same way and with the same immediacy as an EAN. But others say requiring such a level of consistency

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will end up costing EAS participants too much money and hassle. They told the FCC that it would be cheaper and easier to enable the NPT as it is currently programmed in most EAS gear, a less intrusive approach that would offer most of the benefits of an EAN test and help FEMA schedule another one sooner.

Yet that approach would not provide the fullest possible test; it would not test the reset functionality of EAS equipment by lasting longer than two minutes, nor would it override all other EAS alerts. Shouldn't a national test approximate real emergency conditions as much as possible?

The FCC asked a half-dozen questions in its NPRM about NPT implementation alone, seeking comments from anyone with an interest in EAS.

Require broadcasters and other participants to file test result data electronically. — The "vast majority" of the 16,000 participants who responded with data about the 2011 test did so online. So the commission plans to adapt the system it used then and require its future use. The filing system should be improved, though, so a station could preview data before submitting; and users should get a filing receipt, the lack of which caused hassles for some broadcasters.

The commission thinks its updated EAS Test Reporting System can help authorities see how an EAN or any other alert is propagated through the EAS architecture, and to help detect vulnerabilities. It would also be a relief to State Emergency Communication Committees, which are supposed to have supplied the FCC with data tables showing monitoring assignments and message paths but have not yet been able to do so. The FCC thinks data from its ETRS could be used to create those data tables and a planned FCC "Mapbook" that organizes stations and cable systems by state, EAS Local Area and EAS designation.

Require participants to meet certain standards to ensure that alerts are accessible to everyone, including people with disabilities. — The commission wants to set minimum standards for EAS visual crawls, "specifically with respect to crawl speed, completeness and placement." Because these do not affect most RW readers, I won't detail them here,

but you can read about them at the link I'll give below. It also asked for comments about improving the accessibility of EAS audio by taking steps to ensure that audio and visual elements of an EAS alert convey the same or comparable info. Because audio and visual elements of an alert are generated from different sources, they can differ in language and detail, the FCC wrote.

NEWS

"We believe that for an EAS alert to be fully accessible, the audio and visual elements should convey the same message. What steps would need to be taken to achieve this goal?"

The FCC wants your comments on these changes and on how quickly they could be implemented; so file your comments at www.fcc.gov in EB Docket No. 04-296. (Remember to copy me at radioworld@nbmedia.com, too, so we can publish them in our letters section.)

Before doing so you might wish to read what the FCC plans in detail, so I've posted the text of the NPRM at <http://tinyurl.com/orxjwft>.

Note that the commission plans to consider other enhancements later, such as standardizing the waiver process for "live code" exercises, streamlining the state plan process and adding other elements of IPAWS to the testing process. It acknowledged that routine testing of the entire IPAWS is desirable, but for now it wants to focus on the four goals above.

NEWSROUNDUP



Sam Matheny

NAB: The association hired Sam Matheny as its executive vice president and chief technology officer. Matheny comes to the broadcast trade lobby from Capitol Broadcasting Co., where he was vice president of policy and innovation and specialized in advanced digital strategies. He replaces Kevin Gage, who left after his three-year contract was up in May.

SHORTWAVE: Congress approved cuts in shortwave transmission sought by the Broadcasting Board of Governors. The BBG ended some shortwave broadcasts to Asia from the Voice of America, Radio Free Europe/Radio Liberty and Radio Free Asia on June 30. The BBG said the cuts were made where audiences have moved to AM, FM, TV and online.

SPOT BREAKS: Entercom's KNDD(FM), Seattle, cut its spot breaks to two minutes each in response to listener feedback. Station officials say the change is a great way to showcase its advertisers with less clutter and more music.

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CONNECTED CAR

(continued from page 1)

iPhone — not only are the new infotainment platforms driving rapid changes in the automotive industry, they are affecting every other industry that interacts with the consumer in the car, from pizza to insurance.

Connected consumers now simply expect to have connected cars that allow them to carry on their connected lifestyles everywhere they go. And they have little patience for stale technology that doesn't function well. After all, you can get a new phone every few months and new apps any time; why should your car be different?

Synchronizing these expectations with traditional car manufacturing is tricky.

Car manufacturers and their suppliers are racing to adjust to this new pace, but they're not the only ones taking notice. Tech giants like Google and Apple have started developing solutions as well, and there was a great deal of speculation at the show about what the results might be. Will tomorrow's car be a collaboration between the car companies and Google? Will Apple simply end up owning the user experience?

As the battle for the in-vehicle consumer shapes up, the platform continues to evolve. In-vehicle systems have to be easy to use, and not every new infotainment system is getting this right. The old-fashioned radio knob is the gold standard for keeping it simple ... but many of the new systems are centered around touch screens, voice interactions, gesture control and other solutions which offer a completely different way to interact with the vehicle.

Manufacturers are striving for a flexible platform that will allow experimentation and fast fail, similar to Internet and smartphone models, but still maintain automotive grade safety and reliability. A tall order!

Experts and consumers alike at the show discussed quite a few challenges in this area. For example, users on a panel from U.K.-based automotive vehicle security and telematics company SBD found that some systems made it easy to complete basic tasks, like navigating to a destination or playing music, and other systems were so frustrating that those same consumers turned to their smartphones to get the job done. Interestingly, Tesla's 17-inch touchscreen technology got the most compliments from the panel, with users reporting that its large, bright buttons and fast response made them feel safer while driving.

CUSTOMER EXPERIENCE

As they work to improve today's systems and innovate tomorrow's, car companies are partnering with their platform, application and content providers more closely than ever before.

Those who are engaged now have a real opportunity to help shape future systems and be on the leading edge of building successful businesses around them.

The show attendee list reflects an increasing awareness of this fact in the content provider and intermediary space, with representatives from Audiobooks.com, Accuweather, Beats Music and Audible.com joining show regulars like Nielsen, NPR, Inrix, Pandora and Gracenote.

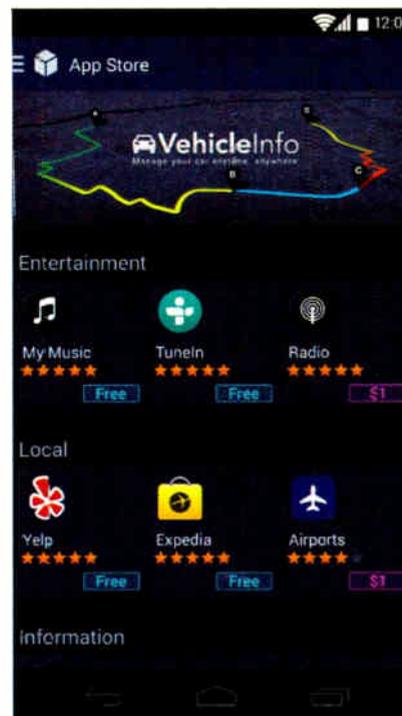
So what will those future businesses be? Executive after executive emphasized that they are focusing on the consumer experience — not just with the car, but beyond the car. As VW Group of America GM Connected Services Frank Weith stated, customer experience is becoming more important than vehicle design.

Conversations about location-based services, dashboard commerce, insurance discounts and even full-on digital lifestyle integration were everywhere. Nissan presented a future scenario in which your car notices that you're not feeling well on the way to work, checks your connected fridge for healthy food and makes sure there's soothing music on when you get home.

Far-fetched? Xtime has a telematics-enabled scheduling service; it links the diagnostics alert from the service to a scheduling capability. Xtime says it can provide an integrated solution that links notification of a problem with your car with helping you schedule a service appointment and helping the dealer efficiently process each service interaction.

These services are built on data of all kinds — vehicle data, driver behavior statistics, consumer data. While 61 percent of consumers surveyed by Gartner stated that there were limits to what they would be willing to share, many show attendees remain convinced that there is a privacy-for-value trade to be made.

This possibility opens up a whole new universe of services. What could you do if you knew the car make and model, musical preferences and location of your



UIEvolution is marketing its new in-vehicle content and application service platform to automotive OEMs and Tier 1 suppliers. Notice that radio is one of the app choices offered. The company says its CloudConnect platform links and delivers content and services to the vehicle.

MORE DASHBOARD

This is one in a series of articles about radio's role and future in the evolving automobile dashboard. To read more, visit <http://radioworld.com/dashboard>.

listeners who are driving around right now? It also potentially upends some traditional advertising models. After all, why buy listeners in bulk when you can swap discounts for dollars directly at an individual customer's point of need?

As GM Chief Infotainment Officer Phil Abram suggested, it's time to reimagine everything. But he also warned everyone not to "defend a position that's undefendable."

There's a lot of innovating to do in the years ahead. For today? The biggest question for everyone who serves the connected consumer is quite simple: How will your business engage with the connected car?

The author is principal at Shuman Consulting Group LLC, which partners with customers to deliver new products and ventures in new markets; it specializes in serving public and private sector participants in the intelligent transportation systems industry. Shuman also is vice

president of industry programs at the Connected Vehicle Trade Association and a senior expert for the PTOLEMUS Group, which advises companies on geo-connected mobility.

MUSIC LICENSING

(continued from page 3)

helps artists, both new and old. He said terrestrial radio does pay royalties to music publishers ASCAP, BMI and SESAC.

Warfield said even with its financial difficulties, radio has supported artists and helped develop careers, "in many cases, even when they're not supported by their record labels." Whether they choose to tour, artists have the opportunity to do so, he said.

Asked about radio's promotional value, Cash said, "I'd rather have control of my copyrights." She also lamented the lack of royalties for music recorded before 1972. "It's heartbreaking" to see artists from an earlier generation feel compelled to go on the road and tour to make up money they've lost, she said.

Streaming's lack of a viable business model was discussed. Pandora Vice President of Business Affairs Chris Harrison said the company pays more in streaming than do competitors SiriusXM or terrestrial radio, and the audio company is trying to persuade the Copyright Royalty Board to lower its rate. Harrison said by this summer, the company is on its way to passing a total to date of \$1 billion in royalties paid.

Warfield said current streaming royalty rates are too expensive for most radio stations, which simply opt out. NAB would like to see a different rate stan-

dard so "broadcast radio can participate more fully in streaming."

Cash and Williams of ASCAP called for more transparency about royalties and how they are divided up.

As part of that effort, Pandora favors the creation of a single database of record, hosted by the Copyright Office, that would house all music copyright ownership information. By enabling services to ascertain quickly who owns which rights to a work, the database would also enable services to identify, on a catalog-by-catalog basis, the owners of the songs they perform. That would encourage true competition among copyright owners for distribution on digital platforms, Harrison testified.

New York Democrat Jerrold Nadler has said he's working on copyright reform legislation to address the various laws governing artist compensation, no matter whether the song is aired on satellite radio, terrestrial radio or Internet radio.

Committee members Michigan Democrat John Conyers and North Carolina Republican George Holding introduced the "Respecting Senior Performers as Essential Cultural Treasures Act" in May. The RESPECT Act would require webcasters to pay music license fees for pre-1972 sound recordings.

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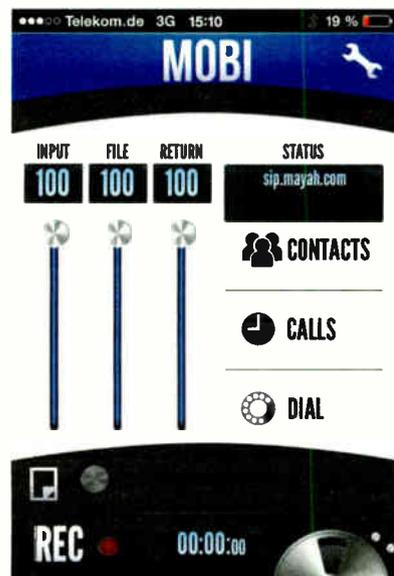
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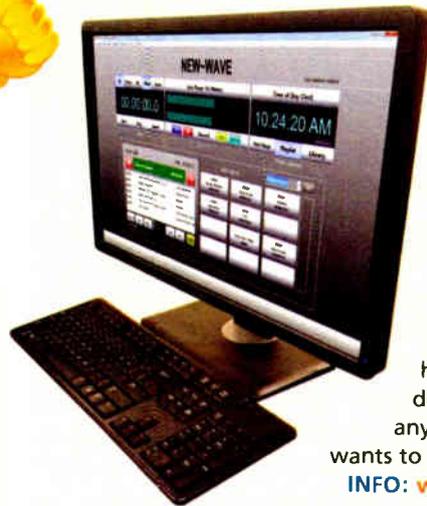
Known for its multistandard codecs, Mayah Communications offers a range of network communications hardware for broadcasters. The latest upgrades to the company's Centauri III and C11 codecs provide them with Opus low-latency codec capabilities, also available as standard on the new C10, D10 and Centauri IV product lines.



For radio broadcasters, the latest C10 STL codec is of particular interest. The most important broadcast standard codec algorithms are included in the base version of this unit, from G.711, G.722 as well as Opus, MPEG Layer 2, 3 and linear audio. If required, AAC, AAC HE, aptX, aptX Enhanced and ADPCM4SB/MICDA can also be implemented.

For additional operational flexibility, Mayah now offers the MOBIPhone Opus Smartphone client (shown). This allows bidirectional real-time audio transmission between iOS clients or between an iOS client and a Mayah hardware audio codec. Because the Opus audio coding standard features minimal delay, it is useful for live broadcasting applications.

INFO: www.mayah.com



ARRAKIS AIDS STREAMING

Console, furniture and broadcast maker Arrakis Systems has announced a partnership with Internet streaming services provider Securenet Systems to provide an end-to-end solution for creating an affordable Internet radio station, it says.

The deal is that anyone signing up for any Securenet Systems plan (starting at \$99) will receive Arrakis' New-Wave automation system for free.

It rates this as a \$750 value. The company says that New-Wave is designed for novice and experienced Internet radio users alike.

According to Arrakis, "It is a solution that provides the radio automation software to produce and present your program material, and the streaming service that has the control panel to monitor your streams, the players for your listeners' media devices, media accounting, ad delivery and much more. This offer is exceptional for anyone who wants to create their own Internet station, or a terrestrial radio station that wants to expand and get their content streamed online."

INFO: www.arrakis-systems.com

AUDEMAT HIGHLIGHTS MOBILITY

WorldCast Systems' Audemat division of test, measurement and monitoring equipment has a new offering, the FM MC5 mobile FM signal measurement system.



The company says that the FM MC5 offers RF coverage measurement for both on-site and off-site monitoring, as well as accurate modulation analysis. It features RF scanning, mobile RF analysis, RDS decoding, MPX analysis, signal generation and tools such as frequency meter, distortion meter, spectrum analyzer and oscilloscope. It can also generate RF, MPX and audio signals.

The FM MC5 is a self-contained unit that can be operated from a vehicle. Built-in GPS allows for detailed reports, including maps.

WorldCast says that the FM MC5, especially if used with a vehicle, "can reveal black spots or weaknesses in the station coverage which were not forecast. It is also highly useful from a marketing standpoint as it can be used to provide an independent analysis of your station's strength throughout the geographical target area to impress existing or potential advertisers or financial backers."

INFO: www.worldcast.com

OMT SHOWS ENTERPRISE

OMT Technologies has taken the iMedia-Touch platform where no iMediaTouch has gone before.

iMediaTouch Enterprise (shown) is the next generation of the content management and delivery platform. It incorporates a new SQL-based content management system and features a new and customizable on-air user interface.

Version 5 of OMT's iMediaLogger has new features including doubling the number of recording channels (up to 24) with discrete L/R mono; real-time preview recordings; an enhanced Web access portal with an advanced Web server; a new SQL-based content management system; and distribution of supplementary media, such as audio, video and graphics.

INFO: www.imediatouch.com



HENRY DAISY-CHAINS REMOTE PACKAGE

The compact light-blue boxes made by Henry Engineering have been a go-to part of radio remote kits for years, and now Hank Landsberg is offering a collection of individual units that can be integrated to create a remote broadcast system. The main components include the new Sports Pod (shown), Talent Pod and MultiPhones master unit. All can be daisy-chained with Cat-5 cabling.



Both the Sports Pod and Talent Pod include mic on/off control and mixing capability for on-site local audio and Return audio (sent from studio). The Talent Pod also offers remote on/off control of the talent mic and duplex talkback (intercom) between talent and a producer (or engineer). The MultiPhones master unit is the third piece of the puzzle, which provides talkback/IFB and also supplies power to all units in the system via the Cat-5 cabling. Each announcer can have his own Sports Pod (or Talent Pod) at his position, or the system can be rack-mounted in a travel case.

INFO: www.henryeng.com

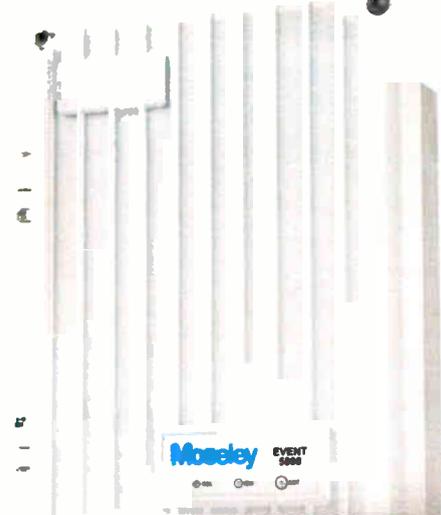
HIGH CAPACITY EVENT STUDIO TRANSMITTER LINKS



TAKE ADVANTAGE OF WIRELESS HIGH PAYLOAD STL/TSL CAPACITY

Moseley EVENT STL/TSL systems provide up to 155 Mbps combined IP, T1/E1 payloads. Multi-station clusters can convey multiple linear uncompressed audio pairs for a truly cost-effective STL/TSL link. Connect your existing T1/IP audio hardware directly into the EVENT system, or use Moseley Rincon for your audio payloads. An optional DVB-ASI module is available for full duplex video.

EVENT systems are fully bi-directional including a Software Defined Indoor Unit (SDIDU) and Outdoor Unit (ODU), eliminating the need for costly waveguide hardware. The ODU is available in the license free 5.8 GHz band, or licensed 11, 18, or 23 GHz bands. Appropriate external antennas are selected based on path length.



INTELLIGENT SYSTEM DESIGN

Spectrum-scalable digital radios with user-selectable data rates enable broadcasters to have greater flexibility in STL planning and future growth. The integrated T1/E1 and Ethernet interfaces allow for a combination of T1/E1 and IP packet data.



IP APPLIANCES AND APPLICATIONS



Offer IP transmitter control, surveillance security, and site monitoring to reduce downtime, and protect valuable station assets while saving travel time to the site.

REMOTE MIRRORED SERVERS



From the transmitter site, offers backup of business records and programming content to get you back on the air quickly in the event of a studio outage.

EMAIL AND INTERNET ACCESS FROM THE TRANSMITTER SITE



Saves engineers time accessing manuals or technical support from manufacturers during maintenance sessions.

SIMPLE NETWORK MANAGEMENT PROTOCOL (SNMP)



Full SNMP package with GUI provides easy monitoring and configuration changes.

Contact The Moseley Sales Team to Custom Configure Your EVENT STL/TSL Today!

moseleybroadcast.com

RADIO DNS SHOWS MOBILE INTEGRATION

The combination of mass-market broadcast radio and personalized Web content makes a powerful proposition. Integrating broadcast RDS with IP content delivery provides a simple solution for radio broadcasters wanting to link their broadcast output to various additional online content.



However, as with many new broadcast systems before it, Radio DNS "hybrid radio" suffers from something of a "chicken and egg" conundrum. Receiver manufacturers will only integrate the technology into their devices once broadcasters are using it, while broadcasters are waiting to see an established receiver base to make it worth their while to use it.

A possible break in this logjam was shown at NAB in the spring with the demonstration of three Samsung Android smartphones (shown) with built-in Radio DNS capability. An Android Radio DNS "app" was also shown — not for public use, but rather in order to demonstrate to manufacturers the benefits of the system and just how easy it is to provide hybrid radio capability.

INFO: radiodns.org

2WCOM HIGHLIGHTS DIGITAL SATELLITE RECEIVERS

2wcom has enhanced its range of radio distribution products to provide equipment for SFN FM network operators. Together with 2wcom's receiver/decoders, the FlexNsert technology locks the timing of the FM signal to synchronize transmission cells in the network.

Distribution can be by ASI, E1, IP or satellite, and any one of the feeds can be selected for backup purposes.

The solution enables broadcasters to implement FM SFN networks using existing analog FM technology, with just one inserter for the uplink, and a receiver/decoder at each transmitter. The solution delivers microsecond-accurate synchronization of FM cells, with automatic adjustment of runtime differences caused by variable packet delays, jitter and satellite anomalies.

Also from 2wcom, the FlexDSR02+ and FlexDSR04+ digital distribution receivers offer a comprehensive feature set, with support for major audio formats, automatic program switching, full regionalization capabilities, SIRC remote control through satellite, fail-safe dedicated hardware, and more.

The company's AIC multiformat audio over IP codec is a 19-inch unit that combines IP encoder and decoder functions in one chassis, supporting various audio formats and providing network streaming connections (DDP, RTP, SIP/SDP). According to 2wcom, the AIC features redundancy management with automatic switching to backup sources, monitoring and alarms and GPS-based latency control for use in SFN FM networks.

INFO: www.2wcom.com

LAWO DEBUTS VIRTUAL RADIO MIXING CONSOLE

Calling it a first, Lawo launched a virtual radio mixing console named crystalClear, a "smart" console interface that is aware of context and adapts to the skill of the user and type of source.

"CrystalClear's entire control surface is software, driven by a multi-touch optimized interface on a high-resolution touchscreen computer display," it stated. "Without the limitations of physical knobs, buttons and faders, the virtual console presents the user with only relevant controls and information, hiding anything not needed for the task at hand."

The virtual console can be reconfigured by recalling a scene or preset; it can accommodate various shows and users. "Unlike a physical surface, crystalClear remembers every detail when loading a scene, even the fader positions."

Lawo says it also made a major update to its MKII mc² consoles.

Version 5 introduces AutoMix. Lawo describes AutoMix as automatically balancing mono, stereo and surround-sources for a variety of applications. "For talk shows or panel discussions, for example, AutoMix ensures users never miss a fader raise and always have the right mic open in time." The company says that this does not subtract from DSP power per channel.

Also added are mxGUI faders. Lawo says that this is a touchscreen-optimized software feature for remote monitoring and control of the mc² consoles.

A control system integration interface called Ember+ has been introduced.

INFO: www.lawo.com



BW BROADCAST RAISES THE CURTAIN

Equipment maker BW Broadcast recently revamped a number of its products, creating the Encore line.

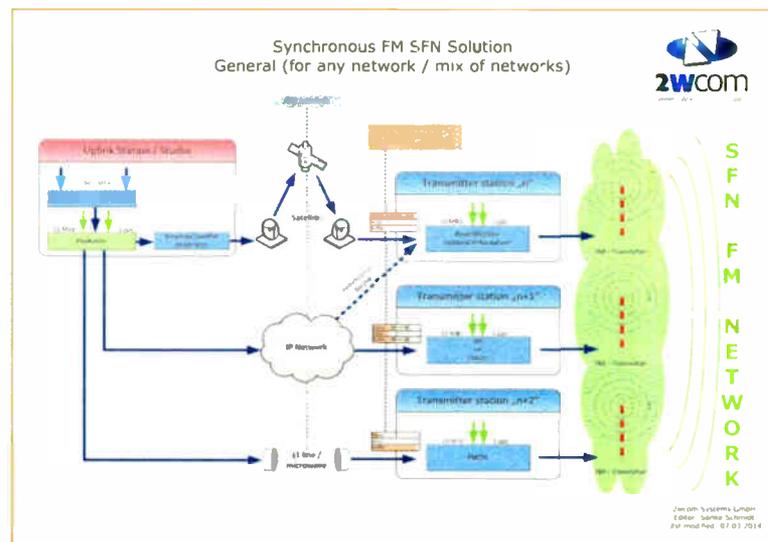
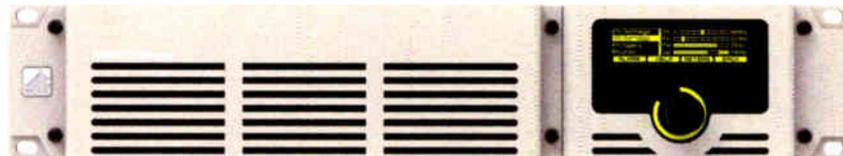
The Vertus Encore (shown) is a "single box" translator solution. That is, it carries onboard a rebroadcast receiver and transmission equipment. It has several other BW features such as field-serviceable parts.

BW transmitters are also getting the Encore touch. They'll range in power from 5 W–3,000 W with slide-in exciter cards, power supplies and BW's Gold Clamp quick-change transistors. Audio backup will be a standard feature along with several methods of monitoring, alerting and logging.

The Ariane Encore marks the debut of the Ariane under BW Broadcast's banner. The leveler is adding some features while retaining the window-gating processing of the Ariane Sequel. It will also sport the BW Broadcast look.

The RBRX Encore is the next iteration of the RBRX 1 rebroadcast receiver. The Encore version offers full diversity of dual tuners. The RDS functionality has been expanded. It is IP-capable. It also uses BW's DSPX audio limiter and stereo generator. There are improved backup capabilities for AAC and MP3 files and USB devices.

INFO: www.bwbroadcast.com

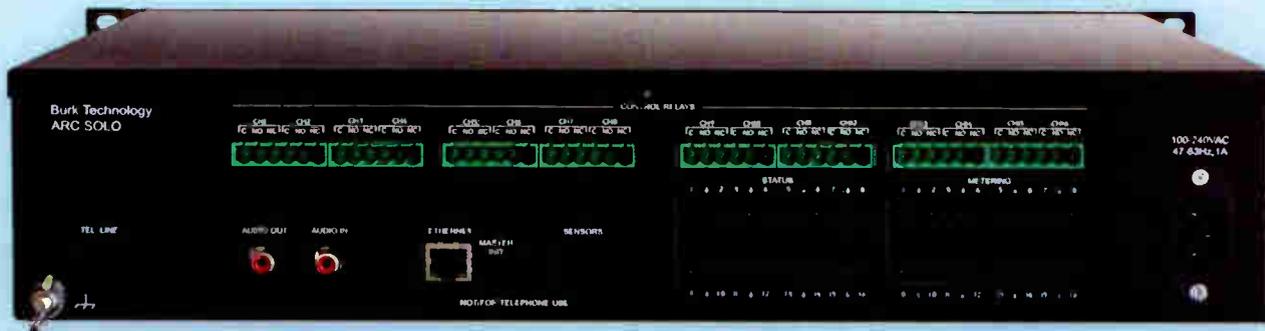


ARC Solo

PLAIN FRONT,



GREAT BEHIND.



In between, the ARC Solo is packed with the features you've come to expect from Burk. For uncomplicated remote control, there's nothing else to buy. Even the new Recordable Speech Interface is built in.

WEB AND AUTOPILOT® 2010 READY

BURK
TECHNOLOGY

www.burk.com | sales@burk.com | (978) 486-0086



MOSELEY LOOKS TO THE STARLINK



Running a digital composite feed straight to a transmitter is a goal for many stations, and Moseley Broadcast knows that.

The company says that its latest Starlink, the Starlink Composite digital composite STL, provides transparent transport from the audio processor and stereo

generator located at the studio to the FM exciter at the transmitter site. The composite signal is transmitted digitally over the link providing error-free performance, it says.

Features include selectable 32 or 64 QAM. The onboard SL9003C locates the RDS generator at the studio for seamless integration of the RDS data stream into the composite transmission. Moseley says that the Starlink Composite should have 20 dB system gain over analog composite STLs.

Error correction is Reed-Solomon T=8. Optional interfaces include voice, low-speed async data or high-speed async data.

The Starlink Composite covers all worldwide STL frequency bands. It is compatible with Moseley's SL9003Q units.

INFO: www.moseleysb.com

GLENSOUND INTRODUCES CUB

Glensound's Cub is a digital mini-mixer featuring two inputs, two outputs and a USB audio interface for phone or other smart devices.

Incorporating multiple level inputs and return monitoring, the compact unit allows broadcasters to use smartphone apps by connecting a smart device to the Cub via a top-panel-mounted A type USB plug. The Cub is delivered with a Lightning and 30-pin Apple interface lead as well as a mini USB connection for linking to laptops and PCs.

The Cub is plug-and-play as a USB audio Class 1 device with the possibility enabling further modes via ASIO or USB audio Class 2 drivers. This interface allows integration into IP soft codec apps such as Luci Live, or as a recording interface for the device into programs like Steinberg Cubasis. The Cub also interfaces with various audio test and measurement apps available, including the new RTS Omneo intercom app.

The two inputs on the Cub itself are mic/line/switchable 48 V phantom power and include mic amps. Each input is individually switchable between two local XLR outputs or to both, thus allowing the mixer to be configured as a stereo device or to work in a twin mono mode. The user can also configure the input on/off buttons for multiple operational modes (momentary/latching/cough).

There are two 6.35 millimeter headphone outputs, both served from a three-input headphone mixer (USB 1, USB 2, input mix) and they have left/both/right switching per input. The Cub operates from four AA batteries or via external DC.

INFO: www.glensound.co.uk



AMPEGON HIGHLIGHTS SW TECH ADVANCES

New from Ampegon is a shortwave transmitter technology with advancements in transmitter control, motor drive tuning and measurement acquisition systems.

The new universal control system features a selection of functions and detailed information; the company says it interacts with various subsystems and performs required measurements.

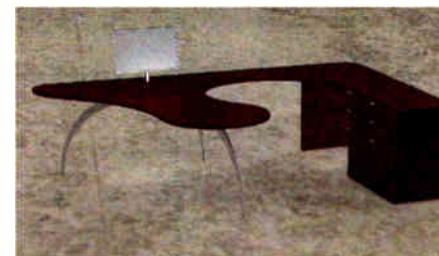
The tuning system with DC motor technology allows faster and more accurate positioning of the transmitter tuning circuits plus digital control, allowing automated frequency changes for optimum on-air performance. On the measurement side, simplified measurement acquisition captures measurements in real time for data display, logging and analysis. Diagnostic support helps make maintenance more efficient.

The company is also highlighting its photovoltaic power plant work at transmitter sites. Ampegon, which recently expanded its business to offer products in the green technologies sector, has developed an approach to transfer fallow land at transmitting stations and antenna fields into photovoltaic power plants in order to produce renewable energy at the customer site.

INFO: www.ampegon.com

OMNIRAX BRANCHES INTO OFFICE SPACE

When you think of "furniture" and "radio," your mind probably turns to fancy custom woodwork and laminates designed to support the latest and greatest studio gear. So why was well-known studio furniture maker Omnirax showing off ... office cubicles?

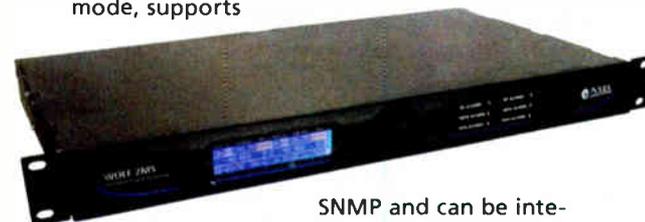


"For every 10 studios, there are 30 or 40 offices surrounding them that also need furniture," notes Omnirax President Philip Zittell. That's why his company has added a line of office cubicles to its studio product line. The office furniture boasts a distinctive angled design that Zittell says makes better use of floor space than typical rectilinear cubicles. "The shape allows for collaboration between multiple people at a desktop, like a cockpit," Zittell says, boasting that the curves and angles of his eDeskTop line create 40 percent more edge area than a typical rectangular desk. The Omnirax desktops can be installed over existing office cabinetry below, or can be installed over new bases.

INFO: www.omnirax.com

AXEL SHOWS PRODUCT LINEUP

The Wolf 2MS (shown) FM monitoring system from Axel Technology is equipped with two FM tuners and is designed to receive up to 64 channels. According to Axel, each RF tuner can perform the complete analysis of RF, MPX, RDS, audio and RDS data dynamic services. The system, which features a FM static or band-scan mode, supports



SNMP and can be integrated into any network, says the company. Two built-in audio streamers allow users to access streamed audio via the Internet and check data/alerts from PCs, tablets and smartphones.

Another animal from Axel's zoo is the Falcon FM range of digital audio processors. The series features integrated stereo generators and RDS encoders. Falcon 3i, Falcon VS and Falcon XT offer four- or five-band architecture, dual-band AGCs, a three-band equalizer, speech detector and four limiters. Depending on the Falcon model, users can manage and tune audio from local studios, LAN or the Web.

INFO: www.axeltechnology.com

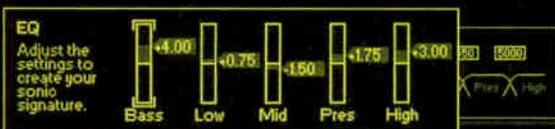
**More Summer
of Products in
our next issue!**

Major Update!

Audio Processing re Built For You.



DAVID IV FM Broadcast Audio Processing: for shaping, sculpting, and boosting your on-air sound. Now with the extra features you asked for.



5 BAND BLISS

The perfect number of bands with controls and tweaks you'll actually use.



BLAZING SPEED

Only 3.9ms of signal latency on the composite outputs, and power to live audio in under a second.



BETTER PRESETS

25 choice presets tuned to make you stand out, without going all-out.

NEW Rev. 3 FEATURES

- “Windowed” AGC control.
- Adjustable Multiband Crossovers Points.
- Adjustable Multiband Attack and Release Times.
- Built-in Test Tone Oscillator.
- Tighter Peak Control.
- English, Español, and Português language menu options.

Learn more at:

www.inovonicsbroadcast.com/model/719



Power Your Phone ... Colorfully!

Also, here's an unconventional use for your spare cable straps

WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

The latest and greatest tech gadget comes in your choice of shades, as seen in Fig. 1.

John Manchester of Screaming Logos sent along this really useful tool. The Power Bank 500 and its siblings charge via USB cable to your computer; in an emergency it can provide a full charge to your iPhone or a 75 percent charge to most other smartphones.

These devices are reasonably-priced and make a great gift. John can add your logo or slogan to it. Contract engineers: Think about something like this for your best clients and consider the Power Bank's bright colors (pink, lime green, blue and white), which will get noticed and are less likely to get lost.

For details, contact John Manchester at Screaming Logos, (978) 834-0066.

Paul "Hitchhiker" Lyons, KD8YRH, is a senior broadcast technician for Clear Channel Dayton and Southern Ohio. He writes in with a quick tip for *Workbench* readers.



Fig. 1: A colorful power bank keeps things charged. It can also promote your business.

own unconventional take on the possibilities.

He takes one tie and wraps it loosely around the handle of a screwdriver, as seen in Fig. 2. He says it makes a great slip collar to hold onto. The driver spins freely, and the fastener is more comfortable than letting the plastic slip between your fingers.

Paul says there's a bonus: If you need a cable tie, you now have one at your fingertips. Because of the hook and loop design, you can fit the ties around any diameter screwdriver.

Paul Lyons can be reached at paullyons@clearchannel.com.

So when was the last time you changed your air conditioning and transmitter air filters? Although the worst of pollen season is behind us, your filters may already be clogged, if they haven't been maintained. It's easy to forget about them — but don't make this common mistake.

Set up a regular inspection and filter change-out program, with either you or a service technician handling the regular maintenance. Air-starved transmitters will literally bake your tube due to inefficient filtering. Dirty air, coating solid-state RF devices, reduces efficiency too and will lead to premature failure.

The subject of filters is especially important when we don't visit the transmitter site as often we might have in the past. Don't set yourself up for

a catastrophic emergency; make some time to inspect this critical aspect of your plant.

Warm humid summertime conditions also can be a breeding ground for algae in the air conditioner condensate drains. An air conditioning supply store can sell you quarter-sized tablets that, when placed in the drain pan, prevent algae formation. A less expensive solution is a little vinegar in the drain trap.

If you've ever had a condensate drain clog due to algae formation, you know how tough that stuff is. Clearing the clog is not easy. Again, a little preventive maintenance will save you time and money.

Got a cooling horror story? Tell me about it, preferably illustrated with high-resolution pictures. Send to johnpbisset@gmail.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.

Not only does this setup make the room look neater, there is also less likelihood that someone passing through will fiddle with the knobs or settings.

Mike Smith, executive vice president of Bravo Mic Communications in Las Cruces, N.M., passed along the tip.

We'd like to also congratulate Mike and his staff for KXPZ(FM) being selected as "station of the year" by the New Mexico Broadcasters Association.

Reach Mike at msmith@bravomic.com.



Fig. 3: The hallway at Bravo Mic's Las Cruces facility is clutter-free.

Looking for a different approach to lay out a rack room or technical operations center? Fig. 3 shows one creative idea. The hallway doors keep technical equipment hidden and also help to save on air conditioning expenses while still permitting quick access into the TOC.

Although the racks shown in Fig. 4 aren't messy, many are less than spick and span. Usually there's a door to the tech room, but this is the first time I've seen the equipment hidden behind its own door within the rack room.



Fig. 4: But see the tech room that is hidden behind the decorative doors.



Fig. 2: An inexpensive slip collar for your screwdriver.

You probably have some of those Velcro brand "hook and loop" cable ties around the shop. Last month we mentioned a use for these; Paul has his



INTRODUCING

AARON 650

FM REBROADCAST RECEIVER



For Challenging Reception Scenarios.



OFF AIR PROWESS

Our unique Software Defined Radio (SDR) front-end delivers unparalleled sensitivity, selectivity, and RF shielding. And with Composite-Regeneration mode snuffing out unwanted baseband noise, you get cleaner audio in locations you never thought possible.



RECEPTION TOOLS

Zoom in on frequency issues with the built in BandScanner™ and MPX FFT, or use Active and Manual reception processing for total control over Bandwidth, Blend, Multipath Mitigation and more.



AUDIO PROTECTION

Whether you utilize 'Hijack' prevention, SD Card or Web Stream Audio Failover, you'll never have dead air. Plus with remote Web listening, Email/SMS notifications and SNMP you'll know (and be able to verify) immediately when things go wrong.

Live **YouTube** demo @ www.inovonicsbroadcast.com/model/650

More in/output options:





the world's finest IP Audio systems inside the world's finest radio studios

wheatstone-radio.com



In This Business, Anything Can Happen. Is YOUR Network Ready?

It's disaster season, and the last thing you should have to spend your valuable time tracking down is a faulty cable.

That's why our WheatNet-IP Navigator software provides real-time notification of any communication failure with any component of the network. But let's say the single cable between the TOC and on-air studio does go bad. No problem. You have a backup studio or two at the ready – one of the benefits of an audio network like WheatNet-IP that's distributed throughout the facility. And if you're really in a bind, you can always run the

station using little more than a single WheatNet-IP I/O BLADE – it has an operating system, I/O, silence sensing, GPIO and mixing inside – plus you can reboot the entire system off of that one BLADE.

NOTE: the station pictured in the flow chart above is in Portland, OR

For more ideas on recovery, go to INN12.wheatstone.com

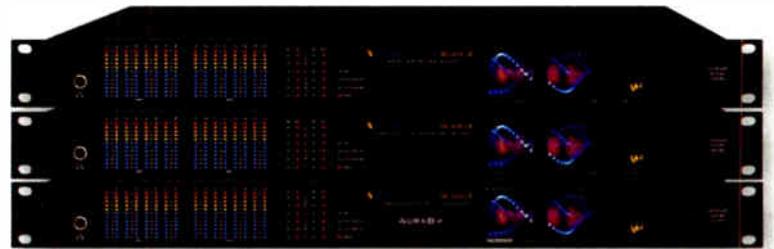


Get Out and About: IP Audio Extended

While it's still not practical to transport uncompressed linear audio over the public Internet...

...you can get coded audio across the Internet by interfacing the Tieline Genie stereo IP audio codec to our WheatNet-IP audio network. We've partnered with Tieline so the Genie has a built in port specifically for connecting into the WheatNet-IP system and sending six channels of audio over the public Internet. Audio performance is highly reliable, and latency is minimal. To find out about this and other ways to extend your WheatNet-IP audio network beyond the studio walls...

Click here to learn more: INN12.wheatstone.com



We've Got AES67 Compatibility Built In

Did you know that our newest I/O BLADEs for the WheatNet-IP audio network are AES67 compatible?

We added AES67 compatibility for interoperability with other AES67-compliant devices and signals into the WheatNet-IP Intelligent Network. Check out this great discussion with AES' Bob Moses about AES67...

Click here to learn more: INN12.wheatstone.com



How to Inspire Commercial Love

Engage creative thinking and motivate listener purchases with promos

A commercial came on the radio and my friend in the passenger seat changed the station. What did I do? I yelled at him!

Yep, I love commercials. It's not just that they have helped pay my mortgage or that I personally know a lot of the local voiceover talent. It's also that, when done well, commercials engage my creative thinking and sometimes give me good reason to purchase a product or service that I need.

With our collective attention span getting shorter every year, it is more challenging than ever to create great commercials and promotional announcements (which listeners interpret as commercials). More and more people with whom I speak question the wisdom of radio stations continuing to sell 60-second units in the name of tradition.

When listeners had limited choices and clients had only print as an alternative, it made sense for TV and radio to deliver messaging in 60-second audio spots. But now that a minute feels like a year, can we keep even a small audience engaged?

Only if the creative of the commercial is incredible.

For clients who demand 60-second spots, perhaps it's possible to create two :30s and use them as bookends in the same stop-set — much like television has done for years. This has the added benefit of beefing up frequency, a huge factor in getting radio commercials to activate.

CHEAP, QUALITY CREATIVE

A reality at many clusters is that one person often is charged with commercial production, and even if that person is a creative genius, he may have only limited access to copy writing and voiceovers.

So come on, people! Open the checkbook a little and partner with one of



Radio Mercury Awards Promotion of the Year winners John Sykes and Tom Poleman, center, of Clear Channel Media + Entertainment are flanked by presenters Kim Berk and Jim Douglas of the "Jim & Kim" morning show of CBS station WWFS(FM) New York.

the hundreds of production companies out there.

Here's why you should: With so many radio personalities and actors out of work, the ease and low expense of a home studio means there are many more excellent independent producers than ever in the history of our business. Supply and demand has driven the cost of the production services to the most reasonable levels we've ever witnessed. Turnaround time is also no longer an issue for most production companies. Plus, there are so many voices to choose from on the open market, it's almost overwhelming.

Okay, so the boss is a cheapskate, and the ultimate reality is that all in-house creative must be produced entirely by employees. So what's a production director to do? Create a sharing system with other markets, if only for voiceovers.

Writing commercials is another story. Try as we might, there is no shortcut to

How do you know when you have magic in a spot? When I hear it, I can actually see it.

airing genius spots, other than to hire a creative genius.

Is it possible for you to build the cost of a writer into your rate structure for certain clients? I can already hear your sales manager screaming, "Are you crazy?" Please remind him that client retention is mighty difficult when commercials don't deliver results.

DO YOUR HOMEWORK

How do you know when you've got an effective commercial? Many people — including salespeople — don't take the time to find out.

Anyone who cares about this dynamic can at the very least read copy or play finished commercials to a few non-biased people. After reading or playing the spots at least twice, ask them to explain the offer in the advertisement. If these few randomly selected people can't describe the basics of the selling proposition, you have not clearly communicated the offer.

Another issue affecting the outcome of the spot in generating action could be a nonexistent offer or poor call to action

PROMO POWER



Mark Lapidus

from the client.

This is perhaps the most challenging part of delivering advertising that works. It takes a special relationship between a salesperson and a client to discuss such a sensitive subject, and I've seen this get dropped like the unfortunate hot potato.

But I've also watched superior salespeople have frank discussions with merchants about the paltry 10-percent-off sales or free desserts with certain expensive entrees. Instead, they urge the client to offer especially memorable perks to their customers that really drive them to come on in.

Here are a few of the tried and true:

- Selected specially tagged items on sale
- Rebates with coupons
- Going out of business sale (when it's not really out of business)
- Offer not accepted at all locations
- We'll beat the advertised price of any competitor if you bring this ad
- Prices too low to mention on the radio

If your sales people nurture that relationship and get creative, clients will offer what they should and reap the benefits.

A few final words about promotional announcements for your own radio station:

Never forget that listeners hear these as commercials. Unlike actual commercials, you do have complete content control, so there is never any excuse for bad copy, poor production or even undesirable placement in stop-sets.

Better to avoid airing promotional announcements at all than to schedule high-profile pieces of nothingness. And if the message communicates nothing, why play it at all? Consider the risk you run in having listeners change stations or form a negative opinion of your brand when promos are bad. The best PDs I've worked with review every promo before it airs and exercise tight quality control.

How do you know when you have magic in a spot? My rule of thumb: When I hear it, I can actually see it. Radio becomes TV in my mind. It's actually kinda dangerous when I'm driving!

Read other great radio promo and management ideas. Visit *Promo Power under the Business tab* at radioworld.com.

STUDIO WARNING LIGHTS
BROADCAST CONSOLES

SANDIES

214-547-2570
WWW.SANDIESUSA.COM

DYNAMAX MX SERIES

Service Lets Users Surf Stations by Song

RadioSearchEngine.com connects online music listening to station websites

NEW RADIO

BY JAMES CARELESS

The power of Spotify and similar online music services lies in the users' ability to select and hear the songs they like, and skip those they don't, all in real time. It's a flexibility that a conventional radio station can't offer, online or over-the-air.

into the search bar and the site finds and lists links to the online stations playing it at the time when the user searches for it.

The links list is organized by how many times each station has played the song. The top spot is reserved for the radio station that has played the least of the song so far, the second-least played in second place, and so forth. This page also lists which Miley Cyrus songs are being aired now on the right side of the

UNEXPECTED APPLICATION

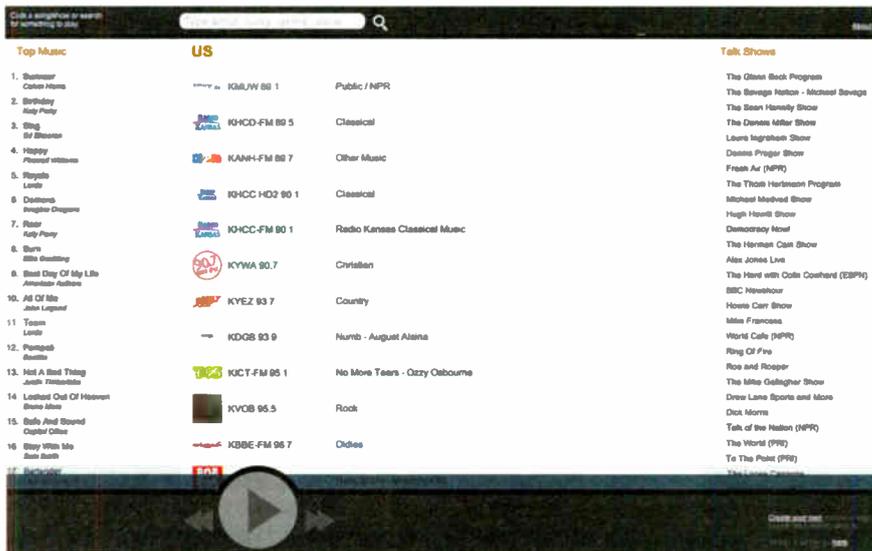
Robertson is also founder and CEO of DAR.fm, a free website that allows users to record their favorite radio shows and store them online for playback later at the user's convenience. According to Robertson, DAR.fm has 90,000 registered members and tens of thousands

and shows. (He has also built a simpler site that tracks talk radio shows using a schedule, called www.ubertalk.com.)

"RadioSearchEngine.com is perfect for people seeking music on their desktop PCs; especially when at work," Robertson said. "It also lets you go directly to the next song you want whenever you want to. There are no limits on skips as there is on Pandora.com, and you don't have to pay a subscription fee to avoid commercials; just select your next song and you're gone."

If you want to listen to a single song and don't mind a preroll video, then YouTube is great. But if you want to listen to continuous music, then it's not a good experience.

— Michael Robertson



Michael Robertson's new site RadioSearchEngine.com is aimed at levelling the playing field for online radio. It provides Spotify-like song selection to online music listeners while using online radio stations (broadcast and Internet-only) as the music source.

The user enters the desired song — say Miley Cyrus' "Wrecking Ball" —

screen, and the top 20 songs in this genre on the left; all with clickable links. (See the screenshot above.)

Should RadioSearchEngine.com not find "Wrecking Ball" playing online, it will then analyze the song's genre to suggest radio stations that play similar songs. In this way, the user stays tuned to online radio.

of unregistered users accessing the site weekly; Robertson declined to release revenue numbers.

"I created DAR.fm to provide a PVR-like capability to online radio programs," said Robertson. "To do this, we had to create and constantly update a database of online Web stations, so that we could link to these programs. In doing so, we created the infrastructure to support RadioSearchEngine.com."

In cyber-speak, Robertson has created software "spiders" constantly searching the Web for online radio stations, verifying that they are on and recording what content they are playing. It is this data that RadioSearchEngine.com accesses to find specific artists, songs, genres

At the same time, there is no requirement for RadioSearchEngine.com users to move away from a station if they want to stick with it. The choice is theirs, at no charge.

PROS AND CONS

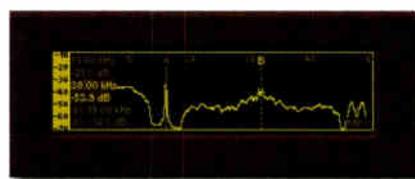
By providing free online access to listeners' favorite songs and shows, RadioSearchEngine.com may be a viable alternative to Pandora and other streaming audio services, particularly those that require paid subscriptions to avoid ads and skipping limits.

"It can also be a boon to broadcasters who are trying to reach a wider audience," said Robertson. "For instance,

(continued on page 20)



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PEOPLE NEWS



Natalie Conner

Beasley Broadcast

announced her pending retirement

David Gerbitz

Pandora

will join the company as executive vice president of revenue operations

Bryant Burke

GatesAir

chosen as vice president of operations



Mark Halverson

Journal Broadcast Group

tapped as vice president and general manager of Omaha radio operations



Steve Shaw

Cumulus Media

promoted to president of programming for Westwood One



Michael Martin

CBS Radio

named to the newly created position of senior vice president of programming and music initiatives

Wade Linder

Cumulus Chicago

hired as operations manager of WLUP(FM) and WKQX(FM), program director of WLUP



David Kuklinski

Neutrik USA

named applications manager

Cary L. Pahigian

Hearst

has filled the role of president and general manager of Baltimore's WBAL(AM) and WIYY(FM)

Lance Richard

Entercom Communications Corp.

chosen as vice president of sales for Sacramento

Kevin Metheny

Cumulus Media

named operations manager of KGO and KSFO in San Francisco

National Association of Broadcasters Education Fund

2014 Broadcast Leadership Training class has graduated:

Trila Bumstead, owner, Ohana Media Group;
Anita Stephens-Graham, co-founder and managing director, Graham and Associates;
Marc Jaromin, president, Mojo Brands Media;
DuJuan McCoy, president and CEO, Bayou City Broadcasting;
Jeanette Tully, CEO, Aloha Station Trust



Erik Tarkiainen

Harman Professional

appointed vice president of global marketing

Send information to radioworld@nbmedia.com with *People News* in the subject field.

SEARCH

(continued from page 19)

top 40 stations can really cash in on a new song's global popularity, by putting it in high rotation for the world to hear."

The downside to RadioSearchEngine.com is that it is reliant on radio stations to play the songs that Web surfers want to hear. This is no problem if the target audience is into Miley Cyrus and other pop stars whose songs are widely played. But it could be an issue if the song being sought is obscure, like Ian Dury's "Hit Me With Your Rhythm Stick." (That said, more people listen to pop songs than obscure songs, so RadioSearchEngine.com is on the right side of the equation here.)

Another limitation is that the system can only report what songs are available when they are already being played. This means that the user will never get to hear a desired song right from the beginning.

"The song is usually about 34 seconds in by the time our users can access it," Robertson said. "That said, many song beginnings are just music beds that deejays talk over anyways. Tuning in later means you're closer to the song's hook."

THIRD-PARTY REACTION

Radio World asked three observers — Fred Jacobs, Tim Davis and James Cridland — for their views about RadioSearchEngine.com.

Jacobs and Davis are president and director of digital at the radio consultancy Jacobs Media (www.jacobsmedia.com). Cridland is managing director of Media UK who speaks often on Internet radio. All three tried the site then sent us their assessments.

Davis sees Radio SearchEngine.com as "a cool concept that allows you to find virtually any song on the radio at any given moment in time. It also puts pure-plays on a level playing field with terrestrial streams, so everyone's pretty equal."

Jacobs said RadioSearchEngine.com's song search function can help online listeners discover new radio streams online. "You start by typing in a song, and then you end up on a stream that you probably didn't know about," he said "You just might find a channel you enjoy — or not."

Cridland rated RadioSearchEngine as being "potentially very interesting. But I'm also not sure that the current use-case is the right one," he said. "If I want to hear 'Wrecking Ball' by Miley Cyrus, I can find it on YouTube. I can hear it from the beginning ... so I can't see why anyone would want to listen to the last half of the song."

"It's problematic that you rarely or ever hear a song from the beginning," said Davis. Cridland added: "Song choice is limited. Unlike YouTube where seemingly everything is there, deeper, niche-ier songs just won't show up if no one's playing them at that moment in time."

Robertson's response: "If you want to listen to a single song and don't mind a pre-roll video, then YouTube is great. But if you want to listen to continuous music, then it's not a good experience."

Like DAR.fm, Robertson describes RadioSearchEngine.com as in its start-up phase. "We are still considering ways to monetize this tool," he said. "Right now, we are just trying to understand its potential, and how people are using it."

The service seems like something that stations can pitch to their listeners online, especially group owners who have many stations turning up in the site's music searches. After all, the music provided here is free, unlimited and all sourced from stations, not streaming audio companies like Pandora.

RadioSearchEngine.com may not keep online listeners loyal to any given radio station. But it may make them more likely to keep contact with radio as a whole, rather than finding their music elsewhere.

How I Built My Internet Station

“We will have no technical excuses if we are not successful”

The fully equipped live studio is built around an Arrakis ARC-15 console. The studio supports full music or call-in shows, live-assist or unassisted automation. The studio can also be used to cut voice tracks or record other programming directly into the Digilink-HD system for scheduled playback at a later time.



FIRSTPERSON

BY JOHN M. STEPHENS

Like many station owners, I caught the broadcast bug thanks to college radio. That was followed by a brief on-air career that ended when the station flipped to an urban format and I got

canned. So I got a real job selling radio time, and later television advertising, before moving on to a New York advertising agency. For the past 24 years I have owned a full-service video production company in St. Louis.

In early 2013, I had lunch with a col-

lege buddy who owned a group of small-market radio stations. We discussed the usual issues: the economy, taxes and how to find talented salespeople. Then he blew me away when he said: “But what really concerns me is how Internet radio growth might affect my stations’ value.”

He was right to worry. But I saw opportunity. With low cost of entry, no FCC and lower operating expenses, Internet radio could be in the emerging position that FM radio was in 1961, when the FCC approved stereo FM broadcasting.

That evening, I started researching and planning my Internet station. I quickly came up with a set of goals to make sure my station had the best competitive chance.

At the top of the list was the best technical platform I could afford, with audio quality as close to FM radio as possible. I did not want to build an Internet jukebox. I wanted to mix live presentation with automation. And I wanted to make money — this was not a hobby.

I studied playout and production systems along with encoding and audio processing. I interviewed three radio streaming services and compared their mobile apps and metadata capabilities. And I asked a ton of questions. One phrase I heard over and over again as I spelled out my demanding specifications was: “That really doesn’t matter because it is just Internet radio.”

Nobody I do business with today says that anymore.

I saw stream encoding, streaming

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INTERNET

(continued from page 21)

servers and audio processing as my transmission system, so I started there. I never even considered hosting our own streaming server, for the same reason I got rid of the Microsoft Exchange Server and Real Video Server in my video operation many years ago. That job is best left to the pros sitting on a very large and redundant fiber Internet pipe.

DISTRIBUTION

I decided to partner with Securenet Systems Inc. to distribute the stream. They host thousands of streams in redundant data centers in California, Florida and France, and their streaming performance has been very good.

Where they really shine is in additional services. Securenet provides a smart and customizable Web player, with interactive features, social media feeds and a complete advertising display system. The monthly fees include free custom mobile apps for Apple and Android. Their U.S.-based customer service and sales teams seem to care whether we survive the first financially-draining years.

With the streaming provider chosen, I moved onto encoding and audio processing for the Internet. It is interesting to note that I received the same incorrect advice from almost every streaming provider when it came to encoding. Most said that all I needed was their free encoding app and any old Windows 7 clunker with an onboard integrated audio chipset or a cheap audio card with 1/8-inch I/O. That never made any sense to me. I won't run my carefully crafted audio through a \$3 audio card. Would any self-respecting engineer feed a transmitter with audio via an unbalanced audio consumer connector? No way!

I expected audio processing and encoding to be a difficult and confusing part of the puzzle. However, my first choice ended up being the best option. The radio stations I've worked for used Orban audio processing, so I started with them.

After lobbing questions at their sales and support folks I received a call from Greg Ogonowski, vice president of product development at Orban. Greg is

Emily Stephens digitizes a vinyl record in the production studio. From the turntable the signal is routed through an Arrakis ARC-8 mixer via USB directly into the Digilink-HD automation system using the built-in DHD-Tools recording app on her workstation. Music files are encoded either as uncompressed WAV or 320 kbps MP3 files which will reside on the Digilink-HD play-out system where they will be available immediately for air.



basically one of the founding fathers of contemporary Internet radio. I learned that under his direction, Orban was the first to bring HE-AAC streaming to the Internet in 2002. They used the Coding Technologies HE-AAC encoders, formerly known as aacPlus. I don't think it is an understatement to say that HE-AAC was as important to the growth of Internet radio as stereo was to FM radio back in 1960s. This codec has done more to make high-quality, streaming audio possible and viable than any other element in our plant.

We chose Orban's Opticodec PC to encode our two bitrate streams and Optimod PC for "major-market" Internet-specific audio processing. They work together and live in a standard PC with the Optimod PC card, eliminating the need for the \$3 sound card in the PC. Orban's PreCode technology manipulates aspects of our audio to minimize artifacts caused by low-bitrate codecs. An onboard mixer supports ad insertion with multiple analog and digital I/O options. Optimod PC's multiband compressor includes program-adaptive dynamics and a crossover topology that works magic on our 45-year-old "retro-progressive" music content, with no readjustment from me. In fact, we are using an Optimod preset designed for my type of station by Ogonowski.

I receive many compliments on how great our station sounds — I don't think they mean my musical selection. Almost 30 percent of our music content was

dubbed from out-of-print vinyl LPs. It is not surprising that Ogonowski and Bob Orban were musicians before they were engineers. Audio processing is clearly both art and science.

LIVE STUDIO

The choice of an automation system was complicated and time-consuming. I did full-install demos on six systems. I started with a free open-source package called RadioDJ, then tried an inexpensive software package from New Zealand followed by a popular hobbyist program (clearly built by programmers who had never set foot inside a real radio station) and finally tested an impressive Linux package that was very tempting.

Ultimately, I chose Arrakis Systems Digilink-HD, which is scalable so it can support a single station or a multi-station group. The system is designed to

compete with the high-end, heavyweight systems at the top of the food chain but at a competitive cost. A software utility called DHD-Tools is used for production tasks. Running from networked workstations, DHD-Tools allows me to control music scheduling, voice-tracking, segue editing, scheduled recordings and a great deal more. Functions can be operated remotely via a VPN. This is a capable system, admittedly targeted more at multi-station groups, not the entry-level Internet market.

Digilink-HD has great visual appeal. It looks like a broadcasting tool should look. No multiple windows opening and closing; controls are where they should be.

Many Internet station operators would be well-served by New-Wave, a feature-rich entry-level package from Arrakis. Comparing the systems, there

WHY AM I DOING THIS?

Can Internet radio ever make money? I point back to FM radio back in the 1960s. Internet radio is well ahead of FM back in its infancy. Recently, Media Daily News reported that 47 percent of Americans age 12 and over, an estimated 124 million people, said they have listened to online radio in the last month. Broadcast still rules, with 58 percent of the survey's respondents saying they listen to AM/FM "almost all of the time" versus just 6 percent for online radio only. To me that sounds just like the AM versus FM in 1961.

But for now, online is at least in the game — we aren't just "playing radio" anymore. Take a listen to "Progressive Rock for Vintage Rockers" at www.ourmusicalroots.com.

— John M. Stephens



is a big price difference. If you can live without some of the Digilink-HD high-end features, you can save a ton of money with New-Wave. I am taking advantage of a monthly program for Digilink-HD that includes full support.

Another one of our goals was to support broadcast-level live presentation, with in-studio interviews, live assist, full manual with CD and LP and live callers by phone or Skype. We stayed with Arrakis and chose their ARC-15 analog console, with 15 inputs, two output buses and real VU meters. On the cool stuff side, the board features an advanced telephone interface to an external hybrid — along with a Bluetooth channel that supports cellphones and even Bluetooth-equipped tablets and MP3 players. Arrakis offers combo pricing on automation with an audio board.

I did not want to build an Internet jukebox ... And I wanted to make money – this was not a hobby.

The ARC-15 features five mic inputs, four of which can be jumper-configured to additional balanced line-level inputs. The board also includes a USB interface that can eliminate the need for a professional audio card when taking a feed from both Windows and Apple devices.

To complete our live capability our studio includes Denon CD players, Stanton and Pro-Ject Debut Carbon turntables, Tascam CD and digital recorders, Grace Digital Internet radios, Tannoy and Bose monitor speakers, along with dbx and ART MP tube mic preamps.

With our location in St. Louis, and a retro-progressive music format, there was never any doubt that we would use only one brand and model of microphone, the Heil PR 40. If you have any questions about Heil Sound, ask any of the members of The Grateful Dead, The Who, Joe Walsh or Peter Frampton. Bob Heil basically invented the modern rock-and-roll concert sound system and along the way developed a number of excellent microphones.

That is what's in our studio. We will have no technical excuses if we are not successful. Now I just have to find another 750 LPs from the late 1960s and early 1970s to round out our sound.

John M. Stephens is the president of Our Musical Roots in St. Louis. Reach him at john@ourmusicalroots.com.

MARKETPLACE

Visual Radio Seen: WinMedia together with Multicam Systems recently demonstrated an integrated automation system featuring camera management in the studio. The "visual radio" system links audio and video content and allows broadcasters to deliver radio on demand — without the need for human intervention — to the Web with pictures, clips and live interviews from studio cameras. With either automatic or manual management featur-



ing camera remote control with shot presets, the system allows radio stations to push video content to the Internet, podcasts or mobiles while broadcasting.

The company explains that by touching the screen, the operator can select a camera and its angle. The camera can also automatically detect and record the person on the mic and adjust itself so as to capture the proper angle.

Info: www.winmedia.com, multicam-systems.com

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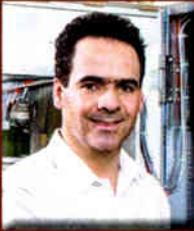
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Jochen Huber
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Tony Peterle
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Virtual Roundtable: Trends in Transmitters

It's one of your biggest capital expenses.
We ask manufacturers what's ahead

Radio World contacted representatives of several leading transmitter manufacturers and asked questions on the state of the industry and where it's going.

How strong do you believe is the long-term health of the over-the-air radio transmission manufacturing sector? Why?

Our respondents were united in their belief that the transmitter manufacturing industry has a strong future. Digital broadcasting is seen as the leading driver for future growth. This was especially true for international companies. But there was concern over a lack of direction from broadcast authorities when it comes to exactly what digital path will be taken and when.

Tim Anderson, GatesAir: There has been consolidation among the traditional domestic transmission equipment manufacturers and increased competition from European and Asian manufacturers. We believe that the over-the-air radio transmission manufacturing sector remains strong both domestically and internationally. We see significant opportunity with new licensees in Latin America, the U.S. and India. Significant replacement business in parts of Europe where the digital transition has been delayed and operators are eager to leverage lowest total cost of ownership in large network operations is solid and growing. At the same time DAB is continuing to roll out all over Europe, providing solid business for our Band III transmission solutions. In the U.S., the demand for elevated HD Radio power and improved efficiency is driving considerable upgrade business.

Tony Peterle, WorldCast Systems/Ecreso: I see the broadcast sector remaining very strong, for a long time to come. Despite

the fragmentation of the audience and the emergence of IP streaming services for audio and video, there is still no substitute for the true one-to-many topology of broadcast. It's still far and away the most efficient method of delivering content to a large number of users. The transmission manufacturing sector may continue to contract, though — the market is demanding ever-lower costs simultaneously with ever-increasing longevity. New broadcast formats and features will breathe some additional revenue into the industry.

Jochen Huber, Transradio: The health of the over-the-air radio transmission manufacturing sector will depend more or less on the ongoing standardization of digital broadcasting in general. At this time there are a lot of digital standards in the field and many broadcasters are uncertain on how to invest. DAB, DAB+, ISDBT, DRM, DRM+, HD Radio and so on ... Too many standards and no guidance from local governments nor from the EU or other organizations. Therefore, some broadcasters are holding back on new investment and running existing transmitters far beyond their predicted lifetime.

Scott Incz, BW Broadcast: It very much depends on the manufacturing company's international reach and customer base. Although some countries are moving towards digital radio, many others are still happy to deliver analog FM for a considerable period of time. If you are asking where I think it's heading: IP delivery all the way to the listener. Ironically, such a delivery vehicle could even allow developing countries to leapfrog developed nations as they embrace modern mobile technologies that will come with fast IP delivery as standard. I have said for years that I think wireless IP radio, cell network or otherwise, will make DAB, HD, DRM and other competing technologies a thing of the past.

What is the most notable trend in transmitter design right now?

This question produced no jetpack/helicopters-in-every-driveway-type of future technology answer. It did produce a blending of business practice, operational efficiency and advancement of current newborn technologies. For newish technologies, digital control and connectivity predominate.

Matthias Stoll, Ampegon: Product reliability and long-term sustainability of the product are the key success factors for products on the market today. Advances in the silicon industry and application of its parts are driving the improvement process of products. New customer demands and reduced complexity are also driving factors for new technology. State-of-the-art equipment has to be designed and operated with intuitive concepts for the operator and controller. The combination of the operator and the controller in one person requires new approaches for control and connectivity in a modern digital broadcast environment.

Tim Bealor and Broadcast Electronics: Broadcast technologies are rapidly getting smaller and more efficient. The result is that manufacturers can integrate more devices and features at the transmitter level. That means broadcasters can do more with less, quickly adapt to new or different digital standards and take advantage of higher power levels.

Gianluca Busi, Elenos: We are looking at the overall energy efficiency, the compactness, the scalability and the reliability of our products. In 2007, Elenos introduced one of the first, if not the first, high power transmitter with an overall efficiency better than 70 percent, and in a highly compact form — 1.25 kW/rack unit. Energy efficiency is the first

big goal that allows the broadcaster to immediately realize a real, large-scale economy in terms of money spent in energy. The effort was focused, first of all, in the design of the RF power amplifiers (first time working in F Class) and in the power supplies.

Tim Anderson, GatesAir: The most notable trend is for higher power density, smaller footprints, higher efficiency and lower maintenance systems designed to deliver lower overall lower total cost of ownership over the life of the transmission system. The consolidation of transmission facilities where floor space is at a premium is driving a trend toward multiple transmitters in a single rack and a proliferation of N+1 architectures.

John Whyte, Nautel: I think clearly it has to be the race to add intelligence and control in the transmitter and put that power to work for the broadcaster. The end result is to make transmitters more capable, easier to service, faster to diagnose and even begin to act as the hub of control for the remote site.

We continue to put a lot of work and innovation into this area. We see this as a response to the increasing demands being placed on broadcast engineers. Broadcast engineers continually tell us about the challenges they face in having to support more and more sites and more equipment. They need more and faster information about what is going on in the transmitter and sometimes look to the manufacturer for additional support.

Jochen Huber, Transradio: In the high-power market there is no trend, except that all broadcasters ask for DRM capability even when they don't plan to use it. In the FM and the digital TV range the trend is for higher efficiencies, though these efficiencies are far below the efficiency reachable with modern AM transmitters.

How far can manufacturers push the limits of overall energy efficiency? Is there room for improved transmitter quality — new materials, new components, new designs, extended life?

There was universal agreement that AM and FM transmitter efficiency had neared its natural limit and any great leap forward was not likely. Improvements when they come will come in small increments. There were suggestions for tweaks.

John Whyte, Nautel: We spend a lot of time asking that question. We've pushed AM technology to 90 percent efficiency, which is astounding. On the FM side, as long as a manufacturer is designing with the latest power supply and FET technologies, they should be able to offer efficiencies that hit the low-to-mid 70s. That means the easy gains have been achieved, especially for AM, and efficiency improvements going forward will be incremental. Our engineers will continue to push the boundaries of what is possible.

Digital efficiencies have improved by up to 15 percent and we think that can result in tens of thousands of dollars in savings over the life of a transmitter.

— John Whyte

The one exciting opportunity for efficiency is in digital transmission. Nautel recently introduced technology called Spectrum/Efficiency Optimizer, which continuously adjusts digital transmission parameters to achieve optimum spectral performance and efficiency. Digital efficiencies have improved by up to 15 percent, and we think that can result in tens of thousands of dollars in savings over the life of a transmitter.

Tim Anderson, GatesAir: Improving transmission system efficiency is now a game of inches. The trick is to seek out every 1/10th of a percent of efficiency available and leave nothing on the table. This means looking at everything; from the RF FETs to the power supplies, to the cooling system components and all of the underlying technologies and processes without compromising performance and reliability.

The next generation of LDMOS FETs offers further increases in power density and efficiency, though not nearly as dramatic as the transition from VMOS a few years ago. Other device technologies, such as carbon nanotube and diamond

semiconductors, may again revolutionize RF power amplification in the future.

Advances in signal processing promise further improvements in efficiency along with power utilization through digital crest factor reduction, spectral precorrection and adaptive efficiency enhancement. Some of the efficiency technologies like Dougherty amplification, long employed in TV, are being considered for hybrid and digital radio transmission system. Other ideas, such as liquid-cooling and geothermal, hold great promise for even higher overall system efficiency and lower operating costs.

The demand for improved quality and performance will drive innovation. We continually explore new and sometimes exotic RF power devices, new signal processing techniques and improved manufacturing processes to enhance quality and efficiency while lowering the capital and operational costs for operators.

Matthias Stoll, Ampegon: There are a number of possible ideas for pushing efficiency to a higher level, starting with using AMC, EAMC, DCC, DAM or DRM as energy efficient modulating

redundancy through extra power supplies and amplifiers that provide backup as and when necessary.

Jochen Huber, Transradio: In the AM range we are meanwhile at efficiencies above 90 percent; I do not know if much more is possible. In the FM range we will have about 75, perhaps, 80 percent. Digital transmitters (DAB or DVBT) will have always lower efficiencies. Recent advances of new transistor technologies like LDMOS have improved efficiency, but for the near future I don't see any big improvements. In the FM range we are seeing high-power transistors delivering more than 1 kW per transistor.

Gianluca Busi, Elenos: The limit is 78 percent for MOSFET devices (typically below 700 W), 75 percent for transmitters up to 5 kW and 73 percent for transmitters up to 10 kW. Elenos has concentrated on optimizing the number of matching steps to minimize the losses in the passive components. The choice of high-performance (low-loss) substrates has helped to achieve high levels of efficiency, as well as the advanced RF (all-planar) design that we use.

Does IP technology affect your plans?

This question elicited more enthusiasm than any other. IP technology, whether as a delivery method (e.g. AES67) or a remote control/monitoring solution, is on everyone's radar.

John Whyte, Nautel: IP technology has brought a revolution in transmitter design and functionality. Consider the impact over the last few years. The connected transmitter puts the broadcast engineer in the driver's seat without even being at the transmitter site. Modern graphical user interfaces give access to hundreds of parameters and provide remote control and more recently even site control. Then add to that IP connected diagnostic services that open up the possibility of proactive customer support and faster resolution of transmitter issues. Then there is the ability to connect the transmitter to IP-streamed content whether that might be a premium data connection like LiveWire or a broadcast Internet stream such as Shoutcast.

(continued on page 26)

on modes for AM radio transmissions. Use of temperature adaptive cooling regulation and optimization. Utilizing efficient digital switching power for modulator efficiency up to 97 percent.

Scott Incz, BW Broadcast: Although manufacturers must choose the right components and integrate them effectively, it's really the RF power transistor manufacturers, such as NXP and Freescale, that are enabling transmitter manufacturers to deliver the efficiencies to customers. Power supply technology improvements contribute, but to a lesser extent than the recent LDMOS transistor benefits.

The new LDMOS power transistors now deliver almost superconductivity performance and the associated reduction in heat will always improve transmitter life expectancy. The reduction in component cost and heat dissipation are enabling transmitter manufacturers to offer more compact offerings at a price point that customers could have only dreamt about 10 years ago. There is a recent trend in using the financial and physical reductions to offer customers

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TRANSMITTERS

(continued from page 25)

One of the areas related to IP that really excites us is that it creates the ability to integrate elements of the audio workflow or overall site management in ways that are new and provide real improvements. Where content is processed, stored, played out can be changed to create new options for broadcasters. We're working with some of the most innovative players in the industry to explore how to further harness these opportunities for broadcasters.

Tony Peterle, WorldCast Systems/Ecreso: At client sites where IP service is available, our customers can make full use of IP connectivity. Monitoring and control of the transmitter with our Advanced Metering Interface is just the beginning — our transmitters support the SNMP protocol, and can even send performance and environmental data back to our factory, so that we can help the user stay on top of preventive maintenance tasks and extend our 10-year warranty to our customers. Streaming audio over IP is another use for the network connection, and we're currently in development to support AES67.

Jochen Huber, Transradio: IP technology affects all technologies, including transmitters. Nowadays, complete transmitter sites are remotely controlled over the Internet. On the other hand, there are those who believe in using the Internet to broadcast radio and TV programs. This doesn't currently reliably work, but with the bandwidth of the Internet growing, I can imagine in future years we will have a more powerful Internet architecture, making radio and TV over the Internet efficiently possible. I guess when we have broadband Internet driving our car, perhaps terrestrial broadcast models will be threatened, but until then we can sell transmitters.

Tim Anderson, GatesAir: Customers expect the latest in IP connectivity in their transmitters with feature-rich Web GUIs, SNMP control and monitoring, interoperable AoIP and support for streaming, MPX over AES and IP and support for single-frequency networking

over IP. The need for reliable and robust transport of program content and data over IP is driving over-the-air transmission and networking innovations.

Scott Incz, BW Broadcast: IP technology is everywhere. We embrace it and will follow the needs of our customers in delivery and control over IP. To not embrace IP would be foolhardy in this day and age. Any company that doesn't embrace IP won't be around in a few years.

We see significant opportunity with new licensees in Latin America, the U.S. and India.

— Tim Anderson

Gianluca Busi, Elenos: We are examining extending the life of our transmitters. Customers have to reduce costs related to failures in the devices of the network. Elenos is continuously searching for new opportunities related to the materials, technologies, components for the best performance of its products, and has implemented a lot of powerful and reliable algorithms able to avoid thermal and electrical stress, even in extreme environmental conditions and to avoid faulty devices and failure propagation. Power amplifiers, power supplies, communications are developed with a strategy for to maintain operational service even if in case of partial fault or heavy stress on the device.

Which market or markets are growth ones for your company right now?

Not surprisingly, large companies see the whole world as their market, so growth is sought outside of home markets. In addition, new technologies, like digi-

tal, and twists on older technologies, such as LPFM, offer sales opportunities.

Tony Peterle, WorldCast Systems/Ecreso: Our partnership with IREC/Crown Broadcast has made the U.S. a real growth market for us — LPFMs and higher-power units as well. Outside the U.S., we are seeing lots of growth in the developing world. Ecreso has a well-earned reputation for ruggedness and reliability, and our customers find our transmitters work very well in some extraordinarily harsh conditions. Africa, the Caribbean, Asia ... Ecreso is on the air in nearly 100 countries around the world.

Scott Incz, BW Broadcast: For BW Broadcast, our business is truly global. We may see translator sales in the U.S., audio processing in China for AM, rebroadcast in the EU or community radio in the U.K. As a manufacturer of transmitters, processing, receivers and RDS, we are a company that offers a portfolio that encompasses all components of a typical FM transmission site and that diversity serves us well.

Matthias Stoll, Ampegon: AM/DRM transmitting station modernization programs in Asia, Africa and Indian subcontinent are our main markets and areas. Economically and socially, radio transmissions remain the most important media to reach, educate, inform and entertain the people in wide areas and large countries.

Tim Anderson, GatesAir: The largest growth opportunities for radio transmission systems are currently in Europe, Asia and the Middle East. These are markets where we see increasing demand for low- and medium-power FM for translators and single-frequency networks as well as DAB transitions. Several of Europe's largest network operators are upgrading their terrestrial FM transmission networks, replacing aging equipment and dramatically reducing operating costs. The U.S. and Latin America, while generally flat, offer new opportunities for expanded low-power FM and synchronous FM boosters and FM translators, as well as high-power systems to support HD Radio digital power increases.

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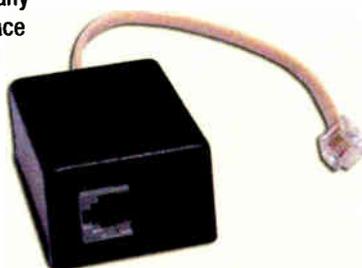
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Throwing More Gas on the Music Licensing Fire

DOJ opens review of music licensing consent decrees

COMMENTARY

BY KEVIN GOLDBERG

This commentary originally appeared on CommLaw Blog.



Kevin Goldberg

In its never-ending push-and-pull relationship with the music industry over copyright royalties, the radio industry currently faces assaults on multiple fronts. While the creation of a “performance right” (or, as broadcasters view it, a “performance tax”) appears to have been staved off for another year (according to the NAB), there are plenty of other threats headed the broadcasters’ way.

For example, the radio industry is already subject to a performance right obligation requiring stations to pay recording artists, through SoundExchange, for the digital performance of sound recordings. That burden is almost certain to increase as a result of the “Webcasting IV” proceeding that will set new streaming rates for 2016–2020.

Also, the Copyright Office is looking at whether changes to all aspects of music licensing are warranted. And lurking just beyond the horizon we have the “Respect Act” recently introduced in Congress. That would require digital radio services (Pandora, Sirius XM and anyone engaged in webcasting, including broadcasters) to pay royalties for sound recordings created before Feb. 15, 1972. Such recordings are currently covered by most state copyright laws but not by federal law.

FLASHPOINT

Now we can add another potential flashpoint: the Antitrust Division of the Department of Justice has initiated a review of the longstanding ASCAP and BMI Consent Decrees that mandate federal court oversight of the rates paid by radio broadcasters to ASCAP/BMI-repped songwriters/composers.

The consent decrees were entered into in 1941 after the two Performance Rights Organizations were adjudged to have engaged in anticompetitive behavior. They provide that the terms and conditions (including the rate) of the license arrangements between broadcasters and ASCAP/BMI must be reviewed and approved by a judge of the U. S. District Court for the Southern District of New York. The decrees are subject to periodic review and amendment by the Antitrust Division, though it’s been more than a decade since the last such amendment (2001 for ASCAP, 1994 for BMI).

ASCAP, BMI and “other firms in the music industry” have apparently expressed concerns that the consent decrees should be updated in light of “changes in how music is delivered to and experienced by listeners.” In response to those concerns, the Antitrust Division plans to explore whether modifications are in order and, if so, what modifications are called for.

Specifically, it seeks comment on several questions.

Do the consent decrees continue to serve important competitive purposes today? Are there provisions that

are no longer necessary to protect competition? Are there provisions that are ineffective in protecting competition?

What, if any, modifications to the consent decrees would enhance competition and efficiency? Do differences between the two consent decrees adversely affect competition?

How easy or difficult is it to acquire in a useful format the contents of ASCAP’s or BMI’s repertory? How, if at all, does the current degree of repertory transparency impact competition? Are modifications of the transparency requirements in the con-

sent decrees warranted, and if so, why?

Should the consent decrees be modified to allow rights holders to permit ASCAP or BMI to license their performance rights to some music users but not others?

The Consent Agreements are among the broadcasters’ strongest protections against the imposition of unreasonable rates and terms by ASCAP and BMI.

If such partial or limited grants of licensing rights to ASCAP and BMI are allowed, should there be limits on how such grants are structured?

Should the rate-making function currently performed by the rate court be changed to a system of mandatory arbitration? What procedures should be considered to expedite resolution of fee disputes? When should the payment of interim fees begin and how should they be set?

Should the consent decrees be modified to permit rights holders to grant ASCAP and BMI rights in addition to “rights of public performance”?

STRONG PROTECTIONS

So what’s the big deal? After all, it has been a long time since the Consent Decrees were amended and there have been a lot of changes in the music industry in that time.

True and true. But the Consent Agreements are among the broadcasters’ strongest protections against the imposition of unreasonable rates and terms by ASCAP and BMI. Yes, many broadcasters aren’t entirely happy with their current rates (which, for the first time in recent memory are identical for ASCAP and BMI, set at 1.7 percent of Gross Revenue from Broadcasting, with some minor adjustments available), but trust me, it could be much worse. After all, Sirius XM pays 9.5 percent of revenue to SoundExchange in 2014, with the percentage of revenue set to rise to 11 percent by 2017.

More illustrative is the recent royalty fight between Pandora and ASCAP/BMI. That face-off was resolved by Judge Denise Cote of the Southern District of New York (the same judge currently overseeing the Consent Decrees). Pandora wanted a rate close to the 1.7 percent of gross revenues currently paid by broadcasters; ASCAP and BMI wanted something closer to 3 percent. Judge Cote settled on 1.85 percent.

One can easily imagine what might happen if such judicial oversight isn’t available to broadcaster in the future. Could they, too, be paying 3 percent to ASCAP and BMI before too long? This increase would make the proposed the long-dreaded Performance Rights Act payments — especially those that would be imposed on “small broadcasters” — a mere pittance by comparison.

And it’s not like individual broadcasters have any leverage against ASCAP or BMI. The industry as a whole does — and it’s that industry-wide negotiating, ably led by the Radio Music License Committee under the umbrella of the consent decrees, that keeps the rates low. But I’ve seen way too many individual stations find themselves buckling under the superior weight of ASCAP or BMI on various issues (such as the interpretation or definition of individual terms in the licensing agreements in ways that have significant financial ramifications). Make no mistake about it: ASCAP and BMI are big corporations with significant money and resources to push small, medium and even larger broadcasters around.

But if you need any final convincing that broadcasters should be concerned, note what is happening with regard to the one PRO that isn’t already under a consent decree: SESAC.

As [CommLaw Blog has] reported, SESAC entity is being sued by the RMLC for anticompetitive behavior. The RMLC is seeking the imposition of a Consent Decree on SESAC as well. In other words, consent decrees continue to afford important protection for radio broadcasters. While the Antitrust Division’s latest review doesn’t mean the ASCAP and BMI Consent Decrees will be eliminated, it clearly opens the possibility that those decrees could be weakened, to the detriment of broadcasters.

If you doubt that, consider this: ASCAP quickly issued a statement welcoming the DOJ’s review proceeding, indicating that they clearly believe things will improve for their songwriter clients. Look for ASCAP and BMI to proffer tales of woe regarding the sad financial state of the music industry. And there may indeed be hardships, but things are tough all over. Broadcasters wanting to give the DOJ a clear perspective of their industry and their need for continued strong governmental protection to preserve their small-and-getting-smaller profit margins may want to consider filing comments with the DOJ by Aug. 6, 2014.

Kevin M. Goldberg is a member at Fletcher, Heald & Hildreth P.L.C. His expertise is in First Amendment, Freedom of Information Act and intellectual property issues, particularly copyright and trademark matters encountered by content creators and users, with a particular eye toward threats affecting publication on the Internet and social media.

Comment on this or any story to radioworld@nbmedia.com.

READER'S FORUM**SUPPORT FOR FM CLASS C4**

I want to support the proposal being put forward ("SSR Renews Push for FM Class C4," April 1 issue) and wish to dispute the perceived negative comments of Tim Sawyer about it in the June 4 issue's *Opinion* section.

Clearly, if Mr. Sawyer is worried about a 3 dB signal increase or a high electric bill, logic would tell us to never upgrade a 25 kilowatt FM to 50 kW, because it's only 3 dB ... or that 50 kilowatt going to 100 ... that's only 3 dB, too! And, for the record, both of those proposals use much more electricity than a Class A going from 6 kW to 12 kW as a Class C4.

And, if Tim Sawyer is looking for other efficiencies, let's take down those 1,500-foot towers, because the difference between a 1,000-foot tower and 1,500 is a "pinch of salt" due to curvature of the earth. FM and TV is "line of sight." Wanna save electricity? Then go and outlaw "tube-type" transmitters.

Today, there are many deserving FM stations that are "rim-shots" to medium-market cities, that would benefit greatly by that extra "3-mile increase." They could easily have 15,000 or more population and another 200+ advertisers to keep them viable.

Of all the FCC filings I have noted over the past 10 years, the filing by SSR, with the assistance of Minority Media and Telecommunications Council, makes the most sense. I only wish I had thought of it. The FCC has a freeze on practically any type of new service now. The manufacturers would probably welcome the interest of broadcasters that would benefit from this serious, well-thought-out proposal. Finally, there's no "gun to the head" with this proposal, so if a broadcaster wanted to stay at 6 kW, they could.

Mark Heller
President and Owner
WGBW(AM), WLWB(AM), WEMP(FM)
Denmark, Wis.

MUSIC CATALOG BINGO

As a consultant I'm getting a headache from music publishers switching affiliations, which suddenly leaves client stations on the hook for licenses that weren't required at first but now are ("Music Industry Pushes Congress for Copyright Reform," *radioworld.com*, June 10).

Prime example: The Neil Diamond song "Red Red Wine," which was a hit for the band UB40 in the 1980s, was published by Diamond's subsidiary Tallyrand Music, which was affiliated with BMI when he first published it (you can find a scan of his Bang 45, accompanying Wikipedia's page about the song). But at some point since then, all of Tallyrand's catalog has been switched to SESAC licensing, which means a station either gets an expensive license just to play that one song or they can't legally play it.

If Congress wants to reform the system, let them deal with that issue as well.

K.M. Richards
Consultant
K.M. Richards Programming Services
Van Nuys, Calif.

GET IN THE APP GAME

Here's what we might be missing — and what one certain company got right ("Does Your Mobile Strategy Fly," May 21 issue).

Radio is a beautiful thing 'cause when you punch the button or spin the knob you get an abundance of choices. The "KXXX" app, whether it be Android or iPhone, offers how many choices? Unless you're someone's absolute "must-hear" station, you're not going to get them to adapt to your app, if there's one out there with many more choices.

Ya gotta be where the people are — and the people are where the choices are. If that weren't the case, those ol' promotional pre-tuned radios would be in abundance. We need to be in the app game, but we have to find a way to give them a reason to download your app over the "shopping mall of radio stations" app.

Dave Mason
Acting Program Director
KRTH(FM)
Los Angeles

WRAS: A CULTURAL INSTITUTION

President Dr. Mark P. Becker does not understand the value of Georgia State University's assets, this whole deal [in which GSU agreed to hand over day-light-hour broadcasting of WRAS(FM)'s Atlanta metro area signal to GPB and sideline the student-run operation and programming] makes me question if he is fit for the job ("Air War in Atlanta," May 27 online).

Who in their right mind would give up a 100,000-watt license, which provides students valuable experience, with very little in return from Georgia Public Broadcasting?

Let's also note that GPB will duplicate content already provided by WABE.

This whole thing astonishes me. WRAS is a cultural institution in Atlanta; nobody would ever guess that someone would be so foolish to meddle with it.

Dennis Portello
GSU Alumnus
Santa Monica, Calif.



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