H1N1 ON YOUR RADIO STATION — Page 28

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INSIDE

Will He Steady the Course at NAB?

A Talk With Mr. Smith, Who Went to Washington — And Stayed

WASHINGTON — Gordon Smith, former U.S. senator from Oregon, is on the job at the National Association of Broadcasters as its president and chief executive officer.

NEWSMAKER

Smith's family owns a frozen food business in Oregon but he is a creature of Washington, having moved here when he was two years old after his father joined Dwight Eisenhower's presidential staff. His cousin Stewart Udall was secretary of the interior under John F. Kennedy.

Smith was elected to the Senate in 1997 and served on the Commerce Committee while the Federal Communications Commission was implementing the Telecom Act, meaning he is probably more familiar than many legislators with how that landmark legislation affected broadcasters as well as wired and wireless carriers.

Photos © NAB

Broadcasters chose Smith, a Republican, to lead them at a time when Democrats hold more of the power cards at the White House, in Congress and at the FCC. He must encompass the disparate interests of TV and radio in both large and small markets; he must steady the course of a trade association that represents a mature industry, and lead the NAB and its broadcast members at a time when many members are worried about their business models and their very future.

(continued on page 5)

IBOC Power Is Now in FCC's Court

Compromise on Increase Is Called A Milestone

BY LESLIE STIMSON

WASHINGTON — A proposal to allow digital FM stations to increase power — one that reflects industry negotiations and recent compromise among several major broadcast interests — is now in the hands of the Media Bureau of the Federal Communications Commission.

DIGITALNEWS

The goals of the proposal are to improve reception of digital signals significantly, particularly in mobile environments and within buildings, and to match up HD Radio digital coverage areas with stations' analog footprints. More broadly, advocates hope a power hike will help renew the pace of adoption of HD Radio by broadcasters and send a positive sign to automakers and the consumer electronics industry.

The commission is contemplating the compromise crafted by iBiquity Digital and NPR, with input from the so-called Joint Parties, a group of 18 organizations including major broadcasters and transmission manufacturers.

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FCC Pushes DIRS Effort

NAB Pledges Help to Build Two-Year-Old Database Initiative

BY RANDY J. STINE

WASHINGTON — The Federal Communications Commission has renewed efforts to build a national database of radio stations it can use to determine damage to broadcast infrastructure quickly after a disaster.

It's billed as disaster support for broadcasters, and the FCC is joining with the National Association of Broadcasters to ratchet up its campaign to entice broadcasters to participate in the voluntary in-house reporting system.

The Disaster Information Reporting System is a free Web-based program launched by the commission and the Department of Homeland Security's National Communications System. It allows broadcasters and other communication providers, including wireless and wireline services, to report their status after public disaster.

Approximately 700 radio and TV broadcast stations are registered with the DIRS initiative, which launched in 2007. FCC officials say many of those stations are concentrated in the Gulf Coast region.

FCC officials say DIRS is crucial to maintaining communication paths with the public after any major disaster.

Broadcasters can use DIRS to request fuel, generators and other equipment they might need after a disaster. The FCC, Federal Emergency Management Agency and local public safety officials will have access to the information.

"Hurricane Katrina taught us a lot. The process of collecting information on the damage done to communications infrastructure was labor-intensive," said John Healy, an FCC Public Safety and Homeland Security Bureau official, during a DIRS informational Webcast hosted by NAB this year.

"We had daily phone calls out to every single radio and TV station in the impacted area. The process was very manual with multiple agencies involved. It just wasn't very coordinated."

But most importantly, he said, "broadcasters really had no way of asking us for help."

BROADCAST PARTICIPATION LOW

In an effort to raise awareness of the benefits, the FCC and NAB are hoping to boost radio and TV station participation, which has been low.

DIRS has been activated four times since its inception: during hurricanes Gustav and Ike and tropical storm Fay in 2008, and during the Kentucky ice storms in 2009.

"The likelihood of (DIRS) being activated in the Gulf region is higher than other geographic areas, but this would be a very valuable tool anywhere across the country during disaster restoration efforts," said David Layer, senior director of advanced engineering with NAB.

Broadcasters simply create a DIRS account and then log in to submit information voluntarily regarding their status after a disaster, Layer said. "They update the information just once a day remotely via an Internet connection and only during the time that DIRS is activated."

That information will be passed along through FEMA to state emergency operations.

"Our goal is for the seamless coordination of communications following a disaster. We know over-the-air broadcast is the most vital communications tool there is in those cases," said FCC spokesman Robert Kenny. "We can help with whatever it takes to maintain operations. For instance, a broadcaster might need special temporary authority to operate out of the license norm after a disaster. We can help with that."

Kenny said broadcasters in the hurricane-prone regions of the southern United States in particular realize the importance of disaster preparedness, hence a high number of DIRS registrants in those areas.

PROJECT ROLL CALL

"But it could be flooding in the upper Midwest or an earthquake in California. Regardless, we invite as many participants as possible," Kenny said.

The DIRS program serves as a complement to the FCC's Project Roll Call system, which establishes a baseline of broadcast activity prior to a hurricane or other disaster to give emergency managers an idea of who is on the air broadcasting critical information to the public post-disaster, Kenny said.

Project Roll Call, a program of the FCC and FEMA, uses data collected by FCC field engineers equipped with a spectrum analyzer to measure broadcast activity within a 30-mile radius before and after a disaster.

"We expect to emphasize the use of DIRS and Project Recall in the future. Emergency preparedness and need to maintain the communication infrastructure after a disaster is more crucial than ever.

"In times of crisis, Americans rely on local broadcasters to deliver critical

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> **Broadcasters** really had no way of asking us for help.
>
> – John Healy, FCC

RW Writers Make Their Marks

Be sure to register now to attend our free webinar "What to Watch for in 2010." Skip Pizzi and I host guest speakers David Layer, Jeff Littlejohn and James Cridland in a roundtable that takes place Tuesday Dec. 8; you can watch and listen from your desk or laptop. Find details on page 29 of this issue.

In a few weeks I'll salute people whose contributions this year have made Radio World possible. Today, a few specific accomplishments:

Congrats first to Al Peterson, who picked up Society of Broadcast Engineers certifications during the AES convention in New York. Al can add the letters CBT for Certified Broadcast Technologist and CEA for Certified Audio Engineer to go along with his ham call sign KJ4IVD. He is assistant chief engineer for the Radio America Network and has been affiliated with RW for 20 years as a columnist, employee and contributor. Those who have met Al or read his stuff know he's both a talented audio/radio professional and one very funny guy.

John Bisset meanwhile has noted his 40th year in broadcasting. You know him as author of *Workbench*. A past winner of SBE's "Educator of the Year" Award, John is a real friend to the industry and a source of a wealth of expertise — much of it picked up from readers like you through the years. He is Nautel's international sales manager for Europe and Southern Africa.

Richard Strickland, who writes about RF safety in Radio World, has developed a new Web site with useful resources. His company, aptly named RF Safety Solutions, is a management and scientific consulting firm focused on radio frequency safety. Visit him at *www.rfsafetysolutions.com*. Find his RW stories under the Articles tab. Also peruse the interesting material under the RF Radiation tab. (Richard's stories also are archived on RW's site under Columns.)

RADIO HISTORY

James O'Neal, broadcast history buff extraordinaire, has authored some of our most popular recent articles, including two in-depth stories about the history of the FCC as well as his careful research into the facts behind Reginald Fessenden's legendary Christmas Eve broadcast in 1906. James, whose desk is 15 or 20 feet from mine, recently attended the Antique Wireless Association conference in Rochester, N.Y. He was honored with a blue ribbon for his "traveling road show exhibit" detailing the career of Loy Barton.

Barton's granddaughter read his RW story and put James in touch with the family, providing him access to more of Barton's life information and materials. The exhibit included Barton's master's thesis and several of his early transistor radios.

You can read the Barton story at *www.rwonline.com/article/5942*. There's more great history to be found under the Roots of Radio tab at our site. And you can learn about the AWA at *www.antiquewireless.org*.

The blue-ribbon display about Loy Barton prepared by James O'Neal.

The coming year marks the 25th year in which Ken Deutsch will have written for Radio World. Ken recalls that he approached John Gatski, then of the RW staff, via a typed letter — commercial e-mail as we know it did not exist — inquiring whether he might submit a guest article.

"He liked it well enough to encourage me to write a second and third," Ken says. "After a while someone there started sending me checks for these. The way it worked then was that I would snail-mail John a printed copy of each article as well as a floppy disk containing same. That went on until about 1990 when I signed up with CompuServe, an early provider of e-mail accounts."

Among Ken's contributions (under the bylines Ken R. and Ken Deutsch) have been profiles of memorable personalities like Nancy Cartwright, the voice of Bart Simpson and a former radio DJ; Fred Newman, the "mouth sound effects guy" on "A Prairie Home Companion"; and Mark Levin, the syndicated talk host.

He has worked in radio, TV and studio recording and authored three books. Ken and his Toledo vocal group re-sang classic PAMS jingles for clients from 1980 to 2000 (he'd purchased 5,500 PAMS master tapes and music tracks when the original company went out of business).

"I have found writing to be less glamorous than any other job I had over the years," Ken adds. "I got more respect from my high school girlfriend when I was a fry cook in a fast food restaurant than I get from my wife for having written hundreds of articles and books.

"Of course I jest. My high school girlfriend was more impressed by the prodigious quantity of French fries and pizzas I was able to pilfer, a fringe benefit not available to writers."

Ken is also a regular volunteer benefitting the Make-A-Wish Foundation.

When I consider the accomplishments and experience of writers like these, it makes me appreciate how deep the knowledge pool around RW is.

One more "first" in the family: Your

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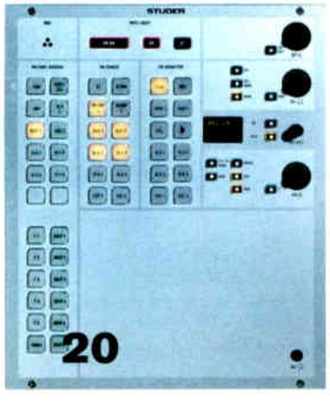
FROM THE EDITOR

Paul McLane

THIS ISSUE

DECEMBER 2, 2009



SMITH

(continued from page 1)

Radio World News Editor/Washington Bureau Chief Leslie Stimson spoke with Smith in early November. Though still settling into his new gig, it's clear Smith is at ease with the press.

***RW:** Since we spoke at the NAB Radio Show in Philadelphia, how are things going for you now that you're in the job?*
Smith: As I speak to you, this is my one-week anniversary. For the last week, every morning I've been singing in the shower.

***RW:** So you're settling in, you're enjoying it …*
Smith: I'm loving it.

***RW:** Has anything surprised you so far?*
Smith: Yeah, a bunch of things have surprised me that I probably can't speak publicly about.

***RW:** What issue has station owners told you they most want NAB to work on?*
Smith: The whole performance royalty issue is centermost in their minds.

The larger issue, for me, that encapsulates that is creating a regulatory and legislative environment that allows radio to continue its great service to the American people. That is what has sadly slipped away over the years.

***RW:** An environment in which regulators make things easier for them?*
Smith: I think the values that the public airwaves provide the American people through the medium of radio are values that are valuable still. I think that that has been forgotten by too many in Washington.

***RW:** A letter that came out of the leadership of the House and Senate Judiciary Committees invited you to appear before Congress and take part in talks designed to settle the performance rights issue before the bills hit the floors of both houses. This interview won't reach readers for a few weeks but speaking generally, is NAB committed to not negotiating on performance rights? Or would you sit down with musicFirst?*
Smith: We've been asked by prominent members of Congress to show up and it would be an affront to Congress not to show. The words of John F. Kennedy come to mind: "Never fear to negotiate, but never negotiate from fear."

I'm not afraid to talk to anyone about the cause and value of radio and how some of the proposals being put forth are very shortsighted and ultimately counter-productive to the larger interests of the American people.

***RW:** At the Radio Show you were talking to us about the lobbying restrictions that you're under for another 12 months or so …*
Smith: That raises a question. In asking me to appear at this meeting, can they waive the ethics law? I don't have an answer to that. So my answer to these members is, "Sure, I'd love to come, but can I? Can you give me a waiver?" I don't know the answer to that, but they'll have to find that for me.

> **'Some of the proposals** being put forth are very shortsighted and ultimately counter-productive to the larger interests of the American people.'

***RW:** So you've asked them that?*
Smith: That is a letter we are transmitting to them as we speak.

***RW:** Other than the performance rights issue, have those restrictions affected your ability to do your job at all?*
Smith: Not at all. Because it's very important for me to observe the letter of the law and I do. At the same time, those restrictions don't apply as to the FCC, where a whole lot of the action takes place. We have a wonderful government affairs shop here at NAB. I work with them every day to make sure they know the hows and ways and

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DIRS

(continued from page 3)

information that can help save lives. Developing programs to help keep them on the air or get them back on the air is very important to the FCC," Kenny said. "This is really a small effort with big benefits for broadcasters."

The administration of DIRS "has resulted in very minimal incremental cost to the FCC," he said, with existing staff assigned to the DIRS initiative when activated.

Private information that radio stations provide to the FCC in regards to DIRS is confidential, he added.

Clear Channel Radio has registered some of its stations in DIRS, said Steve Davis, senior vice president of engineering and capital management for Clear Channel, mostly in areas prone to hurricanes and earthquakes.

"We think DIRS is a worthwhile effort in coordinating between broadcast media, common carriers, first responders, government regulators and emergency management," Davis said.

the company's Emergency Operations Center, headed by Jeff Bennett, expects to help coordinate local responses for the DIRS database after disasters, Davis said.

"While we are initially focused on those stations in hurricane- and earthquake-prone regions, we anticipate that we will be able to provide DIRS information in a timely manner for all Clear Channel radio stations."

Broadcasters can register for DIRS by visiting *www.fcc.gov/nors/disaster/*, or do a Web search for "FCC DIRS" for more information.

SMITH

(continued from page 5)

words that are necessary to advance our case.

RW: *How are you finding the Julius Genachowski-led FCC? How do you think that's going?*
Smith: [At the end of October] I met with each of the commissioners, including Chairman Genachowski. They were, for the most part, just introductory meetings designed to get off on the right foot with each commissioner and as a regulatory body. They were all very favorable and very friendly.

RW: *How do you think NAB is being perceived, either at the FCC or on the Hill right now? We talked about this a little at the radio show. Is NAB still considered a strong lobbying force?*
Smith: I think the answer is "yes," but we can be stronger still. When you can sign up a majority of the House of Representatives on a resolution, that suggests that members of Congress know that we represent family wage jobs at home and we provide a service to their constituents in terms of news, sports, weather and entertainment that is of great value to the quality of life of their constituents.

RW: *How would you describe your lobbying style, personally? I've heard you described as low key, with an ability to reach across the aisle on difficult issues.*
Smith: I've never lobbied before so I don't know what my style is. But you describe well my style as a senator, and I think that the most valuable quality in any human relationship is genuineness and truthfulness. And I think my colleagues knew me for both of those qualities, and I expect to manifest those qualities on behalf of NAB.

RW: *Switching gears to some technical questions: David Rehr joined with Jeff Haley and Jeff Smulyan in trying to persuade wireless carriers to include FM radio in cell phones. Are you involved in that, and if so, how is that going?*
Smith: It's going very well; and I think that was work that was well begun and we're seeing the fruits of that effort already springing up with the Apple announcement that they were going to include this in their new iPod. It is in the new iPod the Nano and there is the further thought, we have heard from industry sources, that our iPhones, of which I'm a possessor, have a radio chip in them that simply must be activated with further software upgrades.

I think that it would be a competitive advantage for Apple, and when Apple does it, I think it's only a matter of time until the marketplace moves other device manufacturers to follow suit.

RW: *Have you had a chance to tell Apple that?*
Smith: Just through the media. That's why we're talking to you!

I flagged this in my first public announcements and I have reason to believe they read the papers, too.

RW: *ISuppli, a company that does device teardowns, had an item about radio being in Apple devices that we wrote about this summer. Now it's gaining steam.*
Smith: This is a huge breakthrough for radio because literally, I would predict in the near future, your telephone will soon be more than a telephone — in addition to what it already is, which is a texting device, an e-mail device and a miniature computer. It will also be a radio and a mobile TV.

RW: *Which is all good ...*
Smith: It's all good and it opens to broadcasting a very bright future, again.

RW: *I was looking at the public comments filed at the FCC on the Minority Media Telecommunications Council "Radio Rescue Petition." The MMTC has 17 proposals, mostly technical items, to help radio. NAB supported a lot of their ideas, but one idea NAB didn't support is the idea of re-purposing analog TV Channel 5 and 6 for radio. I'm wondering, is that set in stone or could NAB change its mind when TV gets through its digital transition?*
Smith: TV stations are currently occupying that spectrum and would have to vacate in order to free it up for radio stations. My understanding is that the NAB board studied this issue and does not support that idea.

Gordon Smith in his Senate days.

[Your question] is not a bad way to characterize it, though the way I would put it is: Some of my friends are for it and some of my friends are against it; and I'm with my friends.

RW: *The friends who pay the higher dues?*
Smith: I think the best way to put it is this is an issue that is evolving, and, in the fullness of time, it will be resolved. But it's the kind of thing best done quietly and with technology.

RW: *This is based on an earlier petition filed a year ago by a group of mostly engineers. They want to extend the FM band, put LPFMs down there, make more space for AMs to migrate there, it's a big, complicated plan, but parts of it may work.*
Smith: I just think there's more to learn, there's more technology to bring to bear; and time will resolve this better than the NAB playing referee.

RW: *In discussions of radio getting on different devices, we're talking about FM. Engineers have said to me it's harder to do AM, period, and to get an AM antenna into a small, portable device — an AM antenna that would work well; and that putting AM into these devices would be more expensive and a hassle for device-makers. Given these obstacles, what is NAB doing to help AM stations?*
Smith: Obviously we want AM, too. By getting a toehold with FM, it provides a way to step up in time to be helpful to AM as well. So it's not AM or FM, it's both.

But it's broadcasting, and sometimes you have to start at the first rung of the ladder before you get to the second. In this case it's FM that leads to the second step of AM.

RW: *So FM may be a toehold for AM at some point?*
Smith: Exactly.

RW: *Do you plan to go to the CES show?*
Smith: Yes.

RW: *What will you look at there? Obviously HD Radio receivers are of interest, but what radio devices are you interested in looking at there?*
Smith: Whatever they've got available for me to learn about and to help broadcast get into the stream of commerce. But I want to go to their show so that I can emphasize the importance of the NAB Show.

RW: *Former NAB President/CEO David Rehr said to me last year, and I'm paraphrasing: "Attendees look at CES, but they buy at NAB."*
Smith: There may be some truth in that. We see these different shows as having different niches, but they all sort of work into one, larger good.

RW: *So you're going to talk to people about radio. Is that another opportunity to talk to cell phone carriers …*
Smith: Without a doubt.

RW: *Say you're in an elevator with a complete stranger. If you had to describe radio in 30 seconds what would you say?*
Smith: I would just say it's free, its content quality. It's ubiquitous, it's part of living in the information age as informed citizens.

RW: *So still relevant, radio has a bright future…*
Smith: Absolutely.

When you drive to work, what do you do? In my case, I turn on the radio. So think about taking that away from people's lives. Whether you like talk or whether you like music or whether you like news channels, sports.

You know, what happened to the Terps last night? You get that from radio, if you really want to be up with the latest and the greatest.

MCLANE

(continued from page 4)

humble editor in chief recently ran the Steamtown Marathon in Scranton, Pa. It was my first marathon. And after this challenging, deeply satisfying experience, I can state with absolute confidence: 26.2 miles is a long, long way.

If there's a story in your printed copy of Radio World that you wish to share with others, remember that you can e-mail it from within the digital edition on our Web site. You need not be a subscriber to delivery of our digital edition to access it.

The current digital edition can be opened via an icon at lower right of our home page. Just open the issue and then click on the appropriate icon to e-mail a story. And you can access past editions under the Resources tab of the site, which means you can look up and forward articles from back issues.

Another insider tip: You can *search* recent back issues from inside any digital edition. Use the Search icon. This can be a powerful tool if you're compiling information about recent news events or tech trends.

POWER

(continued from page 1)

The Joint Parties, iBiquity and the National Association of Broadcasters originally asked the FCC for an increase more than a year ago. Observers believe the FCC preferred an industry consensus before acting on a power hike.

The United States has about 9,560 licensed FMs, according to FCC data. As of November, about 1,650 of those were using HD Radio, according to iBiquity Digital, or about 17 percent.

'THE WATER IS FINE'

The compromise worked out in November calls for the commission to allow a voluntary 6 dB hike for FM IBOC broadcasters across the board — meaning stations could quadruple their digital power — with provision for increases beyond that, up to a 10 dB increase in certain circumstances, or 10 times as much power. Initial prediction models suggest most stations would be able to exceed 6 dB.

The compromise also envisions adoption of technical developments — namely, single-frequency networks to fill gaps in digital coverage and asymmetrical digital sidebands to reduce the potential for digital interference to short-spaced first-adjacent analog stations — that would allow more stations to increase power without negative effects on themselves and neighbors.

Both NPR and iBiquity also committed to development of low-bitrate codecs and conditional access crucial to moving radio reading services into the mainstream digital system.

Supporters hope the agency will approve the plan quickly. They say it will show receiver manufacturers and automakers that the industry has a clear path to increased and more reliable digital signal coverage. Such improvement is critical, they say, as more HD Radio portables enter the market.

Backers also hope a power increase will spur adoption of HD Radio among broadcasters that have not transitioned, including many standalone operators and owners in medium to smaller markets.

"What comes out of this is a very strong signal to all of the industry stakeholders, especially the auto manufacturers, that the water is fine," said Mike Starling, NPR's vice president, chief technology officer and executive director of NPR Labs.

"Come on in and help us promote and deliver these new products to the American people because they're going to have a wonderful experience with the benefits of digital technology with services and clarity that we could *not* deliver with our analog signals."

Supporters including the four transmission companies in the Joint Parties say indecision over a power boost — along with the need for stations to sense a potential return on investment — has helped to stall the digital rollout.

Also, proponents say an increase would help motivate consumer electronics manufacturers to roll out more receivers, including models made for cars.

The industry, however, is not unanimous on the matter by any means.

NOT ALL AGREE

Skeptics have argued that only stations in the largest markets will transition to digital because IBOC remains expensive to implement. They also worry that by boosting power, stations will cause interference to their own analog signals, especially at the edge of coverage areas. They wonder how many stations will lack the necessary headroom in their digital transmitters to increase power and be obliged to spend more to upgrade.

Some opponents are concerned about analog interference to stations caused when neighbors raise digital power. Representatives of the Media Access Project and Prometheus Radio, for example, have asked the FCC to deny the increase; they say elevated power testing has not taken into account the impact on low-power FMs and that "parties noted the impact of self-interference to the analog signals" during testing.

Entravision has told the FCC that interference from IBOC stations to rimshot and lower-powered facilities "sim-

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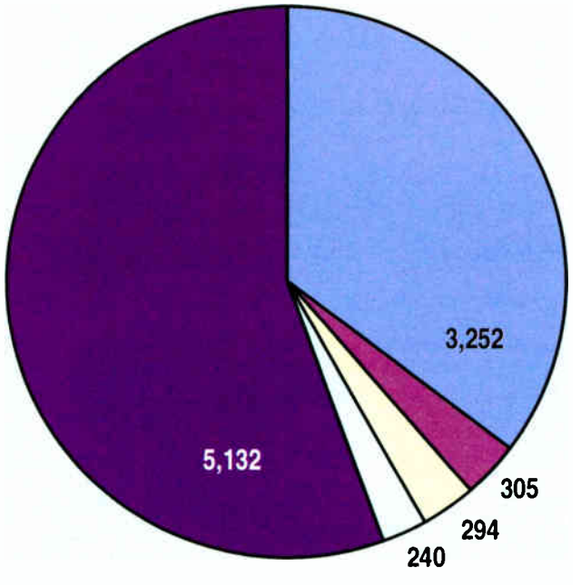
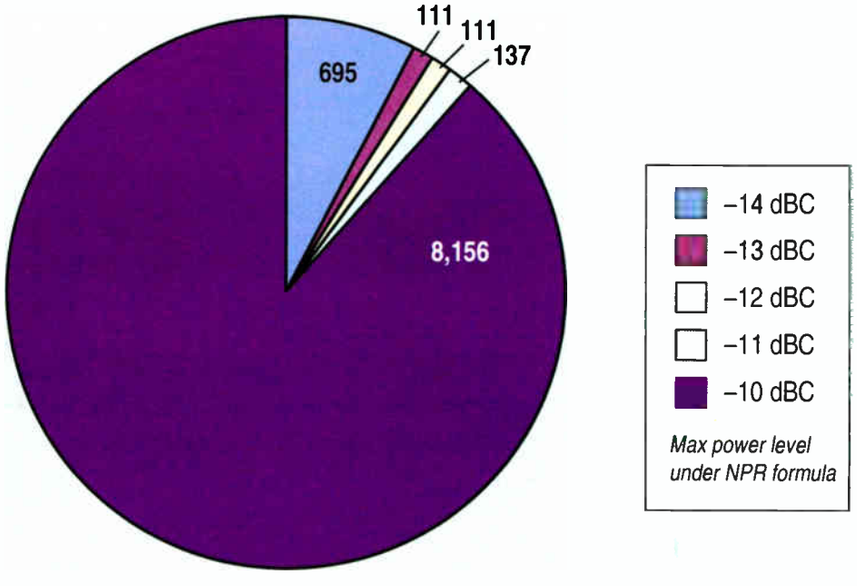
Symmetrical IBOC Power Distribution
(For reserved and non-reserved bands)



Asymmetrical IBOC Power Distribution
(For reserved and non-reserved bands)



NPR has estimated how many FM stations in the United States could increase digital power to various injection levels using either symmetrical or asymmetrical IBOC power distribution. So for example, the left chart reveals that overall (both reserved and non-reserved) some 5,132 FMs, or approximately 56%, can operate at –10 dBc with symmetrical radiation. But, as shown in the right chart, with non-symmetrical radiation roughly 89% of stations, or 8,156 FMs, can reach –10 dBc on one sideband. Additionally, while 35% of stations are limited to –14 dBc with symmetrical radiation, the number decreases to 8% with asymmetrical radiation.

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Telos Nx12: 12 lines. No waiting.

Telos was first to use Mp3 technology, first to see the possibilities of ISDN, first to bring a DSP-based product to broadcasting, a hybrid by the way. Breakthroughs and innovations adopted years later by everyone else.

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It's the Nx12, our most powerful performer, giving you the one-two punch of the latest Telos hybrid technology and audio processing by Omnia for the cleanest, most consistent call quality ever.

Nx12 has four advanced digital hybrids, each with its own AGC, noise gate, and caller override dynamics using carefully tuned DSP algorithms. Each also includes DDEQ, a sophisticated multi-band equalizer, which analyzes and adjusts received audio spectral characteristics so that calls sound smooth and consistent despite today's wide variety of phone sets and connection paths.

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Available in analog or ISDN Versions. Nx12 can connect to as many as 12 analog POTS lines or up to 6 ISDN BRI lines (which would provide 12 caller channels). A digital switch matrix inside the Nx12 connects the lines to hybrids. The Nx12 works with all Telos control surfaces including the Desktop Director, Call Controller, and Console Director. Talent and producers benefit from the unique Telos features, such as our exclusive Status Symbol visual call management icons which clearly show line and caller status.

And, it's backed by the best support team in the business. The highly caffeinated 24/7 support techs.

Telos

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POWER

(continued from page 8)

ply cannot be tolerated," noting that KRRN(FM) in Moapa Valley, Nev., which reaches Las Vegas, "has been adversely affected by DAB operations at the –20 dB level."

Brown Broadcasting, licensee of licensee of stand-alone WBRU(FM) in Providence, R.I., told the agency in comments this summer that it is short-spaced to six other stations and that for various reasons, its station power is being held to 20 kW, only 40 percent of the normal maximum ERP for its class. Brown says the station is one of the ones "that will suffer the most" from IBOC's "destructive co-channel interference … which wipes out a significant part of a station's service area."

Brown also stated: "The giant conglomerates that now dominate radio ownership have some stations that will benefit from an IBOC increase and others that will suffer; but their largest stations are likely to benefit, and they seem willing to trade some burden for what they see as a greater benefit." It said standalones like WBRU "can easily be 'thrown under the bus' by the trade-offs that media giants may choose to make."

'REASONABLE COMPROMISE'

What happens with the increase now is up to the FCC.

The commission can accept the compromise and authorize stations to increase digital power. It may decide to use some elements of the negotiated agreement but add changes to any plan after inviting comment on the proposal or on portions of it. Or it could decide to do nothing.

Observers say the last option is unlikely because the agency has recognized an increase is needed. Media Bureau Chief Bill Lake said during the fall NAB Radio Show that the agency wants to support IBOC. Audio Division Chief Peter Doyle has said the current power level "is fraught with problems" and that notifications from owners converting stations to digital have dropped considerably.

Weeks of negotiations began in earnest after the fall NAB Radio Show; together, NPR and iBiquity made their resulting recommendations. They urged the FCC to adopt a plan in which most stations — commercial and noncommercial — that want to increase FM digital power be allowed to adopt a 6 dB increase, from the current level of –20 dB to a power level of –14 dB, as soon as authorized. To go beyond that to a 10 dB increase, broadcasters would use spacing calculations developed by NPR Labs for stations on reserved and non-reserved FM band allocations. See the formula in the box at right.

(The 50 to 60 so-called "Super B" stations eventually would be able to increase their digital power by as much as 10 dB, but their increase would be based on the maximum for their class, and not a super-powered facility, said Milford Smith, vice president of radio engineering for Greater Media, one of the broadcasters among the Joint Parties. The Super B language in the compromise was part of the Joint Party's original proposal, he said. The language states: For grandfathered super-power Class B stations, the digital power levels should be limited to the higher of: (i) –20 dB relative to their analog carrier as is permitted by the current rules, or (ii) at least 10 dB below the maximum analog power authorized for this class of station as adjusted for height, absent any grandfathered super power.)

NPR and iBiquity crafted the compromise with input from the Joint Parties, who, along with the technology developer, had advocated an immediate 10 dB blanket digital power increase. This summer, iBiquity proposed a 6 dB step in the interim as a compromise.

NPR has been studying the potential effects on analog signals if nearby digital stations raised power. Its initial calculations would have allowed fewer stations to raise power, and it wanted the FCC to wait until NPR completed its elevated power studies before deciding.

Initial NPR study results seemed to predict that short-spaced stations at the low end of the dial that air lightly processed music or talk would suffer interference to their analog signals, especially in a car radio, from an industry digital power hike.

But after walking through the details, NPR's advisory committee — a group that included non-commercial station engineers as well as engineers from Greater Media and Cumulus — realized there would be tradeoffs, Starling said.

One is that some closely-spaced stations could have reception issues. But the compromise offers ways to handle those, he said.

"All in all, the committee felt it was a reasonable compromise to make sure HD Radio will work up to everybody's expectations for portable and indoor operation."

Starling said with its new, final data, NPR Labs completed new power calculations for the spacing recommendations that would allow more stations to raise their power, especially if new methods such as asymmetrical IBOC sideband transmission are used.

NPR projects that overall (both reserved and non-reserved) some 5,132 FMs, or 56 percent, could operate at –10 dBc with symmetrical power. But when you apply the asymmetrical software capability that iBiquity is working on, then approximately 89 percent, or 8,156 FMs can reach –10 dBc on one sideband. Also, while 35 percent of FMs are limited to –14 dBc with symmetrical radiation, the number drops to eight percent with asymmetrical radiation, according to NPRs calculations.

The asymmetrical software would be installed in station exciters, according to Ibiquity President/CEO Bob Struble.

Smith said several versions of the formula for calculating how many stations can raise power and by how much were discussed in negotiations. "It provides a path for stations that aren't absolutely minimally spaced."

NPR previously had filed interim spacing calculations based on initial results of its elevated power tests conducted over the summer. NPR has now completed the study and updated those calculations. It submitted those to FCC in November.

THE PACE OF CHANGE

How fast stations that want to go up to a full 10 dB increase could so, assuming the FCC approves the increase, is unclear and really up to the commission. It may opt to submit the issue of what to do beyond 6 dB for comment, said Starling.

"At that point, assuming they move forward to endorse the proposal, they will define how the notification or request process might work."

The plan includes elements of what Starling calls a "managed power increase strategy." The recommendations include the joint development by iBiquity and NPR of the technical upgrades NPR wanted, such as digital FM boosters for single-frequency networks, the software for asymmetrical sidebands and a variable-bitrate coder including conditional access for stations that air radio reading services.

NPR and iBiquity would give the FCC regular updates on these proposed technology developments.

Concrete steps to resolve legitimate analog interference complaints regarding the increase are included in the proposal. The parties say these steps would remediate harmful interference from any stations increasing power above the existing –20 dB power level.

Critics say similar interference mitigation procedures haven't worked well on the AM dial, where several interference complaints have not resulted in agency action.

WHAT'S NEXT?

Struble and others said that, if the FCC does give stations the authority to increase power, implementation will not happen overnight; each station would need to evaluate its situation. But he characterized the compromise as "an important first step" in which improvements can be accomplished on the station end of the transmission chain, requiring no changes on the part of receiver manufacturers.

"Major advances" in upgrading broadcaster transmission facilities for higher power likely would take place in 2010 but that there was no set timetable, Struble said.

"The Media Bureau has been patient with the industry in working through each party's concerns. A compromise has to help move things along because the issue is not contentious anymore," he said.

Smith of Greater Media said the compromise is "enough to make a real difference and large enough to significantly improve the coverage of digital radio as opposed to analog." Both he and Struble called the agreement a milestone.

Smith said only a couple of his company's stations could raise digital power immediately upon FCC approval; most of the rest would need additional equipment. But he believes Greater Media, as well as other Joint Parties like CBS Radio and Clear Channel, would act as fast as possible to increase power on their stations if approved.

NPR surveyed member station managers to get a handle on how many facilities might increase their digital power. Of 183 responding, 70 percent indicated they'd raise IBOC power "the maximum they would be allowed to over the next year," Starling said. Some, like WAMU (FM), Washington and KUVO(FM), Denver, already have purchased higher power transmitters in anticipation of an increase.

ALLOWABLE IBOC TRANSMISSION POWER CALCULATOR

The parties agree that additional power increases beyond 6 dB may be possible depending on conditions that limit harmful interference.

Stations that seek to increase power by more than 6 dB up to a maximum of 10 dB should be required to file an application with the FCC setting out compliance with the following criteria and formula:

Between the maximum IBOC power of –10 dBc and a blanket minimum power of –14 dBc, the allowable digital power for the digital station, toward any point on the 60 dBu contour of any first-adjacent analog FM station, is:

Allowable IBOC power = [2.27 × (60 – (IBOC station F(50,10) dBu)) – 33.6]

Source: NPR

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Reduced equipment budgets don't have to mean the end of your IP Audio projects this year. Logitek's JetStream Mini gives you the flexibility you need for audio routing, distribution and mixing – for about a third of the price you've come to expect. Everything you need is provided in one user-configurable 64-channel node, and we offer the latest networking protocols to make your implementation fast and easy.

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Logitek
Console Router Systems

Tips to Guard Against Tower Failure

Also, Why You Should Place Your New HVAC Order Sooner Than Later

If your manager has ignored your pleas for backup equipment at another location — a post-9/11 strategy many engineers have adopted — show him or her the aftermath of this tower failure.

WORKBENCH
by John Bisset

Read more Workbench articles online at radioworld.com

The guyed tower was on a very high mountaintop. Strong gusty winds were commonplace. The tower plumb and tension work was completed last year, according to the site owner.

Questions for the owner to explore in this case include: Was the tower tensioned properly? Was the tower design sufficient to support the new antennas that appeared periodically? Was the tower overloaded?

Of particular interest is the force that popped bolts from the tower section flanges, seen at the top of Fig. 5. Not a pretty sight. Talk about an engineering nightmare.

General tips for avoiding your own bad tower experience:

Don't skimp on having a structural study completed before adding antennas and lines; it's good insurance. If you are purchasing a new tower, include all possible antenna loads you may need, including cellular.

Make sure the tower is inspected regularly — quarterly is good — to spot potential problems.

If problems are found, document them to protect yourself or your contract engineering business. After this kind of catastrophe, everyone looks for someone to blame.

Adopt an emergency plan. This is where the secondary site comes into play. Even if it's simply a single-bay

(continued on page 16)

Fig. 1: Check the plumb and tension of your tower.

Fig. 2: A hill, high winds and a heavily loaded tower may not mix well.

Fig. 3: TV, FM, two-way and other users lost their antennas.

Fig. 4: It's a miracle the buildings were spared, beyond coax being yanked through the walls.

Fig. 5: Tower section flange bolts popped, offering an idea of the forces involved.

EVERYBODY WANTS ONE.

And who could blame them? Omnia ONE is the most flexible processor ever built. Yes, it can be used for FM processing. Or AM processing. Or netcasting or even studio production and mastering. Everybody wants more for their money. Omnia ONE delivers. And of course, the ONE has the smooth, punchy, brilliant sound that has made Omnia the #1 processor brand in radio. Everybody can now sound amazing. And we do mean everybody. In less than two years, we have sold more than 2,000 units, making ONE the most successful new processor introduction of all time. Go ask a broadcaster who has an Omnia ONE. You won't have any trouble finding ONE.

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Note to people planning studios:

Have you read the new book Audio Over IP: Building Pro AoIP Studios with Livewire by Steve Church and Skip Pizzi? If not... Axia can save you 30% when you purchase a copy. Just visit AxiaAudio.com/books

PowerStation: the new console system from Axia.

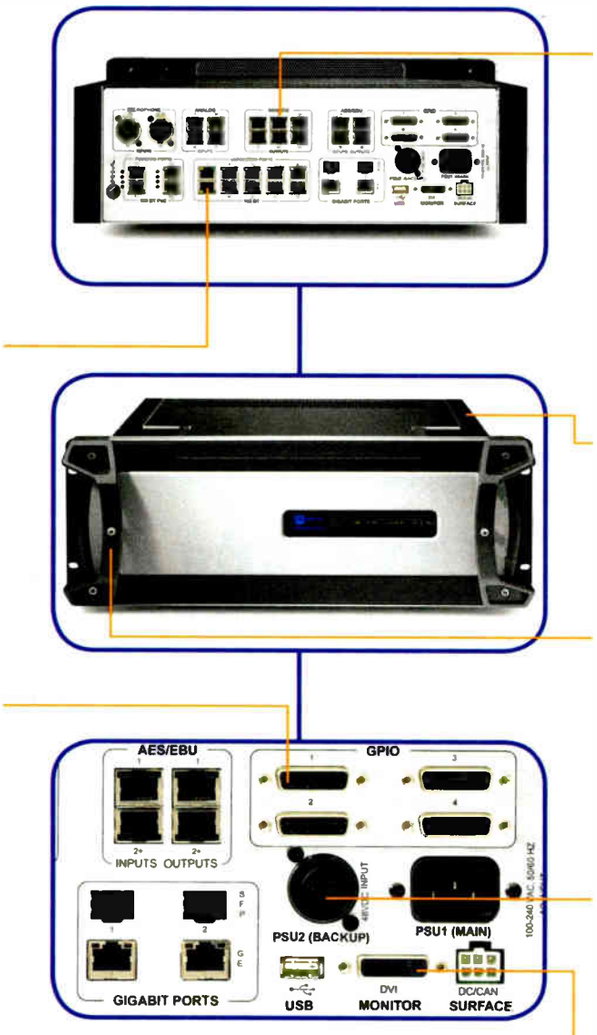
Because there's no such thing as too much uptime.

All stops removed • Twenty years from now, you'll have forgotten this ad. But you'll still have your PowerStation, the full-featured one-box IP-Audio console/router system hardened with **industrial-grade components** and redundant power capabilities. Tough enough to take a football to the groin and keep on going. PowerStation **minimizes setup** and **maximizes "bang for the buck."** Engineered without compromise for broadcasting without interruption.

Easy as π • PowerStation combines a console DSP engine with audio and logic and a network switch, **all in one box.** As its name implies, there's a whole lot o' muscle inside that burly frame, but that doesn't mean it's complicated. In fact, setting up PowerStation **couldn't be easier:** connect your studio gear with standard CAT-5 cables, connect your console with just one cable, name your sources and set preferences with a browser, and you're ready to rock. PowerStation makes building studios about 3.14 times easier than ever.

GPI 0h! • **GPIO ports are built in** to PowerStation — no breakout boxes or add-on converters needed. One day, you might not even *need* logic ports: more and more products from companies like 25-Seven Systems, Audio Science, ENCO, Google Radio Automation, International Datacasting, Omnia Audio, Radio Systems and Telos (to name just a few) use the Livewire™ standard to send their audio and logic control directly to Axia networks over a **single CAT-5 connection.**

Everything's included • Yeah, we said *everything*: PowerStation combines half-a-dozen essential tools into one compact unit. No hidden extras to buy, no "gotchas" after purchase. Inside that muscular chassis you'll find a **bulletproof mixing engine** capable of handling consoles up to 40 faders, a beefy power supply (with optional **redundant power**), machine control ports, and **audio I/O**, all in one box. And of course, since it's from Axia, the IP-Audio experts, a studio built with PowerStation can stand alone — or it can become a part of a large network quite easily. Thanks to **PowerStation Simple Networking**, you can daisy-chain up to 4 PowerStations directly for easy multi-studio installation without the need for a separate core switch. Just another way Axia makes IP-Audio easy.



You're covered • Axia has the most comprehensive warranty in the industry — **5 years parts and service.** And (not that you'll need it), **free 24/7 technical support**, 365-days-a-year. We've got your back, my friend.

E-I-E I/O • Finding space in the equipment racks is like living in a barnyard: too many chickens, never enough coops. So our team of obsessive designers fit **an entire studio's worth of inputs, outputs, logic and network connections** – plus an advanced DSP mixing engine and a massive console power supply – into just 4 RU. There's inputs for 2 mics, 4 analog inputs and 2 AES/EBU inputs, with 6 analog and 2 AES outputs. 4 GPI/O logic ports round things out. Want even more? Just connect the PowerStation Aux to instantly *double* the I/O — or plug some Axia Audio Nodes into its **built-in Ethernet switch.**

Fan free • PowerStation is **silent and fanless.** Because studios today are already full of PCs, laptops and playout servers clicking, whirring and generating heat — who needs more of that? Not only is there no in-studio noise with PowerStation, those **big extruded heat sinks** are just plain cool. No pun intended (or maybe it was. We're like that, you know).

Built like a tank • Remember when consoles were built to last? We do. At Axia, we're all about the long haul. **There are no compromises:** PowerStation uses only best-of-the-best components. Like studio-grade Mic preamps and A/D converters. A rigid, steel-framed, EM-tight chassis that shrugs off RF like Walter Payton brushing off tackles. An industrial CPU designed for high reliability in harsh environments. Beefy extruded heat sinks. Big, brawny handles to make rack-mounting easy. (And it looks cool, too.)

Redundant power redundancy • The power supply is the heart of any broadcast equipment, right? That's why PowerStation is **hardened against failure** with a **super-duty power supply** that sports enough amps to power an arc welder. And for those of you who like to wear a belt *and* suspenders, there's even a connection for **redundant auxiliary backup power** – with automatic switchover, naturally – that kicks in if it's ever needed.

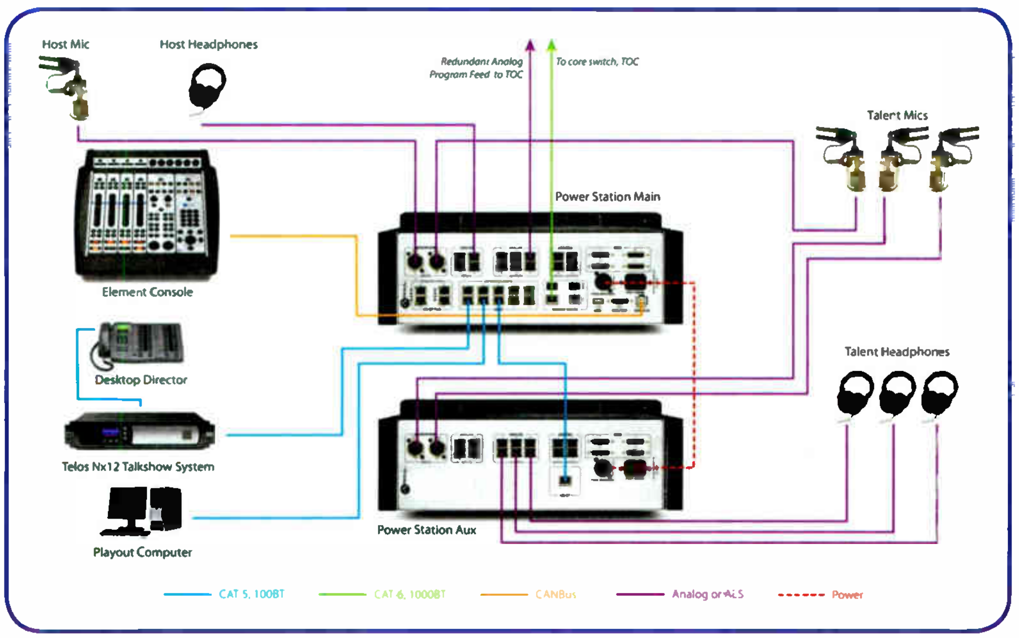
Screen play • Yep, that's a DVI connector. **Your favorite monitor** – standard or widescreen – plugs in to present the console operator with Axia's "so easy an overnight jock could do it" **info-center display.** Meters, timers, fader assignments, mix-minus settings and more, all on-screen, on-demand.

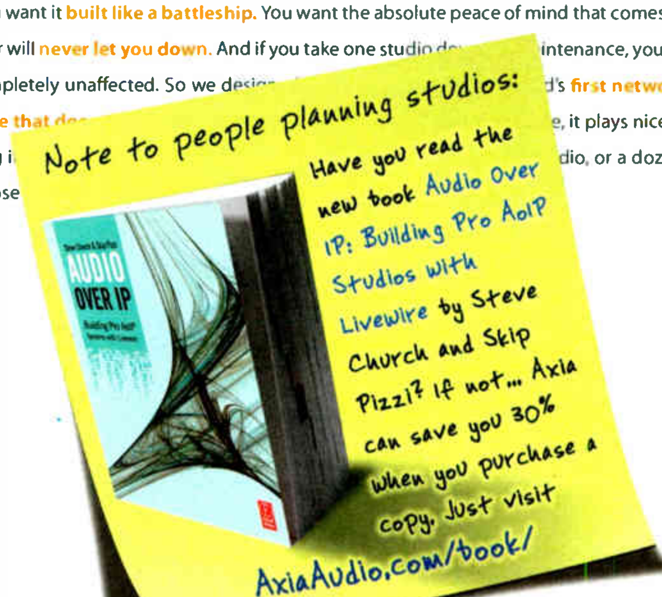
Element shown in Silver/Charcoal color scheme. Also available: Bronze/Charcoal and Warm Gray.

Element 2.0 • With more than 1,000 consoles already on the air, Element is a huge hit. And now, thanks to suggestions from our clients, it's better than ever. Element 2.0 has cool features like Omnia™ **headphone processing** presets to give talent that "air sound", **super-accurate metering** with both peak and average displays, **one-touch phone recording** with automatic split-channel feed, **automatic mix-minus** for every fader, an eight-channel **Virtual Mixer** that lets you combine multiple audio streams and control them with a single fader, and metallic bronze or silver module overlays. And we haven't even begun to tell you about Element's **Show Profiles** that instantly recall talent's favorite settings, its **built-in Telco controls**, fully-integrated **Talkback/IFB** and **Mic processing** by Omnia. And durable? Element is nearly indestructible, ready to take whatever pounding ham-fisted jocks dish out and keep going. You want examples? Element's **avionics-grade switches** are rated for more than two million operations. What look like ordinary rotary controls are, in reality, **bullet-proof optical encoders** — no wipers to wear out or get noisy. The silky-smooth **conductive-plastic faders** actuate from the side, not the top, so dirt and grunge stay out. The **high-impact Lexan** module overlays have their color and printing applied on the back, where it **can't wear or chip off**. The frame is made from **thick aluminum extrusions** that are stronger than truck-stop coffee. To find out even more about Element, visit AxiaAudio.com/Element/ . Grab some coffee and prep for a good, long read — remember, our marketers get paid by the word.

Come together, right now • Now that you know what you can do with PowerStation, let's build a studio. The diagram below shows how a typical Talk Studio might look. Mics and headphone feeds plug into the built-in Mic inputs and Analog outputs... your playout PC, using the **Axia IP-Audio Driver** for Windows®, connects to a built-in Ethernet port... and so does the Telos Nx12 Talkshow System (which sends 12 lines of caller audio, mix-minus and take/drop/next commands over **one skinny CAT-5 cable**). Send a **backup audio feed** to your TOC for extra peace of mind. And after all that, there's still plenty of I/O left to plug in the turntables for the Saturday night Oldies show.

The standalone network • You want your console to be more than just reliable — you want it **built like a battleship.** You want the absolute peace of mind that comes from knowing your gear will **never let you down.** And if you take one studio d... ...intenance, you want the rest to be completely unaffected. So we desig... ...d's **first networked broadcast console that d**... ...e, it plays nice with others, but unplug i... ...dio, or a dozen, at any pace you choose...





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WORKBENCH

(continued from page 12)

antenna and an exciter, you will stay on the air. If you share a site with stations, discuss the plan with them. You may be able to develop a common location for your back-up equipment.

Finally, if something doesn't look right, investigate. It is your job to be the caretaker of your station's technical resources.

Our story about the TV booster amplifier interfering with cell towers (*Workbench*, Oct. 7), reminded Marc Mann in San Diego of an incident in which users at an East Coast marina could not lock onto GPS signals.

The Coast Guard notified the FCC, which in turn dispatched a field engineer. The source of the problem turned out to be a roof-mounted VHF antenna at a home adjacent to the harbor.

The antenna's preamp was leaking RF harmonics like crazy. Authorities confiscated the antenna and preamp assembly, confirmed the emission source in the lab and notified the companies that private labeled this device. Sales were halted. Seems those "FCC TYPE APPROVED" labels really are necessary.

Marc included two links of interest. Here's a story in Landfall Navigation: *www.landfallnavigation.com/gpsdeafjam.html*.

And an item from the Canadian Coast Guard: *www.ccg-gcc.gc.ca/eng/Ccg/atn_Gps_Interference*.

Both make for good reading. Thanks, Marc, for a different take on RFI.

Engineer Mervill Lawson is CE for WUPX(TV) and handles contract work for WKCA(FM), both in Kentucky. While doing research for an HVAC replacement he discovered something that will affect nearly every engineer.

If your budget permits, you may want to consider placing new HVAC orders before Dec. 31.

After this date, the government will oblige you to choose a unit that uses R-410 coolant — at a substantially higher cost. R-22 cooling systems are being phased out by year's end. Under the terms of the Montreal Protocol, the U.S. agreed to certain obligations that affect the residential heat pump and air-conditioning industry.

Although it is possible to use R-410 coolant in R-22 systems, the system must first be purged and cleaned of the R-22. This cleaning process is not cheap. Plus, there is some question as to how long an older system will hold up — R-410 runs at pressures nearly double that of R-22.

After 2010, chemical manufacturers may produce R-22 to service existing equipment but not for use in new equipment. As a result, HVAC system manufacturers will switch for new air conditioners.

You can read more at this link: *www.epa.gov/Ozone/title6/phaseout/22phaseout.html*

As the end of the year approaches, weigh the cost of a replacement system now vs. later.

Merv can be reached at *bearlinc@mrtc.com*.

John Bisset recently marked his 40th year in broadcasting. He is international sales manager for Europe and Southern Africa for Nautel and a past recipient of SBE's Educator of the Year Award. Reach him at johnbisset@myfairpoint.net. *Faxed submissions can be sent to (603) 472-4944.*

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

Hit the Moving Technology Target

'Right Place, Right Time' Is Key, But Assessing Position Also Requires Proper Tools

THE BIG PICTURE

Skip Pizzi

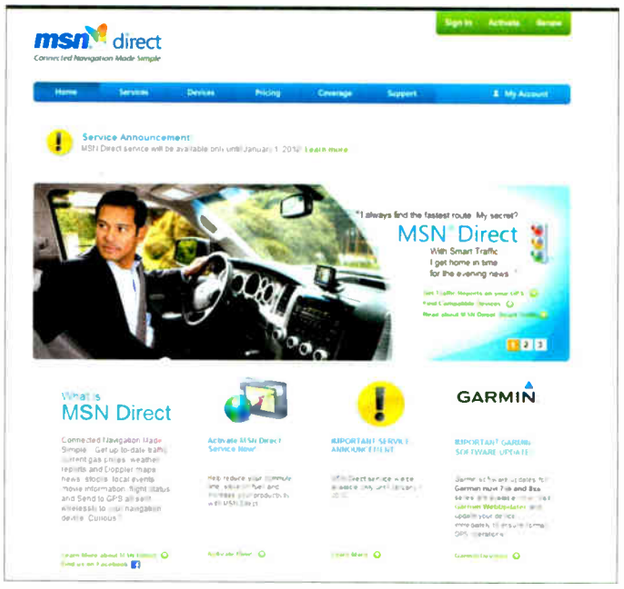
By now most of us are painfully aware of some unusual business phenomena that the digital age has wrought. They include the following:

1) Demand for your content may grow yet your business may suffer (e.g., the newspaper and record industries).

2) The complete "long tail" of content inventory (i.e., both the top current hits and the "catalog" or legacy content) can be *completely* in stock at *all* times at *every* (digital) store. This replaces the old paragon of "just in time" inventory with "all the time" inventory in the virtual marketplace (i.e., bad news for brick & mortar stores).

3) Although they've always been important, good timing and accurate market forecasting are absolutely critical to success today, and with much higher granularity requirements.

I called these points unusual but they only seem that way to those with a traditional media background. In fact, they are the new "usual" as standard operating procedures in the digital environment.



MSN Direct seemed like a good idea but lost much of its value due to the broad penetration of mobile wireless data services.

LESSONS OF LEO

There's been plenty of coverage here and elsewhere on items No. 1 and 2 above, so let's focus here on No. 3, using a particular instance that's been called "the Iridium syndrome."

The name comes from the low-earth orbit (LEO) satellite system that Motorola developed for global voice communications in the 1990s, as you'll recall. You'll probably also remember the system's notorious demise in 1999, after the investment of more than $5 billion.

How could such a well-established and savvy technology company make such a monumental blunder? It was mostly due to bad timing and poor predictive skills.

There have been numerous contributing causes cited in Iridium's postmortem, but most analyses agree that the primary reason for the failure is as follows.

In the 1980s the concept of providing wireless voice communication to almost anywhere on the planet seemed like a great idea, and appeared likely to be a big commercial success. So Motorola set about designing, building and launching a network of 66 satellites — a process that took about a decade to complete. During that development time, however, terrestrial cell phone service had taken hold and was already providing essentially the same service for much of the developed world.

Iridium therefore was marginalized to a small subset of users in areas unserved by terrestrial cell-phone service, and was meanwhile saddled with an extremely expensive network and large, unwieldy handsets. It folded less than a year after its commercial launch and came close to taking all of Motorola down with it.

The moral of the story is that today's pace of technological progress makes accurate predictions at once more difficult and more important. Profound change can happen so fast that it can devastate any business plan.

Most of us have already adapted to this, at least in part. For example, it is extremely unlikely that anyone today would propose a technology requiring 10 years to develop, because we know that we *don't* know what the environment will be like that far into the future.

But just how far in front of us do our headlights actually shine today? What is the currently tolerable development period? And isn't the increasing pace of technology constantly shrinking that window?

THERE'S AN APP FOR THAT

A more recent (though less dramatic) example, and one that hits closer to home, is the MSN Direct service, which Microsoft recently announced it would shutter at the start of 2012, as Radio World reported in its weekly Newsbytes e-mail.

MSN Direct delivered its signal to users' portable and mobile devices via the 67 kHz subcarriers on a network of FM stations, so its shutdown will terminate a revenue stream that had been flowing to a number of radio broadcasters for the last several years.

Again the idea seemed like a good one when initially developed, but lost much of its value in the interim due to the broad penetration of mobile wireless data services. A dedicated, one-way data delivery network to general consumers became an anachronism in the era of the almost ubiquitous cell-phone service, SMS messaging and mobile apps.

Even the latest wrinkle that MSN Direct tried in delivering data to GPS systems (for real-time traffic data, local gas prices, movie times, etc.) wasn't anything

(continued on page 18)

What's in a Name? WorldCast Systems

Supply Side is a series of occasional interviews with industry suppliers. This is with Christophe Poulain, president of WorldCast Systems Inc.

SUPPLYSIDE

WorldCast Systems is the new corporate name for the parent of Audemat, Ecreso and APT.

***RW:** What do you feel the new name says to customers that Audemat doesn't?*
Poulain: The Audemat brand is well respected in the industry, specifically for our range of monitoring, measurement and RDS encoding products; but, as a group, we can offer a lot more than the Audemat product range. Having acquired Ecreso in 2006 and APT earlier this year, we now have a wide portfolio of broadcast solutions that can be provided both as stand-alone solutions and also as a complete turnkey package for radio and TV broadcasters. We wanted to signal the extent of our capabilities to the market.

Christophe Poulain

Audemat, Ecreso and APT are eminent brands in their respective fields and we are committed to retaining these as distinct entities in the broadcast market. The Aztec brand is no longer in existence and Nortek will be absorbed into Audemat over the course of the coming months.

The main group logo bears the strap line "deliver > transmit > monitor," which correspond to the three core brands and outline the three key areas of competency of the group: APT codecs delivering broadcast-grade audio and video between locations, Ecreso transmitters offering efficient distribution of terrestrial radio and TV signals and the Audemat range providing a range of monitoring and measurement tools. ...

The name changeover is the external reflection of some changes we have been making internally to streamline how we operate together as a group.

Internationally, we have been unifying efforts across the member companies to ensure that we work efficiently as a unit and can provide the best service to our customers. All our sales staff have been trained to advise customers on all products throughout the group and provide them with tailored, integrated solutions to match their needs.

In the U.S., we have amalgamated the operations of APT and Audemat Inc. and are now trading as WorldCast Systems Inc., providing APT, Ecreso and Audemat solutions to broadcasters throughout the Americas.

> **We wanted** to signal the extent of our capabilities to the market.
>
> – Christophe Poulain

***RW:** Do you expect to see convergences in the product lines?*
Poulain: While the core brands will remain distinct, there are undoubtedly areas where convergence could bring benefit to the customer.

One of our most exciting product launches over the past two years has been the "Radio All in One" range of multi-purpose products. The flagship

(continued on page 18)

TARGET

(continued from page 16)

that couldn't be matched or bettered by wireless broadband service to the car.

Perhaps most telling is that the oft-touted cost effectiveness of a broadcast solution apparently was washed out here by its dedicated nature, vs. the general-purpose economies of scale enjoyed by wireless platforms.

This last point may soon apply to the entire market for broadcast datacasting.

Are there other processes currently in play that we will someday look back upon and categorize similarly? Perhaps.

EXTRAPOLATION

Consider consolidation and its related actions: When the terrestrial radio industry pushed so hard for liberalization of ownership rules in the 1990s, it thought the battle for survival would be against satellite radio, and thus the fight would be waged against a small number of large, aggregated competitors. The same basis motivated the fight against the satellite radio merger more recently.

Yet it's now becoming clear that the real threat to radio's future may come from a multitude of small, independent webcasters instead. Thus terrestrial radio may have girded itself for the wrong war, unaware that a very different battlefield lay ahead.

Tactically speaking, we may realize too late that instead of lobbying so strongly for consolidation and fighting the satellite merger, the radio industry should have rallied harder against the music royalties that were initially put into place for Internet radio during the CARP proceedings — back in 2001–02, when broadcasters were fairly silent on the issue — and worked to develop a strong webcast presence of their own at the time.

Instead of configuring itself to ward off a monolithic opponent, terrestrial radio should have been preparing for a far more diversified adversary.

Today broadcasters are indeed rushing to build an online presence, but we may conclude in retrospect that they ceded too much early territory to the establishment of independent webcasting. Broadcasters may ultimately lose even more from the emboldening of the music industry they engendered by watching the initial royalty rate-setting proceedings mostly from the sidelines, and the momentum thus generated may even spill over to the assessment of new fees on traditionally exempt over-the-air music broadcasts.

The oft-cited (or perhaps by now, clichéd) Wayne Gretzky quote about his success arising from "not skating to where the puck is, but to where it will be" certainly applies here. The converse therefore suggests that wrongly charting a competitive trajectory can prove disastrous. One sure way to produce such erroneous results is by using old-media formulas in a new-media game.

Skip Pizzi is contributing editor of Radio World. Follow him on Twitter at http://twitter.com/skippizzi.

WORLDCAST

(continued from page 17)

unit of this range, the Ecreso Next FM, combines a high-quality transmitter with essential broadcast functionality such as powerful digital audio processing, stereo encoding, RDS encoding, audio back-up, I/O remote control and TCP/IP connectivity, all in a single 3U chassis.

Our key aim in taking such an innovative approach is to deliver savings to the broadcaster in terms of cost, real estate, time and energy. ...

As part of the ongoing development of this range, it is likely that we will harness the expertise and know-how from other parts of the group to build even greater functionality into the "Radio All in One" series.

We will also be combining the knowledge and product ranges available throughout the group to offer a service-based approach to our customers. We want to move beyond simply supplying products to working alongside customers in the design and deployment of broadcast networks. Broadcasters can leverage our experience and know-how in order to ease the burden on their engineering team.

PEOPLENEWS

Westwood One promoted two new vice presidents in its broadcast engineering department. **Mitch Glider** becomes vice president of engineering, overseeing broadcast and satellite uplink facilities. **Jeremy Schumacher** is vice president of broadcast information technology, overseeing broadcast computer systems.

Mitch Glider

Jeremy Schumacher

Jim Graber

Jim Graber was named senior VP and CFO of **Triad Broadcasting**. Graber has more than 30 years experience in financial, accounting and operational management, the company stated. Triad also named **Bill West** as its new vice president/market manager of Mississippi Media Broadcasting LLC for the six-station Biloxi-Gulfport cluster. He was VP/market manager for Cumulus in Huntsville, Ala.

The **National Association of Broadcasters Education Foundation** said **Bruce Reese**, president/CEO of Bonneville International Corp., was elected NABEF Board Chair. Bonneville has been founding partner of NAB Education Foundation's Celebration of Service to America Awards since its inception in 1999. He is a former chairman of the NAB Joint Board of Directors.

Bruce Reese

Merging Technologies named **Johan Wadsten** as international product manager responsible for its audio cue sequencing system Ovation, replacing Stephane Monhart.

Bosch Security Systems Communications Systems Division named **Steve Johnson** business line manager, pro sound. He's held marketing positions at Shure, Motorola and Harman.**NPR**, **PBS** and **WGBH** named **Stephen Moss** president and chief executive officer of **National Public Media**, a national corporate sponsorship firm for public radio and public television. He succeeds **Robert Williams**, who founded NPM's predecessor National Public Broadcasting and was its CEO.

Bill O'Shaughnessy

WVOX(AM) in New Rochelle, N.Y., recently noted its 50th anniversary. The station and sister WVIP(FM) are led by Whitney Radio Chairman **Bill O'Shaughnessy**. WVOX celebrated itself as "just about the last, remaining locally-owned and locally-operated independent stations in the New York area." Prior to 1949 it had been WWES and before that WNRC. O'Shaughnessy predates the WVOX call letters; he started at WVIP in 1957. He subsequently worked at WNEW(AM) but returned to WVOX in 1965.

Mark Nash

Mark Nash was promoted to president of **Full Compass Systems**. He replaces **Susan Lipp**, now chairman.

Emmis Communications named **Bob Richards** operations manager of the Emmis-Indianapolis cluster, which includes WIBC(FM), WYXB(FM), WLHK(FM) and WFNI (AM). Among other experience he spent 14 years in Indianapolis at WFMS(FM) as air talent/PD/ops manager. He replaces David Edgar, who left Emmis-Indianapolis for another position. Richards also owns Pinehurst Productions, a video production company.

A Look at the Studer OnAir 2500 Modulo

Company 'Breaks Up' the OnAir 2500 Console Into Manageable Parts

BY MEL LAMBERT

While Studer's range of digital broadcast consoles have proved popular in Europe and the Far East, the firm's visibility within North America, in the main, has been limited to larger TV and video production facilities.

PRODUCTTOUR

John Hart, national sales director for Studer-Soundcraft, said Studer has more than 60 large-scale live production consoles in the TV broadcast market handling some of the largest live events and music tours, and he said "good local U.S. technical support" has helped the company grow its U.S. business of late. "The success or failure of European products in the U.S. is directly related to strength, commitment and availability of the technical support organization in place to provide U.S. broadcasters a level of comfort."

However the Studer brand is less common in U.S. radio. One element that, until now, might have been missing from radio offerings is a modular system that can be adapted to suit the configuration being considered for new or upgraded radio air/production studios.

Studer has introduced the OnAir 2500 Modulo, a spin-off of the OnAir 2500 digital console. The company markets it as a feature-heavy, networkable board with a simple user interface at a competitive price.

BUILDING THE MIXER

The OnAir 2500 Modulo is a "build-a-mixer" version of the 2500, now available as separate fader blocks and a central control section, as opposed to being packaged in a standalone, tabletop configuration.

Both layouts use a separate touch-sensitive 12-inch TFT monitor that provides level, EQ and dynamics displays as well as system setup and recall. A rack-mounted mainframe houses a separate power supply and host processor plus analog and digital I/O connections via XLR and D-subs for mic inputs, headphone outputs, line and AES-format ports; optional interfaces are available for MADI, eight-channel ADAT and eight-channel IEEE-1394 FireWire digital multichannel formats.

The 2500 Modulo ships with six mic and four stereo line-level analog inputs, eight stereo AES/EBU format inputs with sample rate conversion, plus ADAT inputs for studio monitoring and FireWire/MADI for more complex installations. Outputs comprise four stereo line-level XLR and D-sub ports, ports for control room monitoring and DJ/guest headphones, plus ADAT, FireWire and MADI connections.

Remote mic and line-level connections also can be handled via Studer's D21m I/O stagebox systems and multichannel MADI links, while multiple OnAir 2500 consoles in a studio complex can be connected via a Studer ReLink I/O sharing system, which provides access to shared I/O capacities.

In this way up to 56 inputs and 40 outputs can be accessed from an OnAir 2500 control surface. The 2500's engine can run at 44.1 kHz or 48 kHz sample frequencies, with synchronization to an internal or external word clock.

The basic idea here, of course, is that the various elements can be installed in custom studio furniture and angled according to the facility's requirements. Fader modules also can be remoted from the main console engine for dual-operator layouts. Modules are designed to be recessed into a desktop cutout, with interconnecting cables integrated within console furniture and the mainframe, with the DSP engine tucked away from prying eyes (and fingers).

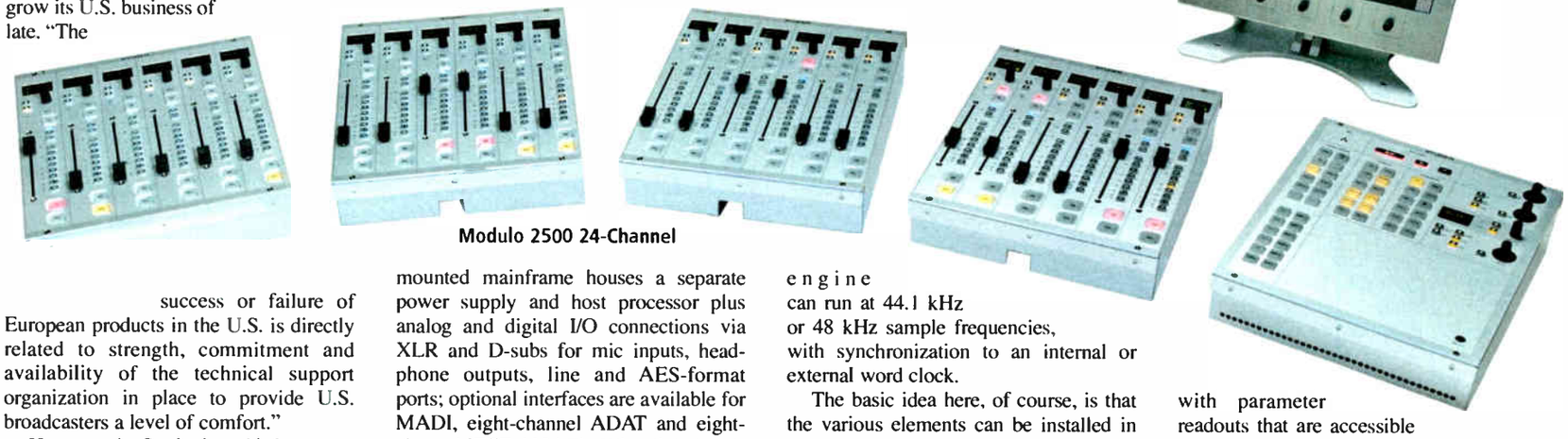
Like the OnAir 2000 and 3000 consoles from which this version is derived, the 2500 Modulo uses Studer's proven software technology but with a simpler user interface.

To reduce end-user prices, three standard configurations are available, equipped with a user-choice of 12, 18 or 24 assignable level faders; servo-controlled, motorized faders can be supplied as a system option. In addition to a level fader, each channel strip features a minimum of buttons and a single assignable rotary control, for a clear, uncluttered layout. The master section controls monitoring functions and source selection, while four assignable controls on the TFT screen are remapped as EQ and dynamics controls according to the user function selected locally or globally onto the target channel strips.

For outputs, the OnAir 2500 offers a stereo program bus, a stereo record bus, two stereo aux busses, a total of eight stereo mix-minus busses and a single PFL bus routing to a built-in PFL loudspeaker.

CHANNEL STRIPS

The remappable channel rotary control features a companion OLED screen that displays a channel label, a level and gain-reduction meter with parameter readouts that are accessible using two pushbuttons below the screen.



Modulo 2500 24-Channel

In use, OLED screens offer several user advantages, including a wider viewing angle than conventional LCDs, with enhanced definition — it is remarkable how much easy-to-read information can be crammed into such a small amount of space on a control surface that needs to remain uncluttered and easy to use.

For viewing system setups and channel settings in greater detail, the companion TFT touchscreen incorporates Studer's Touch'n'Action, for which only critical functions are assigned to hardware controls on the channel strip, further streamlining the console's operation.

Any console function — including dynamics, equalizer or aux send levels, for example — can be called to the TFT and adjusted either on a channel-by-channel basis or globally, with all parameter settings clearly and unambiguously displayed on the screen.

The control surface, at first glance, looks remarkably bare — possibly imply-

(continued on page 22)

MODULO IN THE BROADCAST STUDIO

Radio 105 and Radio Monte Carlo, part of the RCS MediaGroup based in Zurich, Switzerland, recently opened a new broadcast facility whose main on-air studios are equipped with a pair of Studer OnAir 2500 Modulo digital consoles.

D21m I/O units are located in the master control room, with each studio featuring a pair of DJ consoles — one with a 12-fader panel and the other with a six-fader panel. All mixing desks are connected via Studer's ReLink I/O sharing system.

Each studio is equipped with color LEDs to indicate the program that is on air: yellow for Radio 105, blue for Radio Monte Carlo and red for Rock Nation. For additional security, when microphones are open, the studios are bathed in a red light. Separate monitors display a logo for the current program, which enables engineers to accurately recognize the song that's running. The production center handles three nationwide cable radio programs, two FM stations and four Web radio outlets.

— *Mel Lambert*

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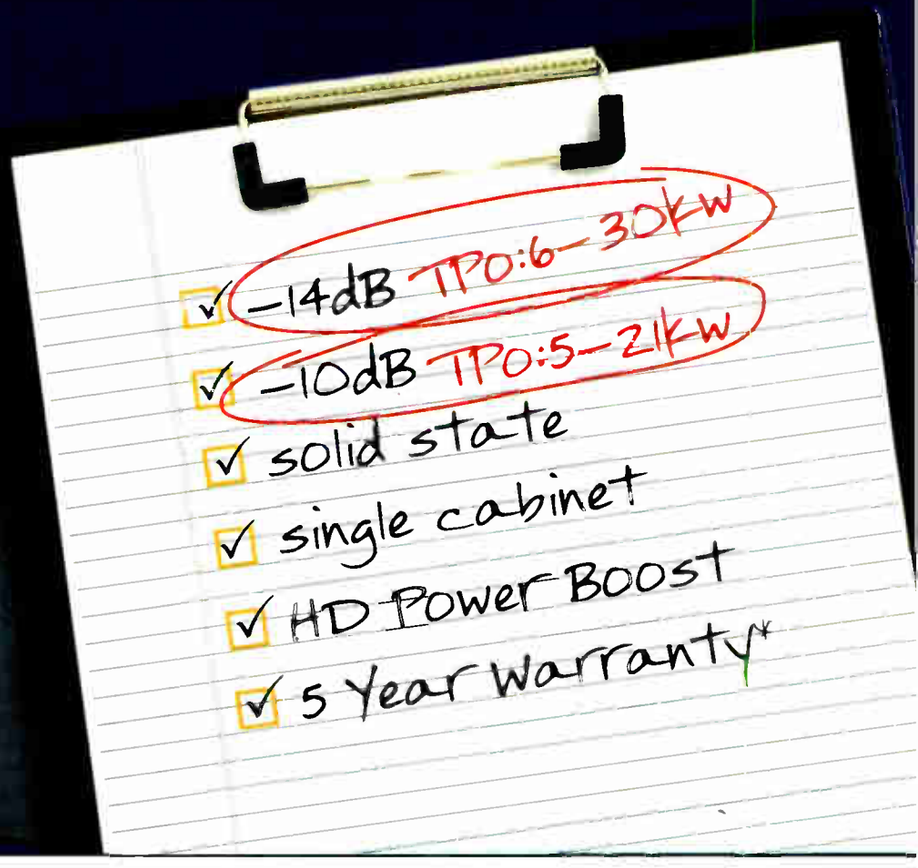

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STUDER

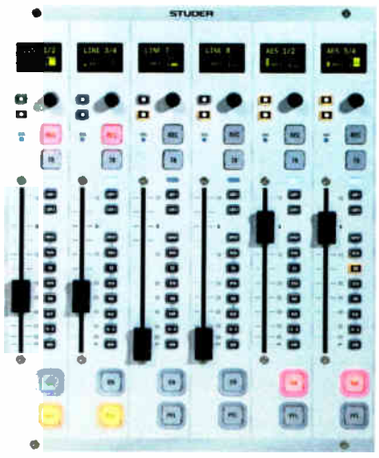
(continued from page 20)

ing that the user will need to drill deep into the software to bring the required function to a knob, a fader or a button for adjustment; but this is not the case.

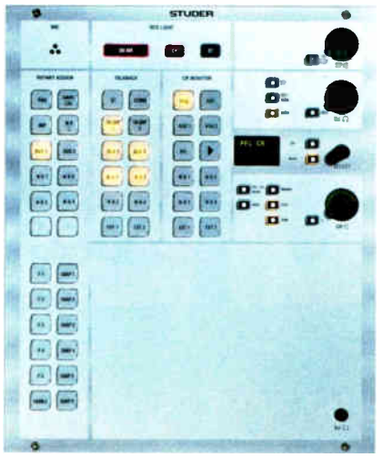
Important functions require a single command action, and are accessible virtually instantly, which is essential for a live air console where clear and unambiguous access to each control is important. Using the same symbolic language as Studer's Vistonics operating system, the 2500's user interface has been optimized as a flat hierarchy without the use of multilevel menus.

For phone-in and complex news operations, the OnAir 2500 integrates Studer's Call Management System/CMS, allowing caller names to be dynamically displayed as fader channel labels. For enhanced flexibility, existing radio automation systems can be integrated with one or more OnAir 2500 consoles using control protocol via conventional serial interface or TCP/IP networked connections. Control room monitoring can be selected between main stereo loudspeakers, PFL loudspeaker and headphone or guest headphone monitoring.

In use, the OnAir 2500 seems easy to master within a few minutes. Once the operator has viewed, on the color TFT display, the I/O map of analog/digital signals routed via external port to virtual sources and hence to the control surface, it is easy to understand what signal source is assigned to each fader position, and how its output is being routed to the targeted destinations.



Fader Module



Master Module

The Touch'n'Action user interface — used successfully in the 2000 and 3000 series consoles — provides control of channel functions via a row of direct-access buttons provided on each channel strip; pressing a key — Inputs, De-esser, EQ, Dynamics, Insert, Aux Send and Mix-Minus, plus two user-definable buttons — automatically opens the corresponding page view on the LCD's main screen.

Also provided are channel on/off and PFL buttons — the latter programmable to set up various groups for complex studio operations, for example — plus a dedicated record button that causes that channel output to start recording onto the dedicated buss, and a talkback key.

CENTRAL MODULE

The OnAir 2500's central module comprises several primary sections: Rotary Assign, which assigns functions to the channel rotary encoders (pan, gain/calibration, source selection, mix-minus summing, aux send levels); talkback select; and monitoring selection with individual level controls for control room loudspeakers plus DJ and guest headphones.

Functions are soft and can be user programmed, if necessary. The array of user-defined keys usefully load any the six primary user-configuration snapshots, as well as five assignable functions such as I/O patch selections. A "Red Light" warning section features a trio of indicators for on-air warning, an open CR microphone or a live studio microphone; functions can be remoted to larger indicator panels, of necessary.

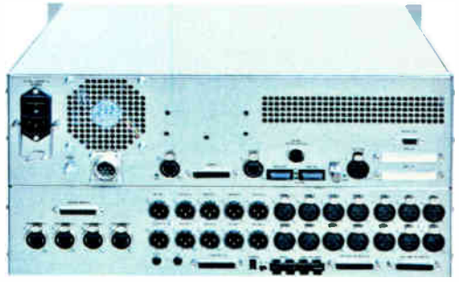
An optional studio monitoring and talkback panel provides remote red light operation, together with studio loudspeaker and headphone control, plus talkback to control room or other destinations, including mix-minus returns.

Pricing starts at $30,000 with many options available.

SOLUTIONS

The Studer OnAir 2500 Modulo on-air and production console seems a well considered alternative to its all-in-one version for facilities that need the flexibility of multiple fader panels mounted into custom furniture, for example, or those requiring interlinked functions within a multiple-studio broadcast facility. It may also help the company find more of a foothold in the U.S. radio market.

Product Manager Axel Kern said the target market includes stations as well radio/TV networks. "Example applications for this console are mobile broadcasting, either live-to-air or production ... In fixed installs, console features like I/O sharing and codec management support cost-effective architectures, using, for example, a few centralized codecs with a networked return line management instead of having multiple expensive codecs dedicated to each single console."



Backplane of the Rackmounted Mainframe Input/Output and Processor Box

Kern noted that the U.S. radio broadcast market differs from the European in the number of commercial broadcasters.

"In most cases commercial stations have smaller budgets to spend and have to be operated much more cost effectively than, for example, a public broadcaster in Central Europe. ... Modern digital broadcast consoles, especially in the radio market, must focus much more on supporting the user in an intuitive way, addressing him with a friendly and straightforward interface, both for operation and configuration." That, he said, has been Studer's goal.

For information, contact Studer USA at (818) 920-3212 or visit www.studer.ch.

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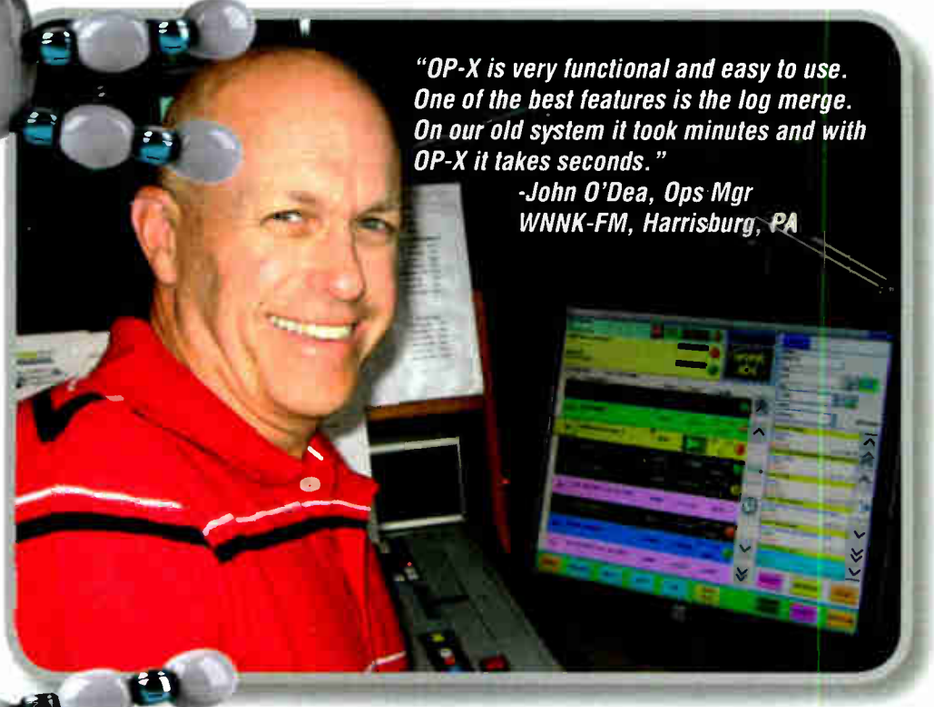

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Medium Shift: Radio to Television

Thoughts on Streaming From Markell Lambright of CBS Radio

BY MARKELL LAMBRIGHT

NEW YORK — As Internet video becomes more popular and a standard marketing, branding and communication tool, traditional TV broadcasters find themselves moving from the television screen to the computer screen. The same holds true for radio.

TECHTIPS

The growth of Internet radio has sparked a desire to stream not only audio from radio stations, but video content as well. More and more stations are installing television production equipment into their studios to broadcast their morning shows not just to car or Internet radios, but to flat-screen computer monitors in cubicles and offices all over the country.

MANY CONSIDERATIONS

However, a radio station considering streaming a morning show or any content using video must consider a couple of things.

While it would seem obvious that the medium of radio and television are different, you'd be surprised that it is often overlooked. You just can't throw a broadcaster who's been doing radio for 30 years on camera and expect to get a great "TV" product. Talent has to be conscious of the fact that the audience can see them now, so they have to pay attention to their appearance, dress and overall mannerisms when they're on camera.

Second, because most radio stations are designed for talking, they make terrible sets for video production. This means that camera placement or positioning usually is bad. In most of the studios I've visited, it was difficult to pull off a multi-camera shoot without getting another cameraman in the shot. In a tight space, usually one cameraman will do the trick, but to produce a quality morning show you'll need a bit more.

What I've found to work well are stationary cameras that a producer can control remotely like the Sony EVI-D100. Canon and Panasonic also make small SD (standard-definition) and HD (high-definition) PTZ (pan-tilt-zoom) remote cameras that can be mounted on walls, ceilings or a desk. Each camera usually requires a 12 V power source and many can be daisy-chained using VISCA control cable, which sends the pan, tilt and zoom commands to each camera.

The next issue for radio stations to consider for video production is lighting. This is the most important aspect of video production, and poor lighting will make your video look amateurish and unprofessional.

Since all Internet video gets compressed during transmission, video camcorders need a lot of light to produce an image that will retain its quality through the compression and streaming process. Depending on the set, track lighting using cool fluorescent bulbs made for video production is an ideal option, otherwise a decent light kit from an experienced lighting equipment manufacturer such as Lowell will do the trick.

The most important consideration is bringing these components together to deliver a final product is a live watchable stream or Webcast online. After evaluating different options, from using laptops with prosumer cameras or high-end broadcast switchers, I found a product from video equipment maker NewTek called the TriCaster.

This is a television studio in a small, affordable box that allows radio stations to produce network-style television (switch multiple cameras, insert graphics, titles, use virtual 3D sets, etc.) that can be broadcast, streamed or projected simultaneously. In addition, the TriCaster's form factor makes it portable, so a station can take it on the road to broadcast from a remote, cover annual music festivals, concerts, sporting events and so forth. The system is a past winner of Radio World's "Cool Stuff" Award, in fact.

As digital media and Internet video continues to grow, more radio stations will stream live video to their audience. As the audience grows, so will the number of advertisers and revenue, enhancing not just the bottom line for the broadcasters, but the experience for the viewers who can watch or listen to their favorite disc jockeys and artist from anywhere an Internet connection is available.

Markell Lambright is a project manager for CBS Radio in the Digital Media Group; he manages the implementation of audio and video streaming projects for 134 radio stations.

Radio World welcomes your tech tips and story ideas. Write to radioworld@nbmedia.com.

Roberto Boschian operates a NewTek TriCaster system for WYCD(FM) in Detroit.

A video-oriented setup can look different than a typical radio studio.

PRODUCTGUIDE

SONIFEX ROLLS OUT SMALL MIXER

The S1 from Sonifex is a small-format mixer designed for on-air use, especially at small stations. Though it is petite, Sonifex insists the S1 does not skimp on features.

Useful features include 10 input channels, a rotatable I/O panel, analog and digital I/O, fader start for peripherals, telco inputs, talkback functions, high-pass and low-pass filters per channel, host and guest headphone controls and tricolor LED meters.

The S1 can be flush- or rack-mounted. It even offers scribble strips on channel strips and aux and ext loops. An integrated power supply keeps the whole package compact.

For information, contact distributor Independent Audio at (207) 773-2424 or visit www.independentaudio.com.

GENELEC SHOWS NEW SPEAKER

It looks identical to its 8200 family siblings, 8240A, 8250A, but the new 8260A is the largest yet.

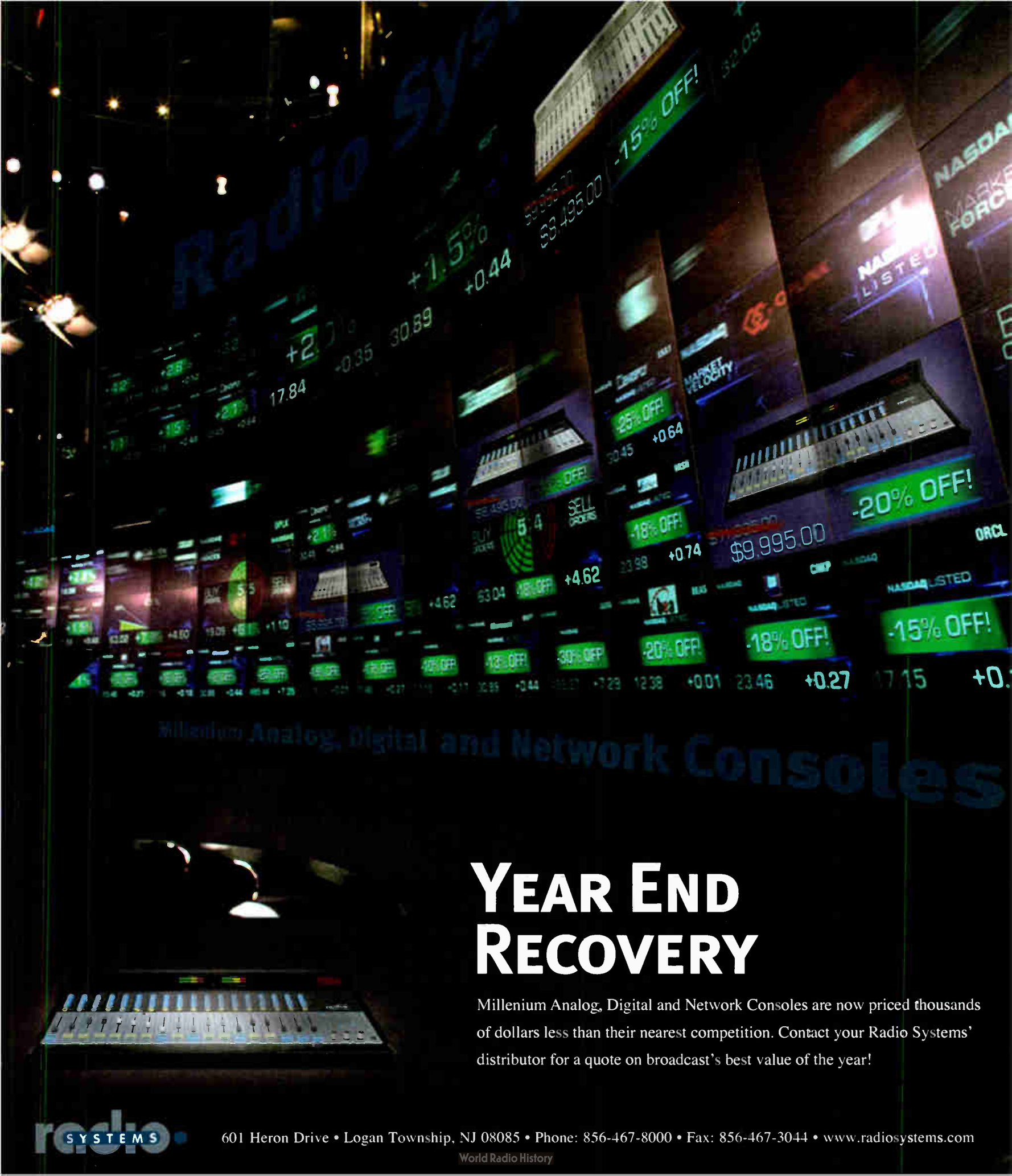
On top of being larger, it is also a three-way model. How does Genelec get a three-way configuration out of what looks to be a two-way speaker? The mid/high driver is a coaxial midrange (5-inch) and high (0.75-inch).

As a three-way speaker it also has three amplifiers — 150 W driving the 10-inch woofer and twin 120 W amps driving inputs to the midrange and high-frequency drivers.

The coaxial driver utilizes Genelec's Minimum Diffraction Coaxial technology along with its Directivity Control Waveguide technology. The enclosure is die-cast aluminum, featuring Genelec's Minimum Diffraction Enclosure design.

The 8260A uses Genelec Loudspeaker Manager (GLM) software to control crossovers, driver EQ, alignment, delay, response, surround configuration and speaker calibration. An AutoCal calibration system ships with the 8260A.

For information, contact Genelec at (580) 652-0900 or visit www.genelecusa.com.



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NPR's iPhone App Is a Role Model

Network Delivers an Authentic Radio Experience on a Wireless Device

BY JAMES CARELESS

National Public Radio has been a pioneer in new media. NPR's News App for iPhone is the organization's latest attempt at staying in the forefront. With so many radio entities putting out their own apps, we thought we'd take NPR's in hand and see how it did.

I found it to be an easy-to-use application that supports listening to NPR audio while browsing NPR text stories at the same time.

"The NPR News App is designed to integrate passive and active news experiences into a single easy-to-use platform," says Kinsey Wilson, senior vice president and general manager of NPR Digital.

"We know that people like to listen to their favorite NPR content while reading the newspaper or surfing the Web. Our News App makes this possible: You can passively listen to audio content while surfing through our wireless site to read whichever stories interest you."

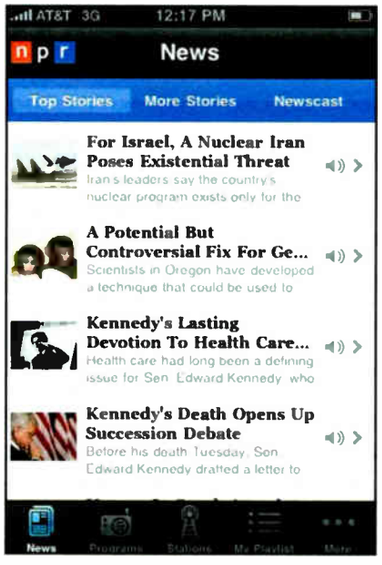
This said, what today's Internet generation really likes is to get things for free. On this score, the NPR News App delivers.

The program itself can be downloaded at no charge from the iTunes store. Once loaded onto the user's iPhone, the content doesn't cost anything extra. It is included with whatever fees they are paying to their wireless carriers.

EASE OF USE

Once the NPR News App is loaded onto an iPhone, accessing it is childishly simple. First, you tap on the NPR icon on the iPhone's main desktop. Then you use a combination of finger taps and swipes — I call them whooshes — to move through menus and select content.

Once I opened it up, moving through the NPR News App was simplicity itself. With the help of my Apple-supplied earbuds and some fast fingerwork, I was enjoying this application in a few minutes' time.



After you get past the opening screen, the NPR News App lets you chose from five main options. They are News, Programs, Stations by State, Playlist and More.

The News section lets you access both audio clips and text stories with photos. The idea is that you can open up an audio file that you want to hear — an NPR news report, to be specific — then listen to it while looking through other stories or other parts of the site. You can also call up the latest NPR hourly newscast on demand.

The audio quality through the iPhone earbuds is comparable to that of a good FM radio. In fact, what is nice about the audio quality is that it is akin to listening to NPR at home or in the car — it has the same *feel*, somehow.

I found this fact striking: Somehow NPR has managed to deliver an authentic radio experience on a wireless device.

As for the online content: Formatted in a text size and style that reminds me of reading a paperback novel, it is easy on the eyes and simple to move through using up-and-down finger whooshes. Interestingly, the stories do not appear to be transcripts of the audio reports, although they share many quotes and facts.

Some nice features: You can queue up reports into a Playlist, so that your iPhone plays one report after another. You can also do this with other programs that have been archived on the site.

Meanwhile, the NPR News App lets you browse the site unhindered. Unless you click on a new audio link, the one last chosen keeps playing no matter how many different pages you surf through.

The next major section of the NPR News App is devoted to Programs. You can choose from archived or live feeds of NPR shows such as "Morning Edition," "All Things Considered" and "Foreign Dispatch," among others. You can also listen live across time zones. For instance, I listened to "Morning Edition" as it was being broadcast on KHPR 88.1 FM Honolulu, while I was working in the afternoon in the Eastern time zone.

The third section is called Stations by State. You can use this to select whichever NPR station you want to hear, assuming that it is streaming its signal to the Web. The NPR News App also lets you find stations that are closest to you (using your iPhone's position relative to the nearest cellular tower). You can also search for them by Zip code.

The Playlist section lets you see what clips are queued for playback. You can edit the list on this screen, should you

(continued on page 30)

V1.2

In V1.1, NPR improved sharing tools, audio controls and image enlargement. V1.2 was issued in October; among the 32 updates:

Listen Live: With v1.2, if NPR is in live coverage, the user will receive a start-up alert inviting him or her to tune in. "Down the line, we will improve the ways in which we notify iPhone app users about live coverage," the development team wrote on its blog. "We also anticipate presenting NPR Music live concerts."

Better Audio: The update offers improved audio streaming in low-bandwidth scenarios and greater Playlist stability.

Sharing: NPR added the ability for users to share not just individual stories but also many of the program episodes via e-mail, Twitter and Facebook. "We have also improved the Twitter share screens in particular."

Story Page & Images: NPR improved the layout of individual story pages. "And, if you enlarge any photo on a story page, you will now see an overlay presenting the full caption."


More than 1,500 IP-Audio consoles so far.
We're at a loss for words. Thankfully, we've got pictures.
AXIA
A TELOS COMPANY
Note to people planning studios:
Have you read the new book Audio Over IP: Building Pro AoIP Studios With Livewire by Steve Church and Skip Pizzi? If not... Axia can save you 30% when you purchase a copy. Just visit
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World Radio History

Swine Flu and Your Radio Station

Radio Is a Powerful Communication Medium. Put It to Work on H1N1

I drove carpool today.

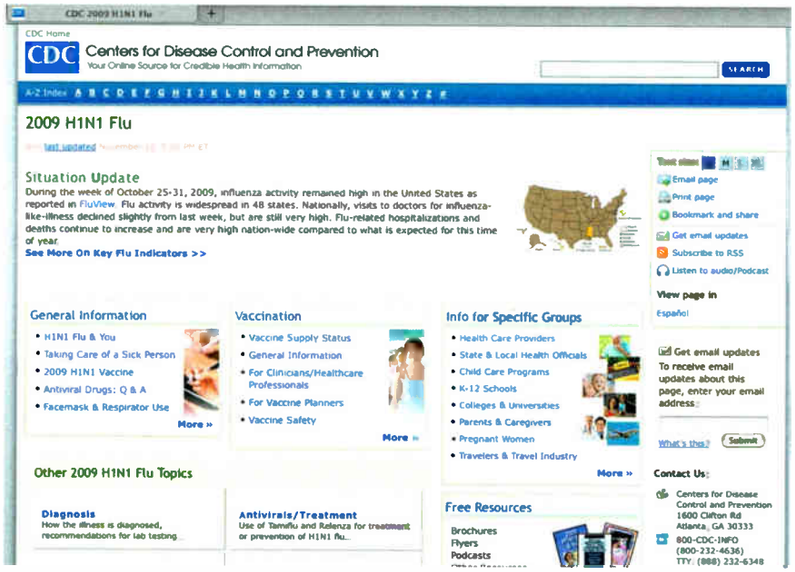
Any parent who has performed this function knows that within 10 minutes, the kids forget you're in the car. I enjoy this invisibility as it allows me to eavesdrop on the humor, frustration and fears exhibited by teenagers.

For once, the fear I heard expressed this afternoon is completely legitimate and, so far, not consistently handled well by the media — radio included.

I listened with amazement as the kids discussed the spread and containment of the H1N1 virus, commonly known as swine flu.

One reported that this potentially life-threatening illness was all over the school and everyone was going to get it. Another laughed and said it was just two kids and there was nothing to worry about. Third kid said that the swine flu had nothing to do with H1N1.

The youngest kid just looked scared.



The Web site of the Centers for Disease Control and Prevention has a great deal of useful information including tips on 'what you can do to stay healthy.'

CURRENT INFO

Even if you're working at a music radio station, you are not excused from reading this article. In fact, it applies more to you than news and talk stations, which already thrive on information.

The Centers for Disease Control and Prevention reported that influenza activity remained high in the United States as October turned into November. CDC said visits to doctors had increased sharply for four consecutive weeks, and although visits then decreased a bit they remained at much higher levels than what was expected for the time of year. Other data, including hospitalization rates and the proportion of deaths attributed to pneumonia and influenza, suggest the seriousness of the situation. Visit the site for the latest information: *www.cdc.gov/h1n1flu/update.htm*.

We have enough info to know that we must build and execute a plan to reach our audience(s). Because radio remains the best mass communication medium in this country, we owe it to our listeners to offer frequent updates about the spread of swine flu and how to prevent infection.

TALKING POINTS

You can start by going to the CDC Web site. Of course, you'll find many other resources online as well, but stick with credible, layman-friendly ones like NIH (National Institutes of Health) or the Mayo Clinic. Set up a "Google Alert" to send you stories about H1N1 once a day, so you don't miss breaking news.

(continued on page 30)

PROMO POWER

Mark Lapidus

Read more Promo Power articles online at **radioworld.com**

FREE WEBINAR
December 8, 2009

Radio World TechCast
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"What to Watch for in 2010"

On Tuesday, December 08, 2009 at 12:00 noon Eastern time, Radio World will present a live Webinar. Please be our guest from your desktop or laptop for a stimulating 60 minute discussion about the most important technical trends that will affect radio broadcast engineers, managers and owners in 2010. We have assembled a panel of radio's thought-leaders along with our editor, Paul McLane and contributing editor, Skip Pizzi.

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The News Source for Radio Managers and Engineers

SWINE

(continued from page 28)

Here are some discussion points for music stations when building a plan to communicate this vital info:

- How are you going to make the information interesting, short and to the point? Do you have access to local celebrities or national stars who can act as spokespeople for your messaging? "Hi this is _____ for K-105's Oink-Oink Report. Nobody says YOU have to get swine flu. Wash your hands with soap and water, or use alcohol-based hand rub. Do this at least every time you eat. Get more information on fighting swine flu at K-105 dot com, keyword H1N1."
- Who's going to update your site with the most current info from the CDC every day?
- Determine a "swine flu update" rotation for vignettes you'll air. How many times per day are you going to broadcast these produced pieces?
- Should you run live copy?
- Can you locate a few local doctors who are infectious disease specialists? Can they give you updates on your morning show, or interviews for your Web site?
- Can you record interviews with people from your target audience who have had the shots or spray vaccination to convince others it's safe and easy?
- Are you prepared to give updates about who is eligible for vaccination and where they can obtain the medicine?
- Should certain groups in your area be regularly wearing facemasks? Find out from the doctors you've consulted. If so, could your station be giving them out?

Finally, what have you told your own staff about coming to work when they have flu-like symptoms? Anyone who's been on the air knows how easy it is to get sick by using the same microphones, computers and headphones as a sickie.

I lectured a staff about this recently and still had someone come in with what they said was a "bad cold." Be tough! Send people home if they come in with symptoms. Likely your staff is small enough — you don't want an entire department out just because someone wants to prove that they can work under any condition.

It appears that education about swine flu is the key to keeping us healthy and happy. Please spend a few minutes this week doing what you can for the greater good. Your station will look better, feel better and — most important — actually be making a difference.

The author is president, Lapidus Media. Reach him at marklapidus@verizon.net.

NPR

(continued from page 26)

change your mind.

You can also "Tell a friend" about NPR by e-mailing the site's URL via AOL, Gmail, Microsoft Exchange, MobileMe, Yahoo or your own e-mail service.

The NPR News App is easy to learn and use. However, what impressed me was how relaxing it was to listen to NPR audio while browsing text stories. It really felt like sitting at home enjoying the radio, while reading a book that interested me.

Put plainly, this app delivers, both in content and presentation. This is why I think the NPR News App will succeed in attracting younger iPhone users.

The facts bear me out. Not long after being launched on iTunes, the NPR News App became the #1 Free News App offered by the site, based on user ratings. Are these all hard-core NPR listeners who are downloading this program? Not likely: Chances are that NPR is succeeding in reaching the younger demographic it has been aiming for.

I found this app to be a good example of what a radio-focused iPhone application could and even should be. My advice to broadcasters is to buy iPhones, download the app and learn it inside-out before launching their own iPhone applications.

NPR has posted info about the creation of the app, including discussion of the development process, at www.npr.org/blogs/inside/2009/08/the_making_of_the_npr_news_iph.html.

James Careless is a longtime contributor to Radio World.

ACOUSTICS

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AUTOMATION EQUIPMENT

WANT TO SELL

It's free and it has been expanded. The only cost is to keep us informed as to how the system is performing and let us know how you are using it. DIY-DJ, is a Linux based radio automation system and now sports a record scheduler (DIY-DJ-RECORDER) which allows you to schedule the recording of a network or any other program for replay later as well as a basic logging system. Beside these additions the system schedules music, does voice tracking (ALWAYS hit the vocal), create a shell, live assist, exact time events, join satellite feeds, automated temperature announce, do unattended remote events and more. Call (406) 679-0527 or email krws@digitaldevelopment.net for a copy today.

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Used 8-Channel Arrakis 12000 series broadcast audio console, includes pwr sply, includes 2 TPM2 modules (mono mic level w/pan cntrl) & 5 TPM3 modules (stereo line level w/mode cntrl), fully functional, was used for 3 yrs & replaced by a Telos Axia digital system. Seth Lind, This American Life, 212-624-5027 or seth@thislife.org.

MICROPHONES/ HEADPHONES/ SPEAKERS/AMPS

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WANT TO SELL

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Delta Electronics RCS 1-V remote control system, new, used, junk, any way shape or form. R Burkhardt, reburkhardt@wbaa.org or 765-494-3968, 7-4 weekdays.

2" plastic "spot" reels 6.5 or 8" diameter, as used for quad video. Wayne, Audio Village, 760-320-0728 or audiovlg@gte.net.

Equipment Wanted: obsolete, or out of service broadcast recording gear, amplifiers, preamps, outboard, radio or mixing consoles, microphones, etc. Large lots acceptable. Pickup or shipping can be discussed. 443-854-0725 or ajkivi@gmail.com.

Yellow strobe lights (5), $10/ea.; (1) bulk demagnetizer, $10 + shpg; Matchbox II interface amp, $40 + shpg; (2) USDA utility summing & distribution amp, $40/ea + shpg; (4) Burk GSC 3000 used but in gd cond, $250/ea + shpg; (5) RPL FPBUC2 balance to unbalance converters, $20/ea + shpg. mraley@bbnradio.org.

WANT TO BUY

2" plastic "spot" reels 6.5 or 8" diameter, as used for quad video. Wayne, Audio Village, 760-320-0728 or audiovlg@gte.net.

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

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CCA AM 10,000 D – Call John KQSS **928-595-0263** between 10 & 6 PM Pacific Time.

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AM Phasors, Phasor Parts, Phase Monitors, Rf Switches, AM Transmitters. Continental Communications 314-664-4497, Contcomm@Sbcglobal.Net

TRANSMITTERS/EXCITERS/TRANSLATORS

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RADIOWORLD

The Case for T1 STLs

Like Meat and Potatoes: Here's Why T1 Circuits Aren't Going Away

COMMENTARY

BY DAVE CORP

First, congratulations for reading this far.

With all of the "I'm IP, are you?" and recent introductions of radio-based studio-to-transmitter links, you'd think venerable T1-based STLs have gone the way of typewriters and 8-track.

So, in the spirit of full disclosure and to make sure all of the facts are out on the table, here's why T1 circuits — like meat and potatoes — aren't going away.

1. YOU CAN'T GET THERE FROM HERE.

Maybe this is too obvious, but there are applications that aren't suitable for radio or IP STLs. In the case of radio links, it could be the airways are full. Or it could be terrain, distance or up-front costs. IP requires a high-speed link — often DSL — which can be found in more and more neighborhoods and business parks but perhaps not so much at remote broadcast towers.

T1 has the benefit of ubiquity (with a "u", actually). Telcos, and their competitors, have mastered T1 delivery so you can get one just about everywhere.

2. WE'RE GOING TO SAVE SO MUCH MONEY.

OK, even though T1s have dropped into the $400-per-month price range (based upon distance), it's true DSL circuits can be leased very cheaply. And the savings add up. It's a common way to cost-justify the price of new equipment. So, time for item #3.

3. WHY'S IT SOUND FUNNY?

Any engineer worth her/his salt knows all about this. For IP audio, you need high Quality of Service or QoS to "guarantee" that audio content is not delayed and thereby distorted by other traffic within the massive Ethernet arteries that stretch across the globe. For sure, if you have a private link — such as a radio-based STL or IP carried over a T1 — you have full control to avoid transmission delays. But the public network for IP transport can look like a Los Angeles freeway during afternoon rush hour(s) when even "express lanes" may not be express enough.

Tried-and-true T1s, of course, are immune from delays. In fact, if it's off-the-air monitoring you're after, the ability of some T1-based systems to limit delays to a few milliseconds can eliminate echo and howl during real-time listening and slash the aspirin budget.

4. OH MY GOSH. OUR LINK IS DOWN.

When asking telco types for an IP link, check to see what kind of support is available when it fails. T1s get full telco attention because they are business-class circuits. There are lots of classes of IP service; the price goes up and savings may peter out for IPs with service assurances comparable to T1s.

5. OH MY GOSH. OUR LINK IS DOWN.

Ethernet is known for lightning-fast speeds, not lightning resistance. That's because Ethernet speeds are relatively high (10 Mb to 100 Mb or even gigabit Ethernet) when compared with T1 (1.5 Mb). The physics of the whole deal is that lightning protection components work very well with T1s, but stray capacitance and inductance start to wreak havoc with Ethernet-rate speeds, essentially loading down (stray capacitance in this case) the signal to the point it's unusable. I'm here to tell you that broadcast towers excel at attracting lightning, so an IP hand-off from a telco can be iffy if you plan to operate during the spring, summer or fall. One of the world's two largest telecom carriers recommends that Ethernet hand-offs be extended optically to within *inches* of cell tower radios before an electrical hand-off.

6. OH MY GOSH. OUR LINK IS DOWN.

You may have read about a recent STL failure caused by tower storm damage. It's a rare event. Heavy snow, heavy rain, fog and the like are more common, and can impact microwave — even with redundant links (that need to plow their way through the same crummy conditions). The thing is, folks often depend upon your station when emergencies occur, so susceptibility to Mother Nature deserves some consideration.

7. OH MY GOSH. THAT'S NOT OUR SIGNAL!

"Thousands of confidential files on the U.S. military's most technologically advanced fighter aircraft have been compromised by unknown computer hackers over the past two years" (CNN, 4/21/09). Hackers

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READER'S FORUM

ISN'T THAT WHAT RADIO IS ABOUT?

Your Sept. 1 front-page article "Is AM Radio Still Relevant?" concerns me.

Our family-owned AM stations in North Carolina, WLOE, Eden and WMYN, Mayodan, continue to do well. WLOE signed on the air in 1946, WMYN in 1953. I've been here since 1972.

Last year was our best year ever; 2009 will be better. Our niche programming, local talk shows, news and community involvement Monday–Friday and 50+ regional Christian programs on Saturday and Sunday contribute to our success. We're the only full-service stations in the market.

My wife Annette and I do a 9 a.m. "Information Hour" weekday mornings, filled with hometown happenings. Live and local. Longtime listeners tell us we're "like a member of the family."

We stream all of our local programs, about 40 hours weekly, at RockinghamCountyRadio.com, and continue to see increases in our local, national and international audience.

Next year will mark my 50th year in radio. I went on the air in July 1960, a few weeks after my 13th birthday, at WSAT in Salisbury, N.C. I believe in our stations, and still love this business!

No, we don't have a million listeners or dollars, but we *do* provide a valuable service for loyal listeners and advertisers, and isn't that what radio is all about?

Mike Moore
General Manager
RockinghamCountyRadio
WMYN(AM) Madison/Mayodan, N.C.
WLOE(AM) Eden/Reidsville, N.C.

EMPLOYEES AND TRUST

In response to Mark Lapidus' horror stories about employee misconduct ("Trust, If You Wish — But Verify Too," Oct. 7), I was disappointed that the main thrust of the article was that since some of your employees might be useless bums, you have to treat all of them as such.

I fail to see how that will encourage your weaker employees to perform better, and I also fail to see how that *won't* cause your stronger employees to jump ship at the first opportunity.

I can't think of too many cases where a 100-page employee "code of conduct" manual inspired me to work harder for my station. Nor can I remember times when frequent reminders that my e-mail was being monitored made me feel like this job was worth staying at. And I'm pretty sure that nobody who's told that they can expect zero privacy at the office is magically going to be committed to the success of the station.

If your employees stink, I'd wonder more about *why* they stink than I would about how I can "police" them better.

If you can't get good employees, have you taken a long, hard look in the mirror? Is your facility a dump? Are you paying shamefully low wages with no benefits? Are you offering zero job security? Are you and your managers acting more like Pointy-Haired Bosses from "Dilbert"?

If you can honestly say that none of those questions applies to your station, you should have little trouble attracting good employees whom you don't *have* to treat like prisoners. If you *are* having such trouble, then re-read that last paragraph!

Aaron Read
General Manager
WEOS(FM)
Geneva, N.Y.

The author is an occasional contributor to Radio World. Opinions are his own.

T1 STL

(continued from page 33)

may not be after your aerospace technology, but with growing talk of subscription-based services, some consideration should be given to protecting valuable program content and avoiding unexpected broadcasts of new "personalities" and content throughout your tri-county area. Even a private microwave link isn't immune, as demonstrated when a Long Island station's microwave STL was overpowered in 2006.

On the other hand, T1s over copper or fiber are immune, from hacking and pirating unless the attacker has physical access to the copper or fiber pairs. As they say in the phone companies, a T1 circuit is a "nailed-up private line."

8. SO, I'M JUST GOING TO HOOK OUR OLD PBX AND OTHER T1-BASED EQUIPMENT TO OUR IP LINK.

Good luck with that. So-called "pseudowire" (transporting T1s over Ethernet) is a gift from above if you just need to surf the Web or link office routers for e-mail and file transfers together. But the big telcos know that even when they're providing Ethernet to cell towers (to support all the new cell phone features) they also need to provide a T1 for synchronization. And many have learned that using pseudowire for cell phone calls (voice calls, not data) is subject to the congestion and quality issues already discussed. Cell phones aren't exactly broadcast quality, either.

These days, when cash is short, it can be a tough argument to replace working T1 equipment with something that may not work as well.

9. IT'S ALL ABOUT QUALITY.

On the one hand we have the new all-digital TV network, HDTV, 10+ megapixel cameras, HD Radio, Home Theater, countless consumer magazines and Web sites that rate which car or toaster or movie is better. On the other hand, there's documented listener fatigue and audio artifacts that can be part of IP processing. IP offers a lot of operational advantages, but public perception seems to be tied more and more closely to quality. Watching the recent grainy replays of the Apollo 11 moon landing was reliving a thrilling bit of history and a mighty fine reminder of how much quality we now take for granted.

There are lots of articles on the digital radio transition (a.k.a., Web, podcasting etc.). Content is king, how the content gets delivered is secondary. So, if content is (are?) the Crown Jewels, preserving the Jewels deserves consideration as Job 1. Of today's technologies, T1 is the bank vault of transport.

10. IP SOUNDS FINE TO ME.

It probably really does to many. But with ratings so close, there's something to be said for nailing the fundamentals to assure a pristine signal. Some will care. Some pay a premium for better quality Sirius stations on their PCs. Some will gravitate to the highest quality and most dependable signal they can get.

We've all seen the arguments for IP and microwave. They remain good choices and have many well-documented benefits. But in the final analysis, there are other factors worthy of consideration when putting together a comprehensive STL cost-benefit analysis.

The author is director of marketing for Pulsecom, a subsidiary of Hubbell Inc. Pulsecom designs and manufactures telecommunications access products.

Comment on this or any article. Write to radioworld@nbmedia.com.

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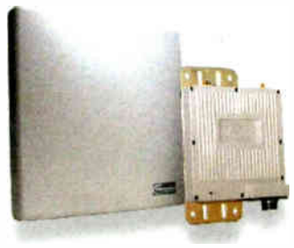

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3. Redundancy is critical. A typical WheatNet-IP installation has multiple levels of redundancy. Each BLADE holds the complete map of the entire system within its onboard memory – we call it distributed intelligence – a system with 50 BLADEs has 49 backups with failover in the event of a failure. Cisco Stackwise technology provides redundancy in the central core TOC switch. A WheatNet-IP/E-Series console studio complex can stand alone, even if the TOC goes down, with backup analog or digital program audio feeding a back end router independent of the core Gigabit infrastructure.

4. Modular is better. Why would you want to combine your switch, mix engine and I/O into one box? Beats us. With WheatNet-IP, you install only what you need, where you need it. We believe in not overselling.

5. Manufacturing quality is very important. Wheatstone is proud to have the best track record in the business for build-quality, reliability and intelligent functionality. With far more up-and-running installations than anyone else, this is where we really shine. An investment in WheatNet-IP and E-Series control surfaces today will reward you with a future-proof, failsafe networking/control environment that's infinitely updatable and in for the long run.

6. WheatNet-IP has an advantage. Take a look at your entire environment. Wheatstone is a perfect partner because we are always there, always innovating. Built into every WheatNet-IP BLADE are features others just didn't think of – handy utility mixers, silence detection, crosspoint routing control, headphone monitoring of any source, lots of logic GPIO, and comprehensive metering of audio I/O, not just signal-presence indicators. And, in the hugely unlikely event that a BLADE needs to be replaced, you just plug in a new one and enter the BLADE number. That's it.

7. Wheatstone is local. WheatNet-IP and the E-Series, just like ALL Wheatstone products, are designed, engineered and built from start to finish in our New Bern NC USA facility. Everyone who works on our products is 100% knowledgeable and immediately available. You can relax – as with the famous insurance company, you ARE in good hands.

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