

PODCASTING: NOW WHAT?

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AdiCorp Redesigns

Company hopes second time's the charm for 'make way for the ambulance.'

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Wireless Giant

Fans mark the 100th anniversary of KPH.

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Radio World



\$2.50

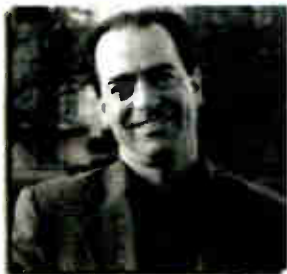
The Newspaper for Radio Managers and Engineers

December 7, 2005

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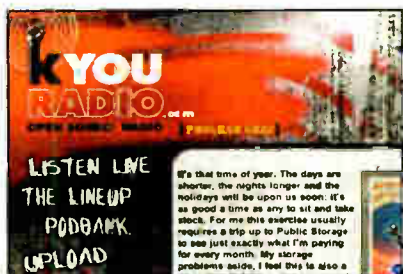
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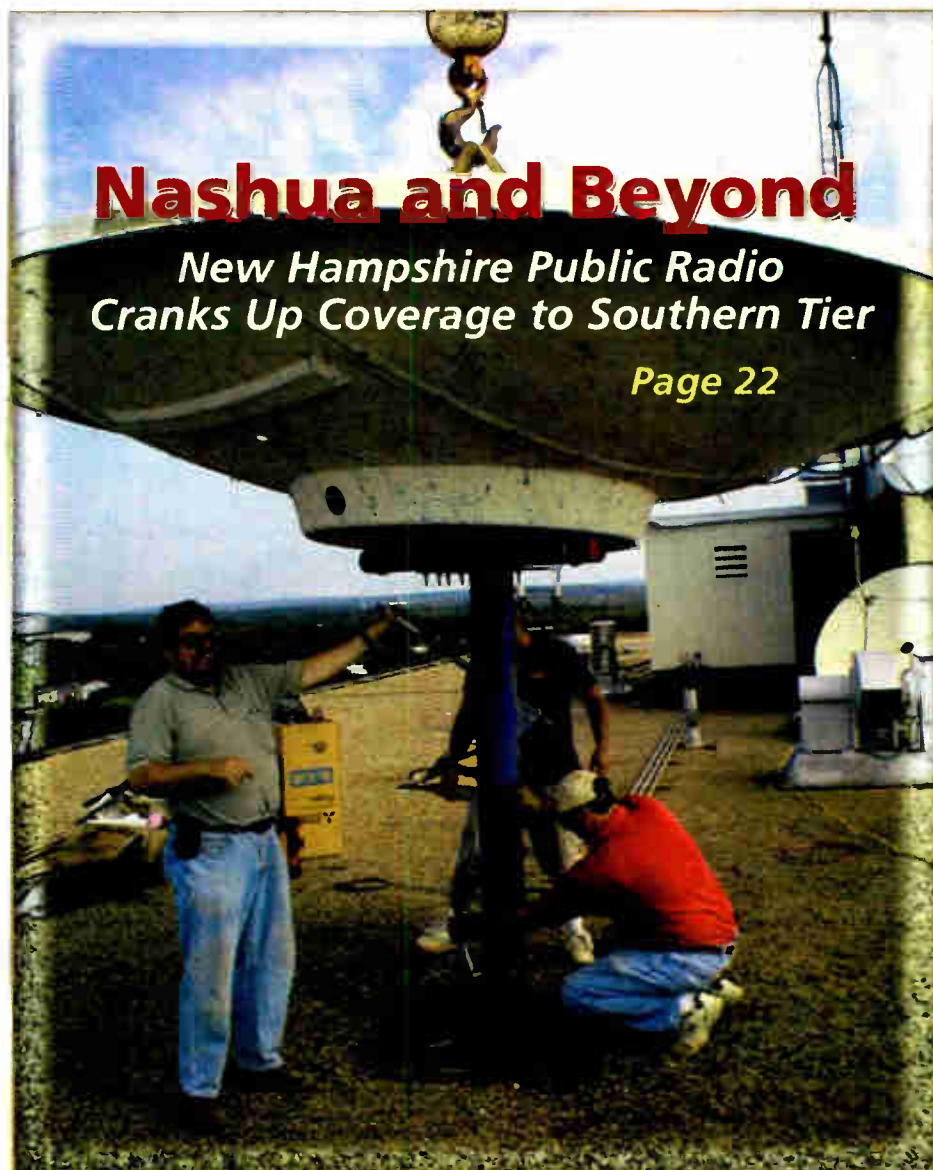
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Nashua and Beyond

New Hampshire Public Radio Cranks Up Coverage to Southern Tier

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NEWS ANALYSIS

Pubcasters Catch the Podcast Fever

Public Stations, Networks Dive in Before They Know Whether It Will Pay Off

by Daniel Mansergh

The explosive rise of podcasting from experimental technology to mainstream distribution platform in less than two years has made broadcasters take notice, if for no other reason than to see what the fuss is about.

Equal parts convenience and content, with a fair measure of hype, podcasting gives listeners the ability to access a global cache of portable, relevant content that can be used whenever and wherever they want it.

It is this balance of simplicity, choice and control that gives podcasting its appeal to listeners, experts believe; and these attributes mark the arrival of what many see as the first truly widespread on-demand distribution model, a disruptive technology that has the potential to reshape the business of broadcasting.

Recognizing both the competitive challenges and service opportunities represented

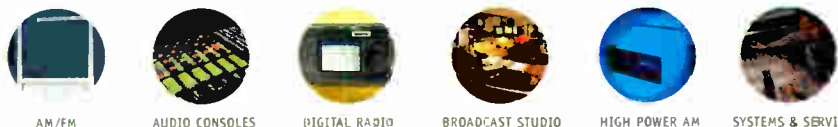
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Would 'Flag' Chill HD Radio?

by Leslie Stimson

WASHINGTON Music labels are holding up a caution flag over digital content. Some observers feel the debate could introduce a level of uncertainty into radio's digital rollout.

Of three draft bills before a subcommittee of the House Judiciary Committee regarding digital content protection, one, circulated before a recent meeting, is specific to HD Radio. The subcommittee governs laws relating to the courts, Internet and intellectual property. The measure would give the FCC authority to adopt rules "to control unautho-

rized copying and redistribution of digital audio content" and relate the language to the FCC's final IBOC authorization.

The recording industry is concerned about devices being developed for satellite radio and HD Radio that would give the consumer the ability to find songs, store them and play them back — potentially avoiding a purchase.

'Not paranoia'

"Our concern is not paranoia," said RIAA CEO Mitch Bainwol, who said physical music sales have dropped for six years due to file sharing. The sale of recorded audio was about \$14.6 billion in 1999 and is "under \$12 billion" now, according to Bainwol, who said the music labels are predicating their growth on the sale of digital music that exceeds the losses on the sale of physical music.

Copyright protection laws for radio "assumed a passive listening experience. We did not anticipate downloads, but that's what's happening, and it will amount to billions of dollars by the end of this decade. We are for cool devices, not for clever ways to bypass compensation for creators." Bainwol testified in favor of a broadcast flag for digital radio at the hearing in November, though he said the association does not want to delay the HD Radio rollout.

A "flag" is a method of marking the signal to limit copying, uploading and other redistribution of digital content.

All forms of digital radio — whether delivered over the air or via satellite, cable or the Internet — are the same in one respect, he said. "What we are talking about here is not casual recording by listeners. We are talking about technologies that allow broadcast programs to be automatically cap-

tured and then disaggregated, song-by-song, into a massive library of music, neatly filed in a digital jukebox and organized by artist, song title, genre and any other classification imaginable."

While the RIAA sees that as distribution and seeks either regulation or compensation for such activities, the group is not trying to change the radio experience, Bainwol said. "Listeners can still hit a record button when they hear a song they like, and can engage in time-shifting, and in TiVo-like recording by time, program or channel. We merely ask that the line be drawn at automatic searching, copying and disaggregation features that exceed the experience they, and Congress, expect from radio."

Public Knowledge says the measures go too far. Gigi Sohn, president of the advocacy group, said the proposal "permits the FCC to extinguish the long-protected consumer right, guaranteed by the Audio Home Recording Act, to record transmissions for personal use. Furthermore, because the draft bill will impose limits on a new technology — so-called HD Radio — that, unlike digital television, consumers need not adopt, those limits may well kill this fledgling technology."

Michael Petricone, vice president of government affairs at the Consumer Electronics Association, testified on behalf of CEA and the Home Recording Rights Coalition. "The proposals for locking down terrestrial and satellite radio broadcasts are harsh, intrusive and completely unacceptable, as is the notion of impairing these services or making them more expensive for consumers," he said.

Language affecting HD Radio, he said, is aimed at stopping re-recording in the home.

The RIAA originally pushed an encryption requirement, at either the transmit or receive end. That likely would have delayed or stopped the digital rollout. Petricone and Sohn strongly opposed this approach. Of encryption, Petricone said, "This would

See PROTECTION, page 3 ▶

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AdiCorp Redesigns EVSS Device

Company Hopes Second Time Is Charm in Winning FCC OK for Emergency Signaling

by Randy J. Stine

WOBURN, Mass. One of the companies developing an Emergency Vehicle Signaling Service believes it will soon have new test data to convince critics the technology is viable.

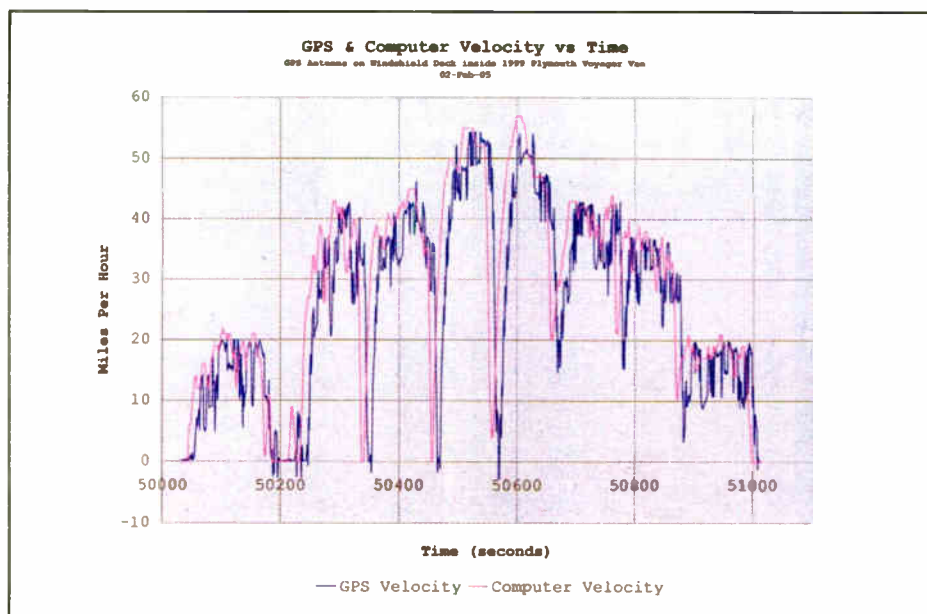
Alert Devices International Corp. says it has redesigned its EVSS system, which uses the AM and FM bands to alert motorists of approaching emergency vehicles, so that it no longer overrides the entire spectrum with audible warnings. The system still continuously monitors stations for EAS attention signals and eliminates interference due to multiple EVSS signals, according to the company.

However the changes may not be enough to convince opponents such as the NAB and SBE, who believe EVSS is a jamming technology that will interfere with existing broadcast signals.

AdiCorp and two other companies, Safety Cast Corp. and AlertCast Communications LLC, have argued that EVSS systems would make roads safer by alerting motorists when public safety vehicles are approaching. In filings with the FCC, the companies have argued that louder audio systems and auto soundproofing advances have made it more likely drivers will not hear the siren of an approaching emergency vehicle.

power, the companies claim, typically between 15 mW and 45 mW, for reception at a range of up to 1,200 feet.

AdiCorp in 2003 petitioned the FCC to



Correlation between public safety vehicle speed and transmission power level of the AdiCorp Radio Alert Transmitter.

'Prepare to yield'

EVSS involves the installation of transmitters in police, ambulance and fire vehicles. The transmitter sends a warning signal intended for reception by car radios in the vicinity. A recorded message states: "Emergency vehicle approaching. Prepare to yield." The signal is broadcast at very low

amend Parts 2 and 90 of the commission's rules to allow emergency vehicle warnings to be transmitted on both AM and FM fre-

quencies. It withdrew the petition in 2004 after NAB and SBE filed comments against the proposed action.

Tom Macone, president of AdiCorp's emergency alerting division, said that the company has since redesigned its Radio Alert Transmitter. It expects to test the EVSS prototype by early 2006.

"We believe the past few years have kind of shaken things out. We have addressed the concerns of the NAB and SBE. They had given us a list of concerns and we chose to have it built right. They had legitimate concerns," Macone said. Officials at NAB and SBE told Radio World they are willing to hear from the company about the updates.

AdiCorp's EVSS prototype is now motion-sensitive, Macone said, which means it only transmits when a public safety vehicle is moving.

"We have incorporated GPS into the unit. The old design just threw signal out everywhere and was hardwired to the siren. Now it's speed-sensitive so that when the vehicle is started the GPS locates itself," Macone said. "If the vehicle is stopped with the sirens running, the unit does not transmit. Also, the faster the emergency vehicle moves, the more powerful the signal."

EAS transmission interference also has been addressed, Macone said.

"Our unit now has a receiver built into it so it can monitor the strongest broadcast signals in an area and go dormant on

See EVSS, page 12 ▶

Protection

▶ Continued from page 2

make digital radio programs incompatible with most of the existing stereo equipment that is in almost every home today. Source encryption would also make useless the many models of digital radio receivers that are today being sold to 'early adopters.'

Adopting an encryption standard would take at least a year, Petricone said, during which time no radios could be manufactured and broadcasters will be forced to the sidelines with their new digital transmitters.

During the hearing, Bainwol said encryption probably isn't the solution. "In terms of the technology by which we would solve this problem, we're agnostic. In a perfect world ... you'd deal with this with encryption at the source. We understand that's probably too late, so a flag approach or some other approach is probably fine.

"What we're not fine with is for radio to morph into an iTunes substitution where we get no payment."

If a flag were mandated for radio, the HD Radio rollout wouldn't stop and the associated receivers would not be obsolete; the IBOC receivers are backwards-compatible.

But still worrisome to some is that the content protection debate may introduce enough uncertainty about the technology that some receiver makers would shy away from introducing HD Radio across their product lines. It's unclear if the legislation is likely to succeed, and if so, how long it would take broadcasters, record labels and equipment makers to agree on specifics.

A flag would be less intrusive to consumers, but CEA does not hold a position on the flag because its members have differing opinions, Petricone said. He also point-

ed out the IBOC proceeding has been active at the FCC for years but that RIAA had not voiced an opinion on this issue until now.

"Once again, the record labels have demonstrated no evidence of actual harm that would justify such a massive government intrusion into consumers' private, non-commercial home recording practices, or the right of entrepreneurs to build new products," Petricone said.

NAB spokesman Dennis Wharton said, "We've seen no evidence of need for a broadcast flag for HD Radio, and it is curious to us why RIAA at this late stage would raise this issue."

Committee member Rep. Rick Boucher, D-Va., isn't sure the case has been made to apply a flag to digital radio; he said someone who wants to copy material illegally is more likely to copy a CD. The RIAA's proposal "would dramatically affect the ability of a person at home to record content," which he called "an assault on fair use."

Ibiquity Digital is studying the issue and reiterated that, to the extent an industry consensus on a flag exists, said it is willing to cooperate to implement the solution.

Satellite radio could be affected by the proposals. Petricone said, "These provisions would not only outlaw products that are on the verge of introduction, but also existing products like the XM MyFi ... Essentially, all these products do is allow subscribers to 'place-shift,' so that they can listen to programming they have paid for outside the car or the home, just like portable FM radios."

The other proposals involve digital television. Subcommittee chair Rep. Lamar Smith (R-Texas) said the purpose of the hearing was to learn about the proposals, the level of support for them and their likely effect on the marketplace, consumers and copyright law. He did not say what the next action would be.



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FROM THE EDITOR

At AES, a Major Celebration

by Paul McLane

The legacy of Major Edwin Howard Armstrong, inventor of FM radio, was recalled during a special session at the Audio Engineering Society convention in New York this fall. Radio World helped coordinate the session.

of Radio World and Northeast Radio Watch.

At a convention full of the latest miniaturized high-tech gear, the Armstrong breadboard and bulky tube receivers from the 1930s and '40s drew curious stares as they were carried into the meeting room, from old-timers who

had worked with similar gear and younger engineers for whom tubes were largely ancient history. Several lined up

to be photographed with the vintage equipment.

Among the audience at the event was Leonard Kahn, the veteran inventor whose career began while Armstrong was alive. Kahn spoke up about Armstrong's titanic patent battles, warning that current provisions in the patent law may put today's inventors in



Jerry Minter, second from left, talks about the shutdown of Armstrong's station as Bob Brecht, Ren McMann and Gil Houck listen.



Mike Katzdorn shows off Armstrong relics.

As part of a celebration of the 70th anniversary of Armstrong's first FM transmissions, the event offered an expanded version of a discussion first held at the Alpine, N.J., tower site in June. Panelists included Armstrong's great-nephew, Robert Carter Brecht, as well as several Armstrong colleagues and acquaintances.

Renville McMann, who worked for Armstrong beginning at age 13, shared memories of the atmosphere in Armstrong's Columbia University laboratory and at the Alpine tower site. Armstrong historian Mike Katzdorn presented a display of vintage equipment, including Armstrong's 1935 FM modulator breadboard.

The AES discussion was broadcast on WA2XMN, the experimental station operating from Alpine on Armstrong's original 42.8 MHz frequency. Steve Hemphill of Solid Electronics Labs, who built the WA2XMN transmitter, also sat on the panel, moderated by Scott Fybush



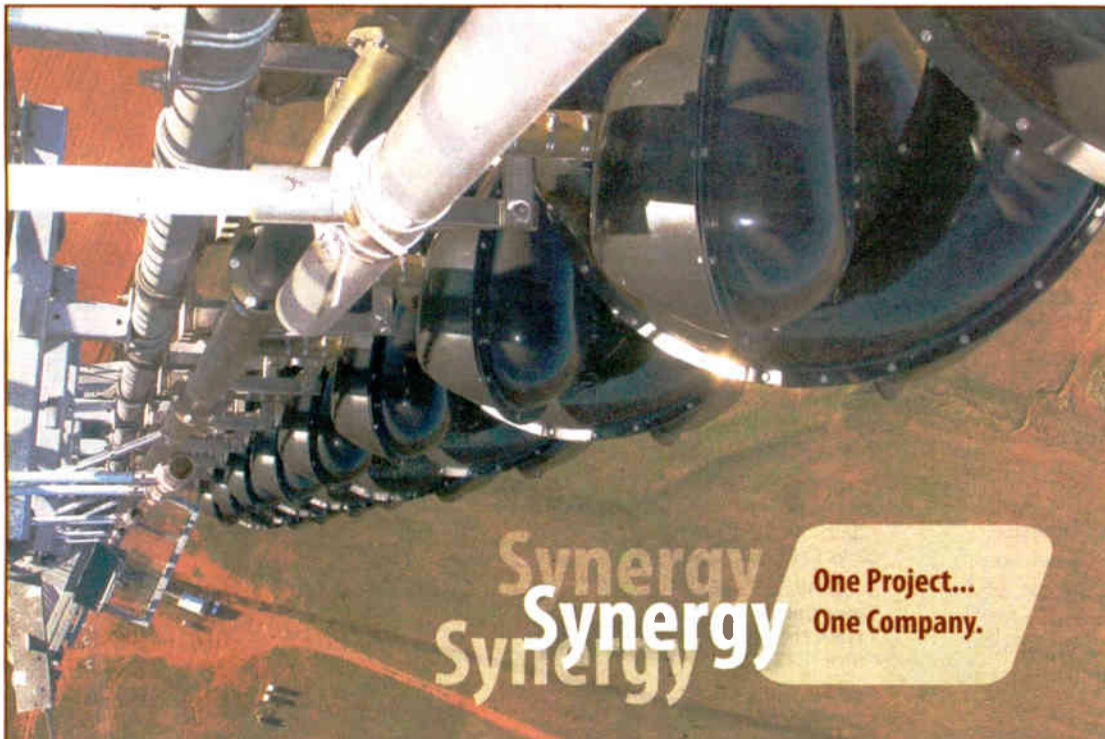
Leonard Kahn weighs in.

danger of having their ideas stolen.

Kahn, who called Armstrong one of the greatest inventors of all time, said concerns about privacy of patent submissions are a major reason he's been reluctant to release details of his Cam-D digital transmission system for AM radio.

Numerous organizers and suppliers provided support for the Armstrong event. Among those contributing hardware or technical help for the broadcast were Art Constantine of APT, Marv Caesar of Apex, Herb Squire and Joe Giardina of DSI RF, Dave Strode of LPB and Kevin Plumb of WPLJ, as well as John Chester and Scharff Weisberg Inc.

Alpine site staff who took part included Charles Sackermann Jr., Dave Amundsen and Randy Bleiweiss. Bob Bartola operated the transmitter at Alpine Tower. AES support came from Dave Bialik, Michael McCoy, Jim Andersen, Irv Joel, Harry Hirsch and Roger Furness.



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GUEST COMMENTARY

APT Has Its Own Take on Surround

Enhanced apt-X Is Suitable for Surround, Regardless of Format

by Jon McClintock

In recent years, 5.1 surround sound has become the accepted mode for audio in the film, television and music industries, as opposed to the simple, two-channel stereo approach. Consumer demand has largely driven this increase in audio channels, with most households now owning a DVD player complete with a 5.1 speaker configuration.

Add to this, the HDTV audience, cinema-goers and the young "gamers" who grew up with the surround sound experience, and we realize there is now a level of consumer expectation that has to be met by content providers.

The simple fact is that the radio broadcast industry needs to provide 5.1 multi-channel audio content. Radio broadcasters are in a highly pressured market, competing against information and entertainment mediums such as TV, Internet, DVD, MP3 players and iPods. An old two-channel program simply is not going to meet the demands of their target audience.

It may be argued that a stereo signal is abnormal. Although we have two ears, the brain has the ability to interpolate many signals simultaneously, which creates a multi-dimensional image. In comparison, a two-channel signal will be both flat and unnatural.

Standards wars

Digital radio has made the incremental step of improving quality by increasing audio bandwidth and adding ancillary services, but this is primarily still focused on

delivering two-channel content. To make a significant step, the next generation of digital radio services needs to offer the surround sound experience.

Several 5.1-for-radio pilot projects have been completed and the war of standards is raging for a suitable transmission protocol. Although several parties are involved, the two primary participants are Dolby and Digital Theatre Systems, with Microsoft starting to flex its powers.

The manufacturers of digital receivers probably will take the smart, well-trodden route of spinning-in both solutions. As such, in principle, listeners will be able to get 5.1 content into their homes through set-top boxes and cars.

Now comes the bigger challenge: How does the broadcaster move live content from remote locations such as music and sporting venues, through to their studios and then out to their transmitter sites?

One solution is to run linear. A 24-bit, 48 kHz sampled program requires a data rate of almost 6 megabits per second. For most broadcasters, such an option is cost-prohibitive and will kill any contribution and distribution projects at birth.

This brings us to our old friend compression and the balancing act between low-bit-rate algorithms, using perceptual coders, and higher bit rates, which use Adaptive Differential Pulse Code Modulation principles, or ADPCM.

Perceptual coders certainly will reduce the network costs but add substantial latency and run the risk of destroying the phase relationship between the individual channels.

Given the loss of stereo separation caused by perceptual coders in stereo signals, this is probably a given. It is also worth noting that the final transmission algorithm, whether DTS or Dolby, will be highly bit-rate reduced, and all efforts toward conserving content should be made prior to the final transmission.

5.1 pilot projects

An ADPCM-based algorithm will offer a much lower coding delay and will retain the phasing between the channels.

Enhanced apt-X from APT generally is considered by users and third-party licensees of the algorithm in the broadcast and post-production industries to be non-destructive in nature and offers end-to-end system latency of fewer than 5 milliseconds, making it a suitable solution for 5.1 contribution and distribution.

Another option is Dolby E, which often is touted as a solution but suffers from a few fundamental problems including a latency of over 60 milliseconds, bit polling between channels, an inability to process individual channels and limited word resolution.

As previously stated there have been a few pioneering broadcasters who have conducted on-air 5.1 pilot projects. Interestingly, these projects are going on in parallel on both sides of the Atlantic, i.e. ORF in Austria and NPR in the United States. Unsurprisingly, the Europeans and the Americans have explored two funda-



Jonny McClintock

mentally different techniques, but key to both was the use of Enhanced apt-X.

ORF, under the guidance of Karl Petermichl (and closely observed by his fellow EBU members), chose Enhanced apt-X wrapped up in the WorldNet SkyLink. This unit is a codec with eight discrete channels (5.1 and a stereo pair) and it uses an Ethernet port to present the compressed data to the outside world.

The WorldNet SkyLink units were used for projects that included "Night of the Long Radio" and ORF's New Year's Eve broadcast. The discrete-channel approach enabled ORF to process individual channels and keep to a minimum the amount of hardware used in the broadcast chain. Data capacity was provided by Austria Telecom, which sup-

See APT, page 6 ▶

APT delivered live discrete 5.1 plus stereo over a wireless IP link between the Empire State Building and the Javits Center at AES. The company demoed what it says is its ability to transmit eight full-bandwidth, near-zero-delay audio channels bi-directionally via wireless IP.

The diagram illustrates the APT WorldNet Oslo system. It shows a 'Wireless link' connecting the 'Javits Center / Empire State Building' to the 'Installation on Empire State Building'. The system includes an 'S-1 - On Air program' with '8 channel playback' and 'Server SACD DVD'. It also shows 'WorldNet Oslo' with '5.1 loop back on AES/EBU level' and 'APR booth 747'. The diagram details the flow of audio from a source (surround DVD player) through the APT WorldNet Oslo Multichannel Codec, over a wireless IP link, to a receiving point at the Empire State Building, where a second WorldNet Oslo unit decodes the channels and loops the audio back to the booth for re-encoding and return.

The source was a surround DVD player with six discrete audio outputs (Left Front, Center Front, Right Front, Left Rear, Right Rear and Sub Woofer) in the APT booth. The six channels were fed into the APT WorldNet Oslo Multichannel Codec and beamed from a rooftop antenna at Javits to a receiving point atop the Empire State Building, where a WorldNet Oslo decoded the channels. That audio was looped back into the second Oslo's inputs to be re-encoded and returned. Listeners heard discrete surround after two encode/decode cycles and a round trip to Empire and back.

Also, WPLJ(FM) fed live broadcast audio from its transmitter site at Empire into additional inputs on the Oslo and a Redline RemoteCaster system designed by APT distributor DSI RF, Inc.

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◆ NEWS WATCH ◆

Tate Nominated To FCC

WASHINGTON President Bush has nominated Republican attorney Deborah Tate as an FCC commissioner and renominated Democrat Michael Copps.

Tate is director of the Tennessee Regulatory Authority, which oversees the telecommunications industry in the state. If confirmed by the Senate, she would fill the remainder of former Chairman Michael Powell's term until 2007. That would return the commission to full strength and give Chairman

Kevin Martin a 3-2 GOP majority.

In 2003, Tate was appointed the FCC's Federal-State Joint Conference on Advanced Telecommunications Services, according to the White House.

As a member of the National Utilities Association, which comprises the National Electric Light Association, the American Gas Association and the American Electric Railway Association, she serves as chairman of the Washington Action Committee and is on the Consumer Affairs and Gas Committees.

Tate also served as an assistant to Tennessee Governor Don Sundquist

and assistant legal counsel to Governor Lamar Alexander as a senior mental health and juvenile justice policy advisor. She founded Renewal House, a recovery residence for women addicted to crack cocaine and their children, according to her bio on the TRA Web site.

In a statement, Martin said Tate has had a distinguished career. He also said he respects the insight and thoughtfulness that Copps brings to the agency. Copps was re-nominated for a five-year term, to expire in 2010.

Senate Commerce Committee Chairman Ted Stevens, R-Alaska, was said to be seeking candidates for

another Republican slot on the commission — that of Kathleen Abernathy, who wants to leave the agency. Her term expired a year ago but she can stay until the end of this session of Congress or until a replacement is seated.

APT

► Continued from page 5
plied a 2 Mbps ADSL circuit.

It is worth noting that German public broadcasters Westdeutscher Rundfunk in North Rhine-Westphalia and Bayerischer Rundfunk in Bavaria also are using Enhanced apt-X for 5.1 and are using an E1 interface. For these projects the broadcasters used the WorldNet Oslo. The actual transport medium, i.e. Synchronous or IP, would appear to be a decision based on what service the local Telco provides.

In the United States, NPR and KUVU(FM) have aired two pilot broadcasts. NPR and KUVU aired the "Toast of the Nation" New Year's Eve event; KUVU broadcast a Diane Reeves concert. KUVU Chief Engineer Mike Pappas used a fundamentally different approach for moving surround sound content.

As Enhanced apt-X is a non-destructive compression algorithm, this removed the incidence of any artifacts affecting the down mix.

At the Reeves concert site Pappas down-mixed the 5.1 channels to two channels using the Neural Audio 5225 system. He then transported the two channels using ISDN codecs. The codec, the WorldNet Tokyo, bonds together 4 x ISDN lines to create a 512 kbps data pipe and uses Enhanced apt-X at 24-bit word resolution, 48 kHz sampling frequency.

As Enhanced apt-X is a non-destructive compression algorithm, this removed the incidence of any artifacts affecting the downmix, something that an MPEG algorithm could not achieve. At the receiving end, NPR reconstituted the two channels back up to a 5.1 mix.

The results of pilot projects undertaken by these pioneering broadcasters are likely to shape and influence the decisions taken when large-scale deployment of 5.1 multi-channel broadcasting begins in earnest. While ORF and NPR adopted two fundamentally alternative approaches using different equipment and transport mediums (and APT does not claim that one approach is superior to another), the constant in both scenarios was the choice of coding algorithm.

All parties agreed that the APT products, and the Enhanced apt-X algorithm, provided the right balance of network efficiency, latency and flawless audio quality.

McClintock is commercial director for Audio Processing Technology Ltd., based in Belfast, Northern Ireland.

RW welcomes other points of view. 



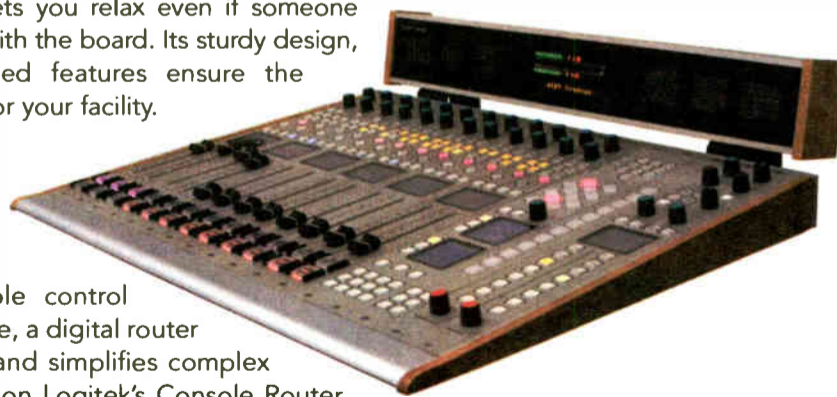
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Energy-Onix Demos DRE's FMeXtra

NASHVILLE, Tenn. The Digital Radio Express FM digital subcarrier system is being tested by a station in Nashville.

Energy-Onix installed a DRE encoder at WBUZ(FM), Nashville.

Energy-Onix President Bernie Wise, station Chief Engineer David Wilson and Cromwell Radio Group President Bud Walters completed the installation in the 100 kW ERP facility to demonstrate the multicasting ability of the FMeXtra digital subcarrier technology to International Idea Bank members attending a meeting.

The DRE system digitizes FM subcarriers; the company says it enables an FM station to transmit up to 16 digital programs using existing equipment. The transmitter site was about 40 miles from the meeting location.

Energy-Onix said in addition to the analog program, two digital stereo channels and one RDS signal were transmitted and received in an area noted for multipath interference. The group used an existing Moseley analog STL, Energy-Onix 25 kW transmitter and analog studio equipment, according to the supplier, which stated, "The only addition was a 3-foot jumper that connected the DRE encoder to the SCA input of the STL transmitter."

The system was operational for the three-day meeting. The International Idea Bank is a non-profit organization established to provide a way for inventors to turn ideas into marketable products.

The supplier says production receivers are slated for Q1 availability.

Calls for CPB Reform After Tomlinson Exit

WASHINGTON Calls by Democrats in Congress and public interest groups to reform CPB have been renewed since Ken Tomlinson's departure.

The former chairman resigned from the board in November. He had stepped down as chair earlier but had remained on the board amid charges he was trying to inject conservative politics into CPB.

The resignation came after the CPB inspector general briefed the board on its report about Tomlinson's activities.

In a statement, board members said they didn't believe Tomlinson had acted maliciously and understood he disputed the findings.

At the request of Democrats in Congress, Inspector General Kenneth Konz looked into whether Tomlinson violated the Public Broadcasting Act by hiring a consultant to analyze the politics in PBS and NPR shows and by hiring two ombudsmen without consulting the board. In his report, Konz stated he found no criminal violations but said Tomlinson did violate his office's code of ethics.

The Association of Public Television Stations called for reform at the top at CPB and proposed legislative changes to reform its governance.

News Roundup

DAVID REHR: Soon-to-be-head of NAB David Rehr was briefed on challenges facing radio and TV, including their digital transitions, as he sat in on NAB board meetings.

Marsha MacBride, NAB EVP/Legal &

Regulatory Affairs, briefed the board on streaming copyright fees, pending FCC action on streamlining FM allocations and commission vacancies.

NAB is planning an event on March 1 to honor outgoing 23-year president and CEO Eddie Fritts.

RADIO SALES UP: U.S. commercial radio revenue was up 2 percent in September compared to the same month last year, according to the Radio Advertising Bureau, which noted a 4 percent increase in national dollars and 1 percent in local revenue for the month.

For the first nine months of the year, RAB's "grand total" radio revenue statistic shows a 1% increase for the industry.

TALK NET PLANNED: Radio One and Reach Media, which owns and syndicates "The Tom Joyner Morning Show," are plan-

ning to launch an African-American talk network next year, the Boston Globe reported.

Radio One owns a controlling interest in Reach Media. The Rev. Al Sharpton would host the main programming for the network, which could be carried on up to 10 markets, including Detroit, Baltimore, Washington, Miami, Cleveland and others.

CONTINENTAL FINANCING: Transmitter maker Continental Electronics said it has partnered with National City Media Finance to provide custom financing for clients.

National City Media Finance is an equipment finance company and says it is one of the largest bank-affiliated leasing companies in the country.

NEWRADIO/WAITT: NRG Media has closed the merger of NewRadio Group and the radio assets of Waitt

Media, following FCC approval. The deal had been announced about a year ago.

The companies merged to form NRG Media, an 88-station group operating in seven Midwestern states that also includes the Waitt Farm Network and Waitt Radio Network. Based on number of stations, NRG Media is the seventh-largest radio network in the country.

WLIX(LP): Low-power FM station WLIX in Ridge, N.Y. has expanded its coverage area using FM translators.

The station, operated by Pine Barrens Broadcasting, Inc., said "RadioX" can now also be heard on translator stations 104.5 MHz in Farmingville, N.Y. and 94.9 MHz in Hauppauge, N.Y., giving the station the potential to reach up to 1 million people. The station went on the air in August.



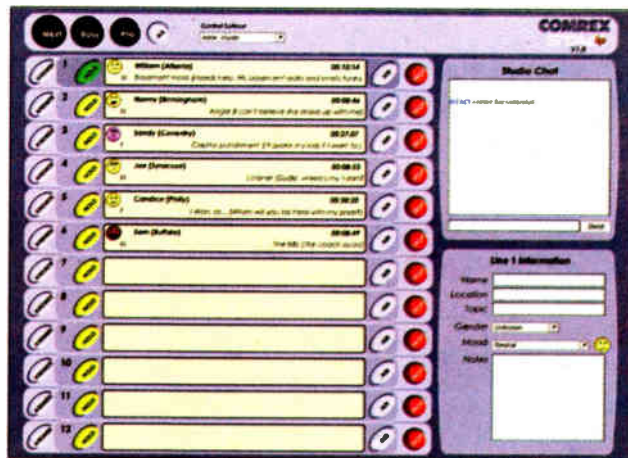
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Podcasts

► Continued from page 1

by on-demand, public broadcasters have been quick to begin experimenting with podcast distribution of their on-air programming.

Iconic Los Angeles public radio station KCRW(FM), known among pubcasters for its eclectic format, loyal listeners and independence, began podcasting a significant amount of its programming in February. "We needed to do everything that was feasible to do," said General Manager Ruth Seymour.

KCRW dives in

Since that early foray, KCRW has hardly let up. Apple CEO Steve Jobs featured KCRW's podcast of the station's pop culture interview show "The Treatment" when he demonstrated the newly-added podcasting support of his company's iTunes software in June. "We had 100,000 downloads in the first day after the announcement," Seymour recalls.

KCRW has continued to add podcasts, now offering more than 20 programs. "When we started streaming 10 years ago, we had three streams, not just one," Seymour says. "We said, 'Let's do online what we can't do on the air.' It's the same with podcasting."

Program producer and network National Public Radio in August launched a podcasting service in partnership with WNYC(AM/FM), WGBH(FM), Boston; KQED(FM), San Francisco; KUT(FM) Austin, Texas and WXP(N)FM,

Philadelphia. Other partners include Northwest Public Radio, Great Lakes Radio Consortium, Public Radio International and American Public Media.

The NPR Podcast Directory automatically gathers programs from a number of public radio stations, networks and NPR itself, which are combined with podcast-specific underwriting and then distributed from NPR's servers to end users for free via station and NPR Web sites, iTunes and other podcast directories.



Ken Stern

"It's going spectacularly well," says Ken Stern, executive vice president of NPR. "We've served millions of podcasts since the directory launched, we were able to bring in Acura as a major sponsor, and we're managing costs with a sense of scale that hasn't been seen (in public radio) before."

The costs for developing and operating the service have been borne by NPR, but have not been published. Station partners are responsible for covering production costs for any podcasts they feed to the ser-

vice. For stations that are already using computer-based production and playout systems, re-purposing an existing program for podcasting adds little incremental cost to production, according to those interviewed for this article.

Stern attributes the success of the effort in large part to the unique partnership. "This really came from the stations," he said, referring to a small coalition of public radio stations that approached NPR in July to propose a joint project to explore the opportunities and challenges of on-demand distribution. "I hope it becomes a model for future projects."

Dennis Haarsager, associate vice president and general manager for Educational Telecommunications and Technology at Washington State University, chairs the Public Service Publisher Initiative working group, a group of broadcast and technology industry professionals who are working to establish a digital distribution service for public service programming.

'On-demand decade'

As a vocal advocate for the adoption of on-demand technologies by public broadcasters, Haarsager is gratified to see the rapid development of high-profile podcasting efforts from player like KCRW and NPR.

"There is a greater consensus than there was a year ago that on-demand is an important place to be investing," Haarsager said, citing as one example a recent speech by British Broadcasting Corp. Director-General Mark Thompson, who declared, "This decade will be the decade of on-demand" and pledged significant resources to make all BBC content available online to users in the U.K.

Similarly, Haarsager observes that U.S. public broadcasters "may be able to be in a leadership role here" in part because local public stations produce hours of original programming each week, and they own the rights (or can obtain them) for much of that content.

But, he cautions, public broadcasters will have to make some changes. "On-demand is definitely a disruption to the aggregators, both networks and local stations as retailers of national content. We're definitely going to have to look at our business."

Stern echoes this uncertainty, but believes that NPR and its member stations are positioned to take on the challenge.

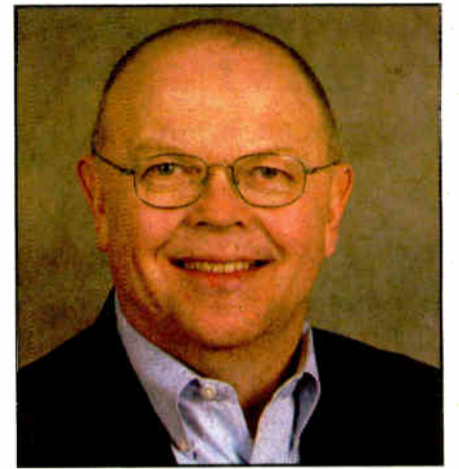
"On-demand audio complements the live broadcasts" of local stations, he said. "It allows people to use the content when and where it works for them. The challenge now is to build a model that not only serves people, but creates value."

Seymour agrees that on-air and on-demand services are complementary, but cautions that the options for building a viable business model for public on-demand will be constrained by the expectations of the audience.

"The culture of online is free," Seymour said, saying that subscription-based services on the Internet have not been less successful. "There are other ways to make money; our strategy is to make everything available to everyone."

NPR's podcast directory (www.npr.org/rss, and click on "NPR Podcasts") offers selections from marquee programs by the network and its partners.

However, Seymour recognizes that there should be limits to what content is available for podcasting. "I like what NPR has done with their podcasts," offering genre-based digests of segments from multiple programs, "but I don't want to see NPR podcasting 'All Thing Considered' or 'Morning Edition.' We (stations) pay for those pro-



Dennis Haarsager

grams, promote them, develop them."

Stations have been wary of NPR's efforts to distribute content directly to listeners in the past, especially since the arrival of satellite radio. NPR programs two channels on Sirius Satellite Radio with a mix of NPR- and station-produced content.

Although most of the podcasting content available from public radio producers is culled from existing programs, Haarsager believes producers will begin to realize that "they need long-term archival value of their created content," putting more resources into productions that will have continuing interest over a long period of time.

Seymour also sees the realities of worldwide distribution changing the nature of programming that was once only heard locally. "The Internet and podcasting is without geography and without time," she observes, "and you may not realize how local you are until you start sending your programs out into the world."

Organizing tools needed

Although she admits that it's a challenge, Seymour recognizes an opportunity in producing for a worldwide market. "Public radio tends to talk to itself a lot," she notes. "I want public broadcasting to reach outside the traditional audience."

Stern sees a similar advantage to playing on a global stage. "I like to tell people that NPR is now the world's largest podcaster. This has taught us that there is enormous interest in our content." He also recognizes that the online community is a distinct audience. "There's a community aspect of this; listeners have new ways to get involved and get content, and we have new ways to get feedback directly from the community."

Haarsager believes that this unique style of online collaboration and communication will turn out to be one of the great strengths of on-demand technologies that use the Internet as a medium, if properly implemented.

"It's essential to provide community tools to self-organize the content," he said. "The more information you add, the more value it has." Otherwise, users will become overwhelmed by the volume of content available, without any reasonable way to sort through it.

In the on-demand future, Haarsager said, "community-based organizing tools are the 'secret sauce' that makes it work."

Pundits acknowledge skeptics who believe podcasting, much like streaming audio, could become dominated by a select few players in three to four years — but believe the skeptics are not looking ahead to the on-demand feature.

Mansergh is director of engineering of KQED Public Radio in San Francisco, which has been podcasting since April.

For more special coverage on the impact of podcasting, see pages 31-32 of this issue.

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problems, so we went to the Axia factory and assembled a network ourselves. It was easy to do, and it just *worked*. We were sold.

"The jocks took to the new board like fish to water. Show Profiles are their favorite part, since they can all have custom board setups. Some like their headphone levels blasting, some don't. Some like the mic on the left side, others on the right. I've got one



guy who brings in his vinyl records every week for an oldies show; he's the only one who uses the turntables but when he loads his profile, they're ready to go.

"There were a few little bugs, but we had the very first surface! Axia support gave us new software



right away and our problems were solved. Two years later, I'm more impressed than ever. I recommend Axia one-hundred percent.

"Since the first studio was installed, we've added a new production and interview studio, and we plan on building three more studios. It'll be all Axia — all the way to the transmitter."



— Marc Johnson, Chief Engineer, WEGL-FM
Auburn University, Auburn, Alabama



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DIGITAL NEWS

'The Stern Effect' on XM Reviewed

Media analysts say trouble with business partners and the possible effect of Howard Stern going to Sirius have depressed the stock price of XM Satellite Radio and caused some analysts to say the satcaster needs to say how it will weather these storms, reported the Washington Post. Though at 5 million, XM has more than twice the subscribers of Sirius, Sirius has reported faster subscriber sign-ups in the last quarter and predicts more acceleration after Stern arrives in January.

One of XM's main receiver maker partners, Delphi, recently filed a business reorganization plan under Chapter 11 of the U.S. Bankruptcy Code, raising concerns about possible supply disruptions. In a downturn in the auto market, the number of cars in which GM said it would install the XM product has fallen below some analysts' expectations, according to the account.

"Management's still got explaining to do," said CIBC World Markets Analyst Jason Helfstein, but he said none of the issues is a problem in the long term, according to the report.

Another analyst, April Horace of Hoefler & Arnett, told the Post while Sirius will enjoy a boost in subscribers from Stern, XM retains the advantage because more U.S. automakers, 60 percent to 70 percent, offer its radios.

Dice Integrates Aftermarket HD-R With In-Dash Units

LAKE TAHOE, Nev. Dice Electronics has introduced a device to allow customers to use its HD Radio receiver with any brand of in-dash headunit. Ibiqity says the launch represents a new product category for its technology.

The product was shown at Ibiqity's booth at the NAB Radio Show, as reported here earlier; Dice Electronics then unveiled it at a specialty equipment show for automakers in November.

With the HD-Dice receiver, the developer says a consumer can keep an

existing car sound system yet receive IBOC signals, including multicast stations. HD-Dice will be available in the second quarter of 2006 and will be compatible with Audi, GM, Nissan, BMW, Honda, Toyota, Chrysler, Mazda and Volkswagen vehicles.

Dice Electronics is a new audio company founded by Dension USA CEO Alfred Barabas and President Laszlo Barabas, who make hardwired iPod/iNano car integration kits.

XM Q3 Losses Increase Despite Revenue Growth

WASHINGTON XM Satellite Radio Holdings Inc. reported a net loss for the third quarter of \$131.9 million, compared to \$118 million in the third quarter 2004. XM reported an EBITDA loss of \$73.8 million for Q3 compared to \$62.9 million for the same period a year ago while its operating loss widened from \$100.6 million to \$109.5 million.

The company's quarterly revenue more than doubled, from \$65.4 million last year to \$153.1 million, including \$140 million in subscription revenue and \$5.3 million in net advertising sales.

Yet XM's operating costs also more than doubled, from \$48 million to \$105 million, which included an increase in programming costs from \$8.6 million to \$28.4 million.

Marketing costs rose from \$66.8 million to \$99.2 million in the quarter.

Subscriber acquisition costs in the quarter were \$53, a decrease from the \$57. Cost per gross addition remained at \$89.

XM ended the quarter with 5,034,642 subscribers, with 617,152 added in Q3. The company believes it will exceed 6 million subscribers by the end of 2005.

Sirius Loss Widens in Q3

NEW YORK Sirius reported revenue of \$66.8 million for the third quarter, a 250 percent increase over the \$19.1 million reported for the period a year ago. But the satcaster had a net loss of \$180.4 million, up from a loss of \$169.4 million a year ago.

Programming and content expenses went up by \$4.8 million to \$23.5 million. The company cited license fees associated with content agreements; compensation-related costs; on-air talent costs as the programming lineup expanded; and broadcast royalties due to the increase in subscribers. Average monthly churn for the quarter and year-to-date were 1.8 percent and 1.5 percent, respectively.

The company reported subscriber acquisition costs of \$149 for Q3, a 35 percent improvement over \$229 a year ago.

As of Sept. 30, Sirius had 2.17 million subscribers. It added about 359,000 subscribers in the quarter, a 97 percent increase over the year-ago figure. The company says it is on track to reach 3 million by the end of the year.

— Leslie Stimson

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EVSS

► Continued from page 3

any specific frequency that has an emergency alert tone going," Macone said.

Its receiver component gives the device the capability to lock on only the strongest broadcast signals in a specific area to avoid overriding the entire AM and FM spectrum with audible warnings, Macone said.

One issue that remains unresolved is how to reach motorists in vehicles listening to recorded audio, HD Radio or satellite radio, Macone admits.

"At this point we will not be able to reach everyone. We are strictly analog AM and FM and not compatible with HD Radio. We realize that the number of people we can reach will shrink as these new technologies become more prevalent," Macone said. "However, we feel the analog market will represent a very large portion of in-car listening for many years to come."

No testing of the new prototype has been scheduled, Macone said. "I've become a patient man throughout all of this. We want to do it as soon as possible."

Testing is expected to take place in Canada, where similar technology has already been approved, and in a test lab in this country, said Macone. He declined to provide more specific details.

AdiCorp's Radio Alert Transmitter is expected to sell for approximately \$1,000 if the company can gain FCC approval, Macone said. The company has spent nearly \$250,000 perfecting the technology.

Attempts to reach Safety Cast Corp. officials for this story were unsuccessful. The company's phone number at its offices in Jacksonville, Fla., has been disconnected and the company's Web site was down, leading to speculation by several sources that the company has ceased operations.

Another firm, AlertCast Communications LLC, has slowed its

development of EVSS based on conversations with the broadcast industry, according to Vice President Howard Closson.

"The biggest source of frustration has been the NAB and their unwillingness to join us to partner on this technology. We are talking minimal interference at a very short-range distance," Closson said. "This is a public safety issue that deserves our attention."

In two recent years, 1999 and 2003, more police officers were killed on duty in auto accidents than by gunfire, according to the National Law Enforcement Officers Memorial Fund, which tracks fatalities. The trend is increasing but there is no single reason for the rise, according to the group, although a spokesman for the fund told the Associated Press driver distraction is partly to blame.

Closson said recent leadership changes at the FCC could aid his company's efforts to at least test the technology. "We just haven't been able to get past the FCC's regulations," he said.

AdiCorp's two biggest detractors say they are willing to discuss the redesigned system.

NAB spokesman Dennis Wharton said, "NAB staffers are willing to meet again to consider any new information that (AdiCorp) might have."

An SBE spokesman said the group would like to review the redesigned system if allowed to do so. "SBE looks forward to being contacted regarding the new design to see if it adequately addresses the many flaws in the original system proposed by ADiCorp," the spokesman said.

AdiCorp officials said they appreciate the time the NAB has spent on the issue. "I believe they will see the value in this and what it can mean to public safety in this country," Macone said.

The company will resubmit its Petition for Rulemaking with the FCC seeking approval for its Radio Alert Transmitter once testing is complete, Macone said. "We left the FCC with the promise that we would come back," he said. 🌐

NEWSWATCH

FCC Considers Low-Power AM

WASHINGTON Could low-power proponents expand their service to AM? The FCC is considering several proposals to establish such a service.

Five petitioners have put forth proposals, which include allowing LPAMs to air commercials, exempting LPAMs from license auctions and allowing individuals to obtain a LPAM license. In contrast, LPFM ownership is limited to non-profit organizations.

The petitioners are Nick Leggett and Don Schellhardt, two of the original petitioners for LPFM; The Amherst Alliance, the Michigan Music Is World Class! Campaign and the LPAM Network.

A key goal of the latest petition is "achieving balance in low-power radio, by making room in community-focused broadcasting for those individuals and small businesses that were left out of low power radio on the FM side," stated Schellhardt.

The FCC has authorized more than 600 new LPFM stations since 2000.

Public comments on the issue were due in November.

Arbitron Delays Satellite, Internet Diary Prompts

COLUMBIA, Md. Should Arbitron diaries ask respondents to indicate which delivery system is used?

The research company is delaying plans to instruct diarykeepers to distinguish between terrestrial radio and satellite, Internet and HD Radio listening when filling out diaries.

The audience research firm said it

made the decision after hearing the concerns of the NAB Committee on Local Radio Audience Measurement and of the Arbitron Radio Advisory Council. Originally, it had planned to include the change in instructions to diary-keepers starting with the Winter 2006 survey.

Arbitron will test the diary language change in 25 markets in February. Implementation would follow a successful outcome, "but not sooner than summer 2006," according to Owen Charlebois, president of U.S. Media Services for Arbitron.

The current diary does not ask respondents to indicate a delivery technology. Arbitron says younger people are telling the audience research firm they've expanded their definition of what radio is, and the company wants to reflect that in its methodology.

RadioScape Helps Design Eureka-147 Tunnel Alert System

LONDON Supplier RadioScape has helped to develop a way for Eureka-147 DAB radios to receive signals in long tunnels, called the RadioScape Tunnel Alert. If activated in response to an incident in the tunnel, the system overrides audio on these radios and replaces it with a live emergency message.

While such systems exist for FM radio, the company says its product is the first for DAB.

The EU recently mandated that tunnels 1,650 feet and longer have an emergency broadcast system to automatically change in-car entertainment to an emergency channel.

Some 2,000 tunnels in Europe would require the system, RadioScape believes.

It has partnered with Tyco Traffic & Transportation for the product. Tyco provides emergency radio broadcasts systems for new and existing tunnels.

RadioScape created the DAB portion of the system.

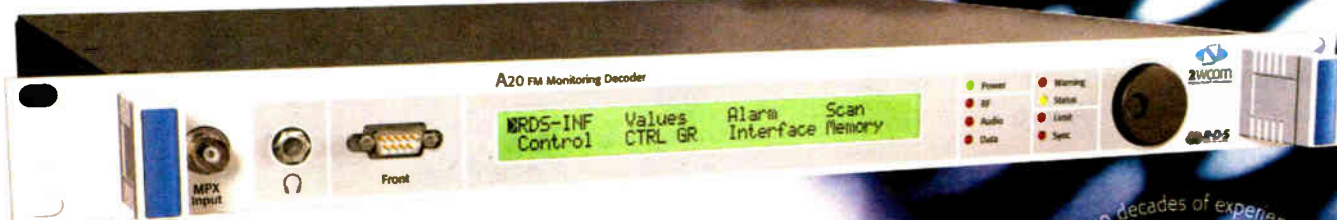
Top of Rock Opens

NEW YORK The Rockefeller Center Observation Deck has reopened after 20 years.

"Top of the Rock" is the trademarked name of Rockefeller Center's renovated observation deck (and "multimedia visitor experience") in New York. Rockefeller Center's radio connections include its role as the long-time home of RCA, owner of the NBC Radio Network, and of radio broadcasts from the Rainbow Room and Studio 8H (where "Saturday Night Live" is now produced).

The observation deck was opened to the public in 1933 and originally designed to evoke the upper decks of a 1930s grand ocean liner, outfitted with deck chairs, gooseneck fixtures and large air-conditioning vents intended to look like the stacks on a ship's deck, according to building officials.

The observation deck was closed to the public in 1986.



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Management has decided to multicast. Which seems like a terrific idea — until you consider just how little bandwidth each channel will get. How will the sound of your station(s) survive these shrinking bitrates? Omnia can help.

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Decipher Tube Serial Numbers

by John Bisset

Cumulus Youngstown Market Engineer Wes Boyd sends a note regarding our picture of the Eimac serial number in the Nov. 23 column. Keeping track of the serial numbers on high-power tubes can aid in warranty issues. But what does the code stand for? Wes received an e-mail from Jim Keen at WRMU, who forwarded a comment from engineer Joe Mauk.

Joe spoke to "Mr. Tube," also known as Reid Brandon, at Eimac. Reid explained that the first letter in the serial number is a year code. Eimac started with the letter "A" for 1985, and continued through the alphabet. They didn't use the letter I.

The other letters are a month code. Then there's a numeric serial number. Being able to figure out the year the tube was manufactured should be helpful, especially in coding used or dud tubes. Reach Wes Boyd at wboyd@theradiocenter.com.

Speaking of old tubes, some transmitters will provide excellent tube life, meaning years. Here's a case where long tube life can bite you.

After more than seven years of tube life, a chief decides to buy a new final. Creeping parameters, especially rising screen voltage, mean the tube is nearing retirement.

The engineer gets the new tube and installs it; but now he gets zero output from the transmitter. Figuring the tube is a dud, he orders a replacement. Same problem. The old tube is put

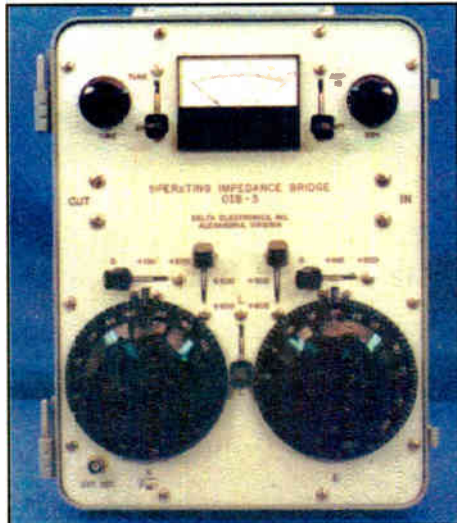


Fig. 1: An operating or common point impedance bridge gives a direct reading of impedance. Shown, a Delta Electronics OIB-3.



Fig. 3: Keep a record of phasor dial controls.

back into the transmitter, and things work fine.

These are brand-new tubes. What's

wrong? We'll have the answer later in the column.

Let's change horses here and take a look at some AM site inspection applications.



Fig. 2: Allow thermocouple meters time to warm up before reading them.

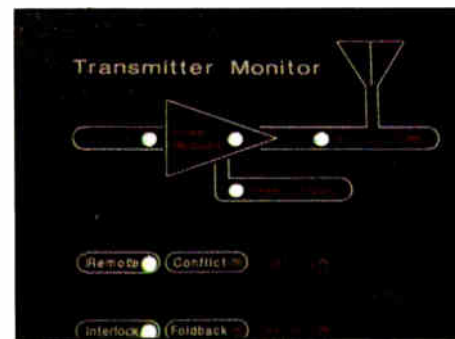


Fig. 4: Check for illuminated overload lights.

It goes without saying that the base current (for non-directional) or common point current (for directional)

meter is measured. The direct power formula is then used to determine the operating power ($I_{ant} \times I_{ant} \times R$ Resistance = Direct Power). The "R" resistance is measured using an impedance bridge, similar to that in Fig. 1.

For a non-directional station, the resistance is measured at the tower base. In an AM directional, the resistance value is measured at the phasor common point. These values are listed on the station license. It makes sense to measure this impedance value periodically. Consulting engineers and many contract engineers have the equipment to make this measurement. Because the measurement directly determines the output power, it's not a bad idea to have this checked every year or two.

For AM stations, the same "5 percent above, 10 percent below power" applies, but be careful. This is 5 percent above licensed power, not 5 percent above the antenna current indication.

Here's what I mean. If the station measures 10A into 50 ohms, the direct power is $10 \times 10 \times 50 = 5,000$ watts. (The direct power formula is *power equals current squared, times resistance.*) So 5 percent above licensed power is 5,250 W. If you do the math, you will see that this is not 5 percent of the licensed 10 amps.

By the way, the current measurement should be made without modulation. The indication measured on older thermocouple meters, as seen in Fig. 2, will increase with modulation. Newer TCA toroid coupled ammeters, manufactured by Delta Electronics, will show carrier shift — deflecting downward.

See NUMBERS, page 16 ▶

New! Dual Digital Distribution!

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Numbers

► Continued from page 14

To find out what the current maxima and minima are, you must calculate backward. 5,250W is the licensed power plus 5 percent. Divide this by 50 (the resistance) and take the square root of that number to get the current. The square root of 105 is 10.25A.

operation.

On an AM directional license, do not use the "theoretical" values for this purpose. These values were used by the consultant to design the directional array. Use the actual values for base current, phase and loop ratios, as these are the actual measured values when the proof was conducted.

Do the measured values differ from the actual licensed values? Don't ignore this; report the findings to your

At my transmitter workshops, I tell a story of an overzealous jock. While straightening the transmitter room, he turned all the phasor cranks so they lined up perfectly.

If you inadvertently take 5 percent of the licensed current (10 amps), you get an upper limit of 10.5A — this is 0.25A higher than the FCC authorizes. Making this mistake will cause you to be cited for *overpower* operation. The same problem occurs when you miscalculate for the lower power (10 percent low) value using the current instead of the power. This is a common error noted by inspectors; don't get caught!

Once again, if you have old calculations at the transmitter site, especially that predate you, do the math and make sure they are right. When you've done this, tell the manager how you helped the station avoid a hefty fine. In some cases, with old impedance measurements that have changed, a station may be actually be operating below licensed power. Of course, the converse is also true, and must be corrected.

You should have a copy of the station license at the transmitter site. Include a listing of the pertinent licensed parameters so that it's easy to check these numbers. Check the numbers periodically to ensure proper

chief engineer or consultant. Again, parameters at variance can lead to a fine.

A few other documents that should be at the site include a current copy of the tower registration information, STL or RPU licenses, and a current copy of the antenna or common point resistance sweep, plot and measurement.

As you become more familiar with your site, look over the license, and if any of the items differ from your inspection, find out why. Whatever you do, don't adjust the phasor controls unless directly supervised by your chief or consultant.

At my transmitter workshops I tell a story of an overzealous jock. While straightening the transmitter room, he turned all the phasor cranks so they lined up perfectly. It sure looked nice, but it took days to get the pattern back.

The crank set-screws slipped, so when a crank was turned one full revolution, the coil or variable capacitor only turned halfway or a third. It was impossible to tell where the phasor had been set prior to the jock's alignment.

It cost the station a lot of money and time to get the array back in tune.


Check the transmitter for any illuminated overload lights, as shown in Fig. 4. Identify them on the maintenance log or contracting workorder, reset the overload and see that the overload doesn't return. Check all overload lights and make sure none are burned out. Usually there is a "lamp test" switch for this purpose.

So, any idea what's wrong with those new tubes mentioned earlier?

Turns out there are differences in the process of the new 4CX3500A that have changed the input capacitance. The manufacturer re-did the ceramic to make it less likely to crack. However, the change caused the tuning to be very different.

In this particular case, the course output tuning line had to change 1/4 inch. Add to that, the solid-state IPA was folding back. The high voltage has to be cycled or power removed from the IPA to get the unit out of fold back.

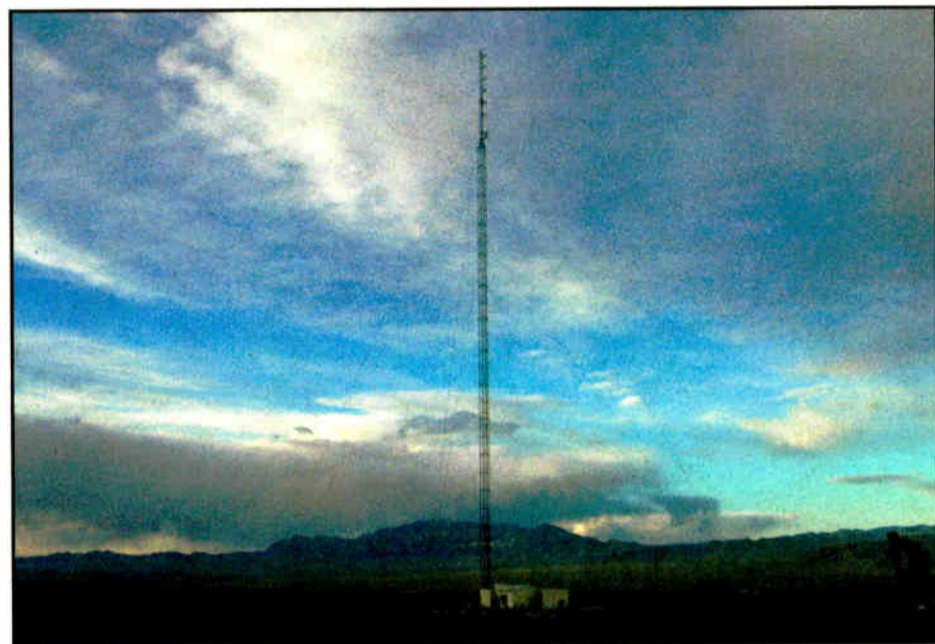
After the tuning was readjusted, the transmitter ran fine. Let's hope for another seven years of tube life. Thanks to Rick Levy of Broadcast Signal Lab for sharing this experience. Reach him at rlevy@broadcastsignal-lab.com.

John Bisset has worked as a chief engineer and contract engineer for more than 30 years. He is northeast regional sales manager for Broadcast Electronics. Reach him at (571) 217-9386, or jbisset@bdcast.com. Faxed submissions can be sent to (603) 472-4944. Submissions for this column are encouraged, and qualify for SBE recertification credit. 

2006 Tower Site Calendar Available

Radio tower buffs, and those looking for a gift for one, can order next year's Tower Site Calendar from Scott Fybush. This is his fifth annual calendar.

The calendar has monthly photos of broadcast transmitter sites, with pictures and notes from Fybush, creator of "Tower Site of the Week" and "NorthEast Radio Watch." He also contributes to Radio World. (We keep 'em on our walls here in the office.)



The Tower Site Calendar includes photos of KQRT(FM) Las Vegas, above, and Mount Wilson in Southern California.



The pages include notable dates in radio and television history. Featured sites in the coming year include two stations whose towers are located at shopping centers; the rooftop tower at the Prudential Tower in Boston; WMCA(AM) in New York; hilltop WKJV(AM) in Asheville, N.C.; KCMO(AM), which was formerly the site of WHB, in Kansas City; and the rooftop AM tower of WEJL in Scranton.

The cost is \$16 including shipping (slightly more in New York). Visit www.fybush.com.

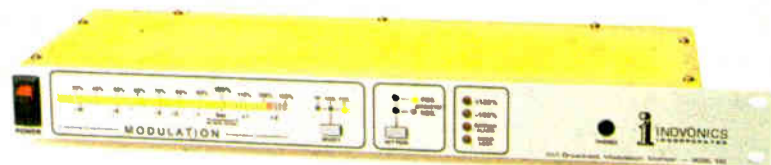
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RIAA Lobbies for IBOC Controls

The Big Picture

The Music Industry Wants Mandatory Content Protection Added to HD Radio

by Skip Pizzi

Last time we discussed how the FCC's attempt to institute a backward-compatible content protection scheme for digital television was rebuffed by the courts, and how TV content providers have been working ever since to have the system reinstated.

As explained in that column, the venue for this effort has shifted from the FCC to the Congress, because the court ruling that overturned the DTV content protection scheme hinged on the FCC's lack of an adequate congressional mandate to venture into this space.

Thus the TV content industry, led by the Motion Picture Association of America, has focused on getting an explicit statement from Congress that would permit the FCC to extend its regulation deeper into the consumer's home media environment, as required by the proposed content protection system.

Recall also that this system maintains backward compatibility because it simply adds a flag — not encryption — to existing DTV broadcasts, and sets rules for how new consumer electronic equipment must behave when it sees content so marked. This "Broadcast Flag" approach calls for next-gen consumer DTV equipment to apply the encryption after reception, and for all other new digital video equipment to maintain this protection, such that Internet redistribution of flagged content is prohibited.

The Broadcast Flag system's necessary incursion beyond the RF stage is what drew the attention of the courts, since it strays beyond the FCC's default jurisdictional boundaries. Such expansion of the commission's powers requires additional authority, which generally can only be granted by congressional order. So MPAA lobbyists and others have been working toward this end since the court ruling in May of this year. At this writing, they had not been successful in this effort.

We also noted in the previous column that record companies, as represented by the Recording Industry Association of America, have joined this endeavor, with the hope that any regulatory mandate on broadcast content protection could also apply to digital radio services.

With this background, you can see how the content industry's ongoing effort to apply content protection to digital broadcasting has engaged IBOC through the back door. But the process of adding radio to the mix is not as simple as it may seem, for numerous reasons.

Why radio is different

First, if Congress eventually does provide specific authority to the FCC to enforce its Broadcast Flag rules for digital television (which many expect it will), the commission will be enacting a regime that has already passed through a thorough vetting process by the industry, including content owners, broadcasters and DTV equipment manufacturers. These rules will also utilize a technical delivery method that has been standardized by the Advanced Television Systems Committee, the U.S. DTV standards body.

In contrast, no such industry vetting or standardization discussions have yet occurred for content protection in digital radio, so simply providing FCC authority to extend the process to include content protection for digital radio could be seen as inappropriate or at least premature. The best the FCC could do is to continue the process started by its Notice of Inquiry on the subject of content protection, comments to which nearly all have been negative to date. (You may recall that the RIAA provided the only substan-

tive comments to that NOI in support of the need for content protection in digital radio.)

Neither does the NRSC-5A standard address the subject of content protection, so the FCC has no technical recommendations to review or adopt on the subject. So the process of developing any rules regarding content protection in digital radio would take some time — probably multiple years, as the abovementioned process for digital television required.

Moreover, the RIAA is apparently seeking a broader scope of protection for audio content broadcast on digital radio than the Broadcast Flag rules provide for

See RIAA, page 18 ▶

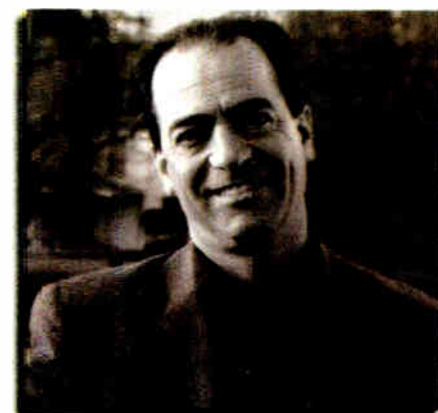


Photo: Garry Hayes, BBC

by Skip Pizzi



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RIAA

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DTV content. Beyond the prevention of indiscriminate, mass redistribution via the Internet to which the DTV rules are limited, the RIAA seems to be calling for restrictions to individual consumer copying, home networking and search capabilities. (The last is intended to prevent consumers from programming their receiver equipment to automatically seek out particular songs broadcast via digital radio for permanent storage.)

So the inclusion of digital radio to any grant of authority for the FCC could bring with it an inherent escalation of scope for content protection rules, unless such grant were specifically limited by

the language of the congressional statute.

Consider also that the Broadcast Flag rules only got as far as they did because they ultimately received widespread sup-

port from both the content and the broadcast industries, with the latter sector motivated in this direction due to concern that premium content would migrate completely from over-the-air broadcasts to the more secure digital cable and satel-

The RIAA's stance could put a kink in the HD Radio rollout.

lite TV delivery environments. In addition, each broadcast television network is now allied with a Hollywood studio, so policies are generally coordinated

between the TV content and broadcast sectors.

Again, this is certainly not the case in the radio environment, where no fear of access loss to content exists among broadcasters, and no corporate alliances

between broadcasters and record labels have been forged. (If anything, the recent payola flap has heightened the need for distance between these industry sectors.)

Therefore the music industry will likely be forced to drive this proposal unilaterally, without broadcaster support — and perhaps even overt opposition from some radio operators.

It is important to note in this context that the digital radio industry has been concurrently considering the voluntary addition of some type of content protection technology on multicast channels, in order to enable a terrestrial subscription radio or similar service in the future. Given this, it is unlikely that these quarters of the radio broadcast industry would willingly accept a mandatory framework for overall content protection in digital radio.

Another contextual element here is the simultaneous dust-up between RIAA and satellite radio over the new crop of storage-capable satellite receivers (see our column in the Oct. 26 issue). Again in stark contrast to the TV world, this implies that there is no content-industry preference for satellite radio delivery, despite its intrinsically more secure technology.

Incompatibility

Complicating matters further, some of RIAA's recent actions on this issue appeared to prefer an encrypt-at-the-source approach, rather than a Broadcast-Flag type of system.

In other words, instead of simply marking broadcast content for downstream protection as the flag system does, RIAA suggested that all IBOC broadcasts (or at least those that include copyrighted music) be mandated to include full-time encryption of the digital broadcast signal, and that these signals only be entitled for legitimate decryption under circumstances of which the RIAA approved.

While they were not saying so directly, what the RIAA was asking for in this case could have stopped the HD Radio rollout in its tracks.

To be clear, from a purely technical perspective the encryption-at-the-source method is a simpler and potentially more effective content-protection system than the Broadcast Flag approach, but at this point it would have been impossible to implement in the U.S. digital radio format without orphaning legacy equipment.

In other words, encrypted IBOC transmissions would not be backward compatible to the current generation of IBOC transmission and reception equipment, not to mention their non-compliance with the interim FCC rules on digital radio. The encrypt-at-the-source approach therefore was unlikely to find much favor from regulatory, broadcast or CE sectors for application to terrestrial digital radio broadcasting, given that the HD Radio rollout was well underway.

The Consumer Electronics Association quickly reacted to the RIAA's proposal, expressing strong opposition to the addition of content protection to digital radio. The CEA's comments cited the protection as unnecessary and intrusive to consumers' well-established rights. CEA also took particular offense to the encrypt-at-the-source provision, saying it was too late to be implemented in the fashion RIAA proposed due to the compatibility prob-

See RIAA, page 19 ►

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RIAA

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lems noted above.

The NAB had not yet reacted publicly on the matter as of November, but apparently had voiced private concerns to the RIAA on this plan.

Next steps?

Following that proposal, the RIAA soon learned what the rest of the radio industry already knows: For the inclusion of any technology in IBOC, all roads lead through Ibiqity Digital.

Reportedly the RIAA was somewhat taken aback when Ibiqity refused to add an overall encryption solution to the HD Radio system. This should have come as no surprise, however, given the fact that any inclusion of mandatory IBOC encryption at this point would have brought the HD Radio rollout to a screeching halt, rendering existing HD Radio equipment useless and causing a hiatus in the deployment while a suitable encryption system was developed, tested and approved.

During such a pause, much of the growing momentum toward HD Radio conversion likely would evaporate, and prospects for the format's success would be severely curtailed. This is certainly not something Ibiqity or any early-adopting IBOC broadcasters and consumers would willingly accept, nor would it serve the American public, given HD Radio's potential to improve the U.S. media environment.

So in its most recent actions, the RIAA apparently has backed off from its specific call for encryption at the source, instead moving to a more general call for some robust method of content protection.

This could still involve encryption at the source, but it could also include a more palatable (and backward-compatible) flag-based system. Given the incom-

patibility issues discussed above, the latter approach is far more likely to be ultimately preferred.

Yet even this liberalized RIAA stance could put a kink in the HD Radio rollout.

Consider that even if the RIAA's proposal were accepted today, a mutually agreeable technical solution would still have to be developed (most likely by Ibiqity), which then would probably not be implemented for a year or more. Licensing issues for this new technology might further lengthen this development period, as might the development of rules to enforce the regime throughout the digital consumer ecosystem, which are a necessary part of such a scheme.

If the process followed the DTV regulatory model, HD Radio products could still be deployed during this development period without support for the protection

technology, but after a given date, all subsequently sold product would have to support the protection system. After that point, legacy products would continue to operate normally, but new devices would observe the protection rules.

Yet it will not be known whether this is indeed the process that will be followed for IBOC until the FCC rules on the matter, which will likely take some time. During this possibly lengthy period of uncertainty, some broadcasters and CE manufacturers might elect to remain on the IBOC sidelines, particularly given the already lukewarm interest in IBOC expressed by some receiver manufacturers. This could hamper seriously the rate of growth for HD Radio. Even the current discussion of the topic on Capitol Hill could be causing such a chilling effect, thus slowing the HD Radio roll-

out. An early resolution should therefore be desirable to all parties.

Meanwhile, in the U.K., where DAB has been making great inroads and music broadcasts over digital radio have been popular, there have been no reports of increased music piracy as a result of DAB's penetration. Some observers have viewed this as an indication that the RIAA's concerns over digital radio broadcast of copyrighted music may be unwarranted.

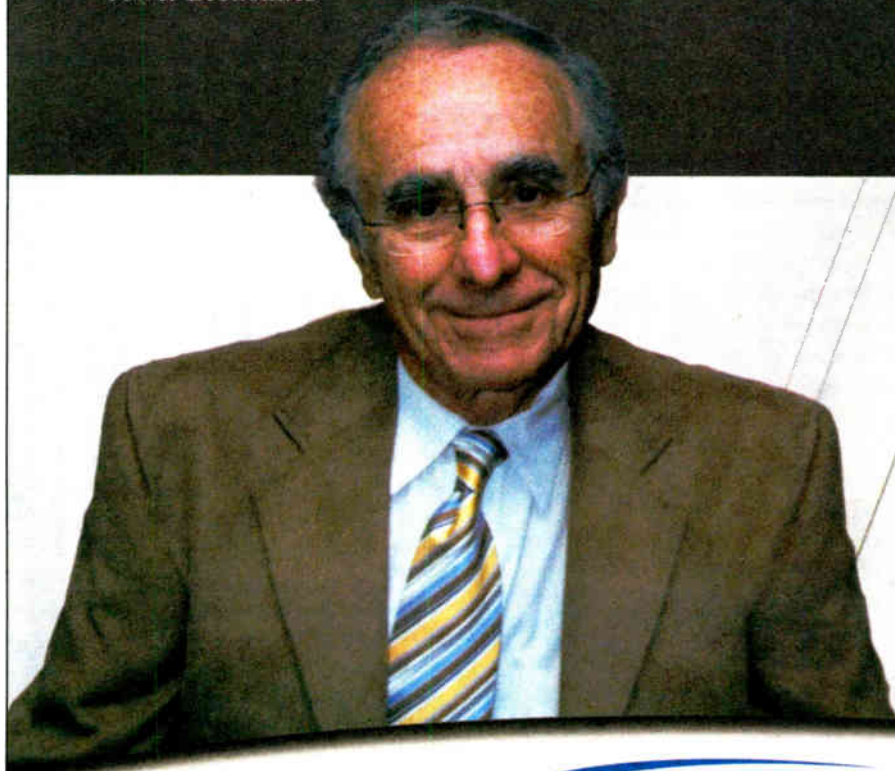
In any case, the matter will not soon subside, and it is pivotal to the success of IBOC. The RIAA, the FCC, U.S. radio broadcasters and receiver manufacturers will face significant challenges in the coming months as they attempt to resolve it.

Skip Pizzi is contributing editor of Radio World.

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WIRED FOR SOUND

A Tribute to Norm Abramson

by Steve Lampen

Norman Abramson changed your world, or soon will.

Never heard of him? He was the guy given the job in 1970 of setting up a data link among the Hawaiian Islands by radio, something he called AlohaNet. He set up this link to send packets of data. If there was a collision or packets got lost or dropped, they would be resent automatically.

Problem was that the system was only about 17 percent efficient. A student from Harvard named Bob Metcalf was helping. He had been reading about new math theories that would increase the efficiency of such a system. He went off to the Xerox Research Labs, where he worked, and eventually got packet efficiency close to 90 percent.

The first packet Metcalf sent down a wire was on May 23, 1973. Because it was based on that Hawaiian system where data was sent wirelessly through the "ether," he called it, you guessed it, Ethernet.

In case you haven't noticed, a lot of manufacturers of audio gear are taking a good hard look at network protocols like Ethernet. Some are doing more than that, using Ethernet to run audio. Wandering around trade shows like NAB and AES, and collecting data from Web sites, I

compiled Table 1, some of the audio firms now involved with Ethernet.

I'm sure there are other audio companies running Ethernet. I would love to know about them.

Product	Company	Type	Channels	Top Specs
CobraNet	Peak Audio	100baseT	128	96 kHz/24-bit
EtherSound	Digigram	100baseT	64	48 kHz/24-bit
MaGIC	Gibson	100baseT/ 1000baseT	32 320	48 kHz/24-bit
The Bridge	Wheatstone	100baseT	64	48 kHz/24-bit
Ethernet Audio	360 Systems	100baseT	2	48 kHz/16-bit
IQ Net	Crown	100baseT	128	96 kHz/24-bit
Axia	Telos Systems	100baseT/ 1000baseT	"32,000"	48 kHz/24 bit
ASI 2416	AudioScience	100baseT	16	48 kHz/24bit

Table 1

The granddaddy of Ethernet audio is Peak Audio, owned by Cirrus Logic, which runs CobraNet. This popular system shows up a lot in power amps. In an auditorium, stadium or traveling large speaker system, CobraNet allows one network, one Cat-5 cable, to send multi-channel audio to multiple amps. Each can be configured any way you want it: vol-

ume, EQ, delay and so on. Each amplifier is really a NIC card on the network.

The number of channels in a network-based system is determined by several factors. First is the data bandwidth of the

cable and components. For most of these systems the designers chose 100baseT. The second choice would be the sampling rate (quality) of the audio. The higher the rate, and higher quality of audio, the fewer channels you can carry.

The common maximum is 32 channels, although some offer 64 or even 128 at lower sampling rates. You would think this would be enough channels; but a few manufacturers offer gear that works at Gigabit Ethernet (1000baseT) and supports 320 audio channels, such as Gibson, the guitar people. Telos/Axia can support multiple networks, up to "32,000 channels" of audio. Don't ask me where you would use that many channels;

maybe when you have a hundred radio stations using one networked facility.

One problem with Ethernet — a minor issue for data, but notable in audio applications — is latency. Because this is packet-based delivery, the bits have to be put back together.

That re-assembly often is far from instantaneous. If packets are lost or damaged and are re-sent, that can dramatically increase latency. For public address, latency can be added into the desired speaker reproduction delay. The stadium announcer can't monitor himself off the speakers; but then, delay in a stadium or auditorium is already so long, this is rarely possible.

The users who have a real problem with latency are broadcasters. They want announcers and personalities to monitor themselves off the air so they know what they sound like. A delay of more than a millisecond in the headphones makes listening to yourself difficult. But monitoring off the console means the talent won't hear the way they sound on-air, with all the audio processing.

One solution is offered by Axia, a subsidiary of Telos Systems. It uses multiple networks, with one configured for low latency audio only. All the other data, control signals etc., have little problem with latency. After all, we don't care if we have to "wait" a few milliseconds after pushing a Start button for the command to be carried out.

We'd like to hear from users and suppliers of Ethernet systems about how they've incorporated the technology into their broadcast products and systems. E-mail to radioworld@imaspub.com so we can share the information with readers.

Steve Lampen's book "The Audio-Video Cable Installer's Pocket Guide" is published by McGraw-Hill. Reach him at shlampen@aol.com.

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Remarks by President Bush about Paul Harvey, recipient of the 2005 Presidential Medal of Freedom:

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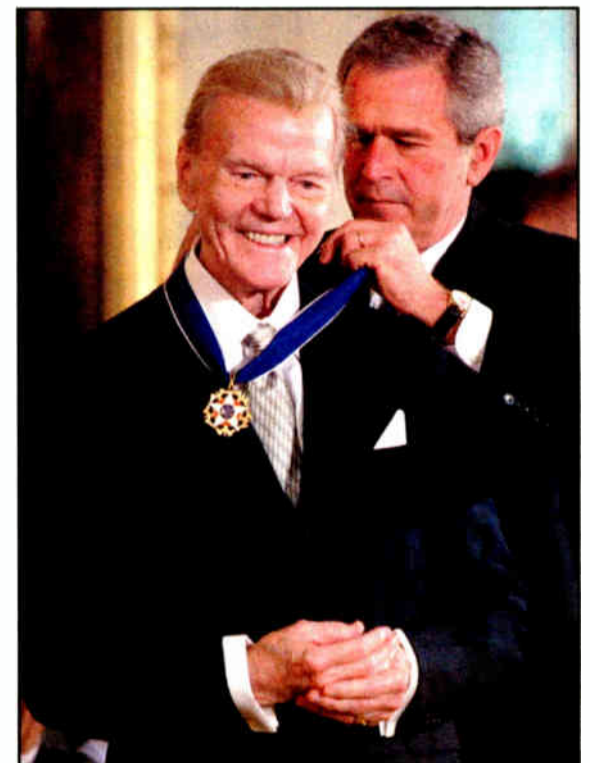
"This tireless broadcaster is up every day before the sun, writing his own scripts and ad copy for an audience tuning in to more than 1,200 radio stations and the American Forces Network.

"He first went on the air in 1933, and he's been heard nationwide for 54 years. Americans like the sound of his voice. His friend, Danny Thomas, once said to him, 'You'd better be right, because you sound like God.' (Laughter.)

"And over the decades we have come to recognize in that voice some of the finest qualities of our country: the patriotism, the good humor, the kindness and common

sense of Americans. It's always a pleasure to listen to Paul Harvey, and it's a real joy this afternoon to honor him, as well."

Harvey was honored at the White House in November among a group that included Vinton G. Cerf and Robert E.



Kahn, Andy Griffith, Frank Robinson, Muhammad Ali, Carol Burnett, Robert Conquest, Aretha Franklin, Alan Greenspan, Sonny Montgomery, Gen. Richard B. Myers, Jack Nicklaus and Paul Rusesabagina.

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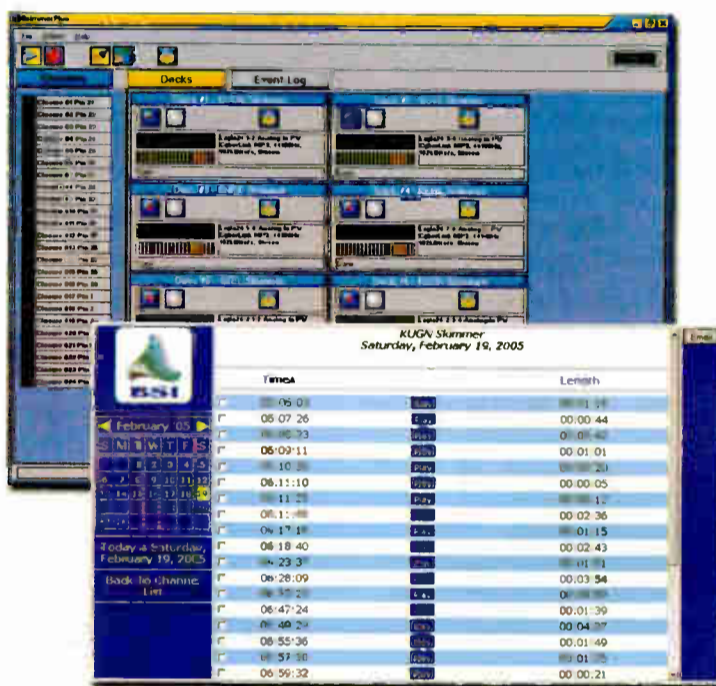
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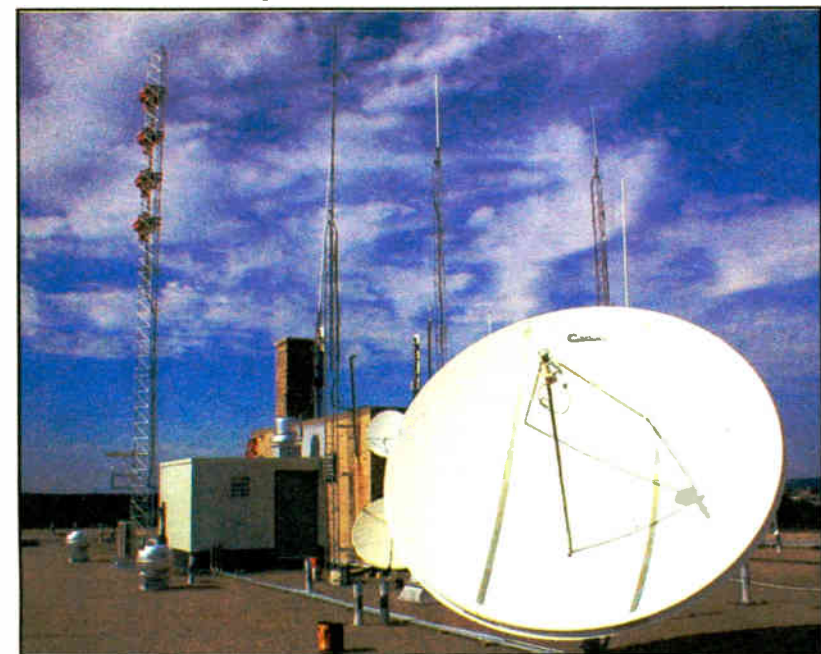
New Hampshire Public Radio Expands Coverage to Southern Tier With WEVS

by John C. Huntley

Some projects take years to mature. WEVS is such a project. In the midst of construction it had aspects of "one of those projects." Radio World asked me to share details of the experience.

New Hampshire Public Radio grew out of WEVO, which began broadcasting in 1981. Now NHPR operates four trans-

mitters and three translators; it can be heard in almost every corner of the state, and indeed part of the mandate of NHPR is to cover all of New Hampshire.



WEVS site, with added penthouse room, new tower and Shively four-bay, half-wave-spaced antenna visible at left.

mitters and three translators; it can be heard in almost every corner of the state, and indeed part of the mandate of NHPR is to cover all of New Hampshire.

The latest addition, WEVS, operates at 88.3 MHz in Nashua, the state's second-largest city. A large number of people in the coverage area were not in the primary coverage area of any NCE station. WEVS now provides a "clock radio-grade" NHPR signal in the southern tier of the state.

Its application was filed in 1996, nine years ago and before I was even hired. But a mutually exclusive (MX) application existed for this frequency. The FCC has no means to resolve those, so the application sat for several years.

Eventually the other party neglected to respond to an FCC query, and the license was granted to NHPR. I will comment here that if you have a pending application that is MX'd, always answer any queries from the commission.

The CP was granted in September of 2003, for 3 kW ERP.

Turn and burn

The station was designed from the ground up for HD Radio operation; costs are covered in part by CPB digital coverage and PTFP grants.

WEVS, a directional FM, is in the crowded Northeast. The original application specified using the location of an existing translator that served the city, poorly, with 17 watts ERP. Other sites also were studied.

This is the best location from a coverage standpoint; but it's on the roof of a five-story hospital building. The original

application also did not require any modifications to prevent predicted interference to the Channel 6 out of Portland, Maine. The Channel 6 restrictions can, in my opinion, be rather draconian. Also of concern was a directional AM located 1.9 km away. Another non-directional AM is just over 1 km distant.

St Joseph's Hospital has contracted with an outside company to manage the

RF on its roof. The contractor is a local company and easy to deal with. They first requested a technically impractical, ninth-order intermodulation interference study involving the other tenants on the roof. We negotiated them to a practical fourth-order study. The advantage of such a study is that you are forearmed with the knowledge of possible interference.

In February of 2005 I had a final equipment list and was checking tower locations in preparation for a letter to nearby AM stations. We hoped to obtain waiver letters.

I discovered that the coordinates for our new tower did not match those of the hospital or the existing translator. The discrepancy was nearly a kilometer and dated to the original application.

I contacted our engineering consultant immediately. The response from Kate Michler at V-Soft Communications was "Don't mess with me on a Friday afternoon!" When she realized I was serious, she got right to working with me on it.

To shorten the story, after several days of "turn and burn" the solution turned out to be a minor modification application and was submitted by John Crigler of GSB Law within two weeks of when the error was discovered.

We went ahead with the equipment order and construction. The modified CP was issued mid-June 2005.

The modification was a bit less minor from a technical standpoint. It required a minor change to the directionality of the antenna. The ERP increased.

Unfortunately, it forced some Channel 6 restrictions onto the station. WEVS is 5 kW vertical and 3.5 kW horizontal.

Piggybacked

Physically, there was no room to install a larger transmitter. There is room for two deep Middle Atlantic racks. The Broadcast Electronics FMi201, FXi-250 exciter and FSi-10 HD generator, plus airflow spaces, entirely fill one rack.

We had to add a bay to the antenna. Even with this change, the transmitter



John Huntley, left, and SJT Systems' Scott Tickler tightening support pipe bolts.

vantage was that construction to the point of occupancy was delayed about 45 days.

In March we discovered that the nearby directional AM was off the air, having fallen prey to "property values." So the expense of AM measurements and a possible de-tuning of the WEVS tower could be removed from the project budget.

The tower for this site is 60 feet of self supporting PiRod. NHPR uses a C-Band satellite channel for the primary STL to most of the stations throughout New Hampshire. The dish is a 3.8M Comtech with an internal heater. The mounting for the satellite dish and tower were designed and approved by the structural engineer for the hospital. Installation of the support pipe for the satellite dish went easily.

At the last minute, the mounting bolts for the tower had to be moved about 13 feet to above a different support column. Sixty days earlier, I had gone to the architect with a concern about one of the mechanical drawings. I saw that the drawing could be viewed as requiring the installation of the tower bolts in a mirror image of the headings we specified. I was reassured it could not happen, yet it did.

As the contractor said, "We built it to the drawing details. That is what we were given."

We resolved the situation by arranging for the contractor to bolt a 1/2-inch steel plate to the bolts that were installed.

Heading confirmed

Access to the roof is limited. A crane with a 140-foot reach was used to place the satellite dish onto the support pipe on the roof. The crane would not quite reach to the tower base plate. The tower sections and gin-pole were moved to the roof. The base 20-foot section of the tower was tilted up onto the base plate manually.

The FCC requires that the antenna heading of a directional FM antenna be certified by a licensed surveyor to be within 1 degree of the specified heading. We had arranged through the contractor



Tower base and plate, with alignment marks visible. A welding ground is attached to the bolt at bottom of picture.

now is at nearly maximum output power.

The hospital was (and is) in the throes of major construction. On their recommendation, we piggybacked construction of the additional penthouse for our equipment into their construction. One advantage is that the facility meets special building codes for hospital construction. Another is that the specialized tradesmen are on site nearly all the time. A disad-

for a surveyor to pre-set marks on the plate for placement of the tower on the plate. When the tower was oriented to the marks, it was welded to the plate per specifications from the structural engineer. The contractor had certified welders on site for the larger project.

Several days after the tower was up, the surveyor revisited the site to verify

See WEVS, page 24 ►

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World Radio History

ROOTS OF RADIO

The Wireless Giant of the Pacific

'Night of Nights' Morse Broadcast
Marks 100th Anniversary of KPH

by James Careless

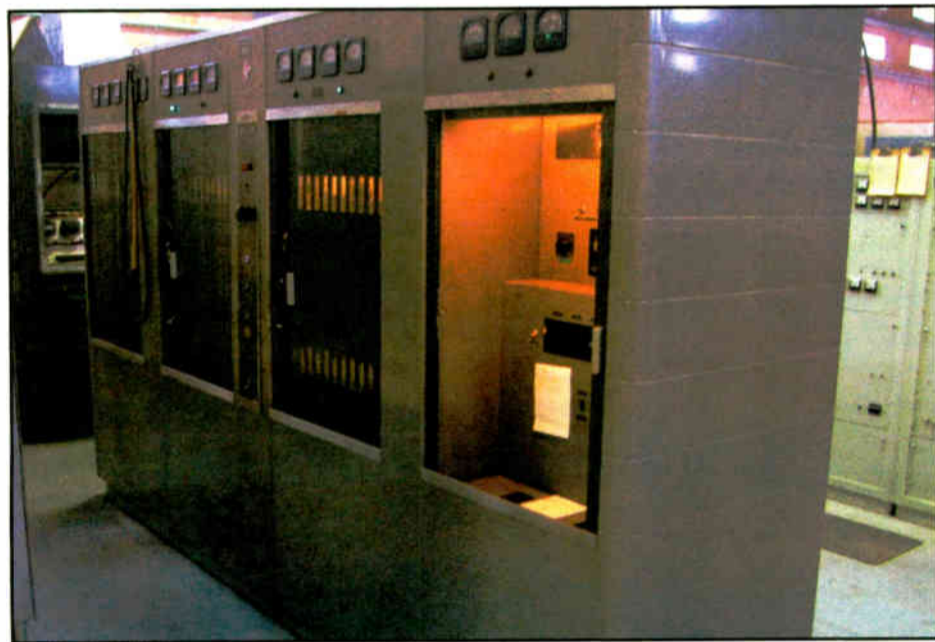
A century of radio history was marked on July 12, 2005, when ex-RCA coast station KPH returned to the airwaves 100 years after first transmitting Morse Code traffic from San Francisco.

vital marine communications system for all concerned.

Shut down and left to the elements with the cessation of commercial U.S. Morse traffic, KPH has been since been restored by the volunteer-run Maritime Radio Historical Society and the National



Steve Hawes checks the frequency of an exciter for a PW-15 transmitter.



1950s vintage RCA 'L' set originally used in point-to-point service, later converted to Morse operation.

In its heyday, the ex-RCA station was part of a global network that relayed CW (Continuous Wave) messages between ships and shore, providing a reliable,

Parks Service.

Since 2000, the MRHS has staged annual "Night of Nights" Morse Code broadcasts to revive the romance of

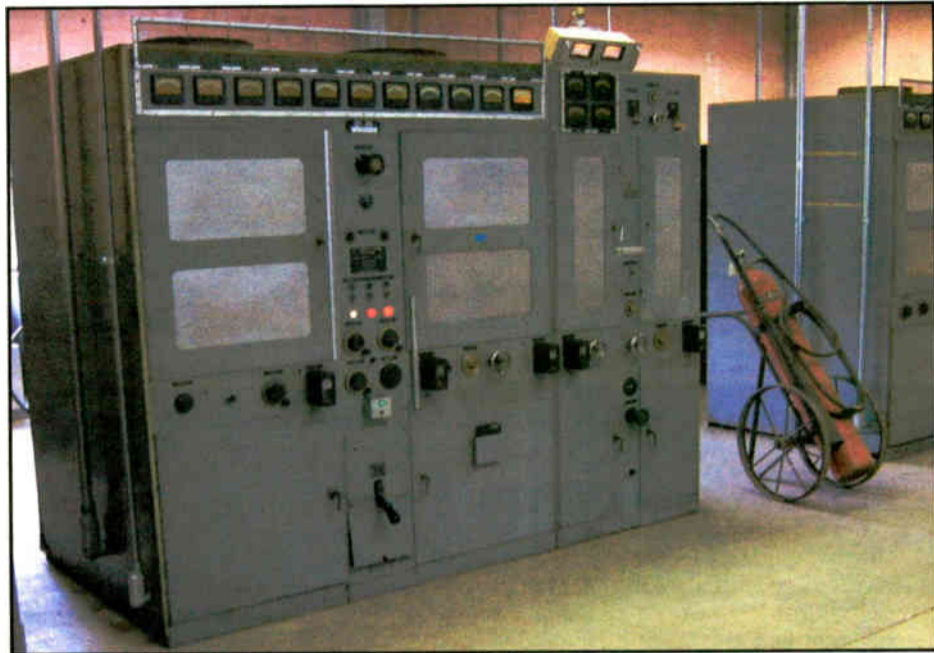
Morse on America's airwaves.

"After this year's broadcast, we were deluged by letters from people from around the world, who had been waiting with their earphones for KPH to return to

to these folks."

Seven years before RCA founder and then-CW keyman David Sarnoff tuned into the Titanic's Morse Code distress calls, KPH began Morse Code service from San Francisco's Palace Hotel (hence the PH in its name).

Displaced by the 1906 San Francisco earthquake and fire, KPH's operations center moved to a number of locations



Two 1940s vintage Press Wireless PW-15 transmitters recovered from Globe Wireless transmitter site south of San Francisco.

the air," says MRHS secretary and chief CW operator Richard Dillman. "Many wrote and said they used to listen to KPH's ship-to-shore traffic for years, and never ever expected to hear it again after the 1999 closing.

"Hearing KPH alive again means a lot

until settling into Point Reyes in 1946. Today, the site is part of the National Parks Service's Point Reyes National Seashore.

Meanwhile, KPH's transmitter and antenna site remains at Bolinas, Calif.,

See KPH, page 25 ▶

WEVS

▶ Continued from page 22
the installation.

The antenna radiation center is at 15 meters above a hospital roof. We have to control angle tightly and level the radiation from the antenna. Shively supplied the four-bay 6810 in radomes. The bays are half-wave spaced and directionalized. The H/V ratio is unequal, with V dominant.

A polynomial feed is used. With this feed method, less power is fed to the end bays. The feed minimizes the energy radiated at low angles from the antenna. The RFR level on the entire roof is well below the uncontrolled access exposure limits. There are no cases of interference to hospital electronic devices or to other users on the roof.

Combined

The transmitter at this site is a BE FMi-201 operated in low-level combined mode. The same transmitter is in use at WEVO as the HD transmitter, though feeding a separate antenna there.

Control of the site is via a Burk GSC-3000 I/O 16 and voice interface. The audio processing has been an Aphex 2020 Mk III as we waited over 120 days for the delivery of another brand of processor. Backup audio is via a Comrex Matrix rackmount. There is an FM receiver for an additional backup. It does require a cavity bandpass filter to receive WEVO.

As an afterthought we found an STL path from an existing STL repeat site and

are working toward an STL feed also.

The penthouse room for WEVS is climate-controlled. The Mitsubishi "Mr. Slim" split HVAC is backed up by a thermostatically controlled fan with dampers. The electrical service is from a stepdown transformer from the hospital 480VAC distribution. We have an LEA TVSS on this service panel. Grounding for the electrical and for the tower and dish are derived from building metal in an existing penthouse (per the NEC). Grounding connections to the tower and dish are cadwelded.

Since WEVS has been operating, we have been working hard to remove all of the "unintentional listeners." The NCE portion of the FM band is about exactly half the frequency of Channel 7. There were cases of interference to TVs in the "blanketing interference" zone as defined by the FCC. Most of these cases of interference have been resolved.

We find that the tubular (inline) notch filters manufactured by Communications & Energy Corp. work well. They are slightly more than one third of the cost of a similar product from another manufacturer.

We are not required to resolve cases of interference where a pole-mounted pre-amplifier is involved. However the cost of having legal counsel respond to a complaint through the FCC, even if it is not our fault, will greatly exceed the cost of having an outside contractor adjust the notch filter in most of the pole mounted preamplifiers. In two cases the preamplifier has been replaced.

John C. Huntley, CPBE, KK7IW, is director of engineering for New Hampshire Public Radio. Reach him at jhuntley@nhpr.org.

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KPH

▶ Continued from page 24

where it has been since the early 1920s. It is located at the old American Marconi Company facility for trans-Pacific point-to-point communications, which was established in 1913.

From 1905 to 1999, KPH was known as "the wireless giant of the Pacific." Twenty-four hours a day, 365 days a year, CW operators manned their keys, sending out commercial messages from shore and receiving replies, status reports and distress calls from sea.

Officially, KPH's radio turf was the Pacific Ocean. However, when shortwave propagation conditions cooperated, "its signals could be heard around the world," says Dillman.

During its history, the wireless operators at KPH saved countless lives as they heard and responded to ships' SOS calls. The "Den of Thieves," as the operators within the crowded KPH operator room were known, were the best; "able to copy the worst fists" — incompetent CW operators — "and the highest speeds on the air," states the historical society's site www.radiomarine.org.

When U.S. commercial Morse signed off on July 12, 1999, it was a sad day for the station's crew and fans, among them Dillman and MRHS President Tom Horsfall, who were in the room when the final Morse message was sent from Half Moon Bay.

Two years before, KPH's Point Reyes center had been shut down. As a tribute to the operators' decades of careful listening, KPH Station Manager Jack Martini didn't turn off the room's radio receivers. Instead, he left them running, maintaining a silent vigil over the Pacific's airwaves.

Reborn

A few years after KPH had been taken out of service, Horsfall and Dillman returned to the station. Having successfully restored a 4U Radiomarine console from the World War II Victory ship Rider Victory/KQTK, the men were eager to keep KPH from decaying into history.

"We managed to talk our way past a security guard, and get into the Operators' Room," Dillman recalls. "As we approached it, we could hear the radio receivers through the door. They were still on, just as Jack Martini had left them. Meanwhile, the room itself was a time capsule: It was intact, just as if it had been abandoned only five minutes earlier."

The same could not be said for KPH's transmitter hall.

"Moisture and salt from sea air had gotten in through the vents, and windows that were no longer sealed," says Horsfall. "Many of the 1950s' vintage RCA transmitters were damp inside from condensation."

Despite these obstacles, the MRHS decided to tackle KPH's restoration. With the active support of the National Parks Service, Horsfall, Dillman, broadcast engineer Steve Hawes and former KPH operator Denice Stoops (KPH's first female operator), they cleaned and weatherproofed the transmitter hall, then started restoring the station's equipment.

"Wherever possible, we used original parts to do the repairs," Horsfall says. "Fortunately, KPH's engineers kept a big inventory of replacement parts in stock."

Repairs were also made to the station's extensive antenna farm; a task that required much restringing of wires.

The big night and beyond

KPH's return to the airwaves on July 12, 2005 was a triumph for the MRHS on many levels. Not only did a big crowd turn out for the event — "the largest we've ever seen for the Night of Nights," Horsfall says — but the station received lots of CW responses from ships and other shore stations.

"One of the ships who contacted us in Morse wanted to know if we were available to actually relay messages, just like the old days," Dillman says. "Meanwhile, Coast Guard communications station NOJ in Kodiak, Alaska, replied to us in flawless Morse, even though the Coast Guard stopped using it in 1993!"

Also on air for the Night of Nights were WLO, Mobile, Ala., and KLB Seattle, plus the Coast Guard station NMC which is co-located with KPH.

In addition to bringing KPH back to life, the MRHS launched KSM, the first commercial CW station to be licensed by the FCC in decades.

"KSM's purpose is to keep commercial Morse traffic alive in the U.S.," says Horsfall. Although KPH's owners Globe Wireless have been very supportive of our efforts, they are increasingly using KPH's channels for data communications. This is why KSM needs to exist, to ensure that channels are always available for CW traffic."

Co-located with KPH, KSM is licensed to operate on 426, 500, 6474 and 12993 kHz. For actual on-air times, see KPH, page 25 ▶



Front panel of 1942 Press Wireless PW-15 transmitter in operation on KSM 12.993 MHz frequency.



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GUEST COMMENTARY

5 kHz Bandwidth Restriction Suits AM

Pre-emphasis Response Distortion at Transmission End Can Compensate for Listeners' Poor Radio Bandwidth

by George W. Woodard, PE

I have long been an advocate of AM bandwidth restriction to approximately 5 kHz — long before the recent trend and well before digital IBOC and/or DRM came on the scene. The genesis for my advocacy for a restricted AM bandwidth was based upon the realization that the majority of AM radios, portables, tabletops, clock radios, automobile radios and even semi-professional receivers all had poor higher frequency (h-f) response bandwidth.

I first noticed this quantitatively in the late 1950s and early 1960s. The typical AM radio high-frequency response was about -12 dB, or worse, at about 4-5 kHz. Little has changed in the ensuing 45 years.

Although I can offer no proof, it has long been my belief that AM radios have limited high-end bandwidth because of cost and the fact that restricted bandwidth reduces the occurrence of nighttime skywave adjacent- and next-adjacent-channel interference.

Frequency response data

My advocacy of restricted AM transmitter high-end bandwidth enforced the concept of "less can be more." That is to say, if the transmitter bandwidth on the AM bands had been restricted to 5 kHz many years ago it would have allowed the receiver manufacturers to increase receiver bandwidth while still maintaining acceptable adjacent-channel interference. The

receiver cost factor would not have been solved by this action, and in fact would have reversed.

To offer some support for my position, Fig. 1 shows frequency response data I recently performed on nine AM

made with a modulation bandwidth (-1dB) of 20 kHz; 640 Hz was arbitrarily chosen as the reference frequency. For radios with tone controls, the controls were set at mid-rotation. Radios with multiple bandwidths were set at the highest bandwidth. Averages were computed using RMS (power summation) techniques.

The data seen in Fig. 1 do not paint a pretty picture for analog AM. Even


Modulation Frequency (Hz)	A(dB) (Worst)	B(dB) (Best)	C(dB) (Average of All)	D(dB) (Average of All minus Worst and Best)
75	-15*	+3.5	-0.8	-1.3
150	-10.5	+2.8	-0.1	-0.1
320	-1.2	+2.1	+0.7	+0.7
640	0	0	0	0
1000	-1.9	-1.4	-1.1	-0.9
1500	-5.2	-2.8	-2.5	-2.2
2000	-6.9	-3.4	-3.8	-3.6
2800	-13.0	-5.2	-6.3	-6.0
3200	-16.5	-6.0	-7.1	-6.1
4200	-20.0	-6.9	-9.2	-9.0
5000	-32.0	-9.1	-13.3	-13.7
6400	-40.*	-12.2	-17.9	-19.2
8000	-50n	-14.1	-22.3	-27.3
10000	-50n	-16.5	-25.5	-34.3
12000	-50n	-20.1	-29.4	-45.1
15000	-50n	-26.0	-35.4	-49.7

* Means Approximate, and n means "noise" (-50.0 dB used in calculations)

radios I own. The data are divided into four categories: A, the worst radio (in terms of h-f bandwidth); B, the best radio; C, the average of all nine radios; and D, the average of all radios minus the best and the worst.

The RF signal generator was home-

cut through atmospheric conditions that foil voice and modern data communications. We also think that it just makes sense to have radio communications that still uses actual human operators. For this reason alone, Morse deserves to be preserved."

James Careless is a frequent RW contributor. He wrote in the Nov. 9 issue about the MusicToGo service. 

the "best" radio in the table, a tabletop model circa 1970, is still -9.1 dB at 5 kHz. While I did not make measurements on the two automobile radios I own, my ears tell me the AM radio response is very poor — typical for car radios for as long as I can remember

KPH

► Continued from page 25
check www.radiomarine.org.

"Ultimately, we want to keep CW alive as a form of wireless communications," says Dillman. "After all, it is very bandwidth and time-efficient, and able to



Upstairs transmitter gallery showing vintage RCA transmitters and more modern Henry units.

The data do not paint a pretty picture for analog AM. Even the 'best' radio in the table, a tabletop model circa 1970, is still -9.1 dB at 5 kHz.

— compared to the quite acceptable cassette, CD and FM modes.

The human ear is remarkable, having approximately 100 dB dynamic range from the threshold of hearing to the threshold of pain. Hence, the ear could easily "respond" to an h-f signal that is -20 dB, -30 dB or less. But that would not correspond to the typical engineering definition of "response," which is typically -1, -3 or, in some cases, -6 dB. Nor it would fit the standard definition of "high fidelity."

Pre-emphasis distortion

I have no argument for those who claim there are radios out there with excellent h-f audio response. They may indeed exist. However I think I can say they are in the extreme minority, a

minority so small it would not be prudent to base a transmission standard upon it. It is my belief that the data presented in Fig. 1 represent the majority of radios available to the AM listening public.

I also have little argument with those who propose a dual bandwidth system — wideband (10 kHz or higher) for daytime ground-wave propagation, and narrow-band (~5 kHz) for nighttime sky-wave propagation — except the wideband daytime bandwidth still will not gain the listener much because of the arguments and data presented in Fig. 1 — i.e., the overall system limitation is caused by the typical listener's receiver.

There is, however, something that can be done at the transmission end to compensate for the listener's poor radio bandwidth, and that is pre-emphasis response distortion.

Pre-emphasis has been used on the AM band for years, ever since the NRSC recommended a modified 75 uS standard in 1985-86. This pre-emphasis recommendation yields approximately +10 dB boost at 10 kHz and a +5 dB boost at 4 kHz. A different and more pronounced pre-emphasis could be used with a restricted 5 kHz bandwidth standard to achieve dramatic improvement in the AM system bandwidth — "system" being defined here as including the listening receiver.


A pre-emphasis curve peaking at approximately +9 dB at 4 kHz, followed by a "brick wall" filter with a 5 kHz cutoff could dramatically improve the overall AM "system" response while still preventing adjacent-channel nighttime skywave interference.

The Ts and Ss and other consonant sounds would return to the AM band spoken word. Music, while not high fidelity, would at least be better — noticeably better than it is now. Nighttime sky-wave interference would be made acceptable.

And, for those few high-quality radios out there, the "treble" might have to be cut a bit. They do this successfully in regions of the world where the AM band channel spacing is 9 kHz as opposed to our 10 kHz spacing and where the European Broadcasting Union and Asian Broadcasting Union establish the transmission standards.

Of course digital, whether IBOC or DRM, is now around the corner and requiring its own and new transmission standards. But as long as analog AM exists, I think the discussion above is valid.

George Woodard is the former vice president of engineering for Radio Free Europe/Radio Liberty. He resides in McKinney, Texas.

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Studio Decisions
Michael King works out the implications
of digital radio in a smaller market
Page 16

Multicasting at WFAE
A North Carolina public station splits
its FM signal three ways
Page 14



August 3, 2005

USER REPORT

LPFM Finds DJ in Automatronix

WJTW Likes System's Auto-Repeat, Auto-Random Modes for Rotation of Music, Station IDs, Promos

by Tom Boyhan
President
WJTW(LP)

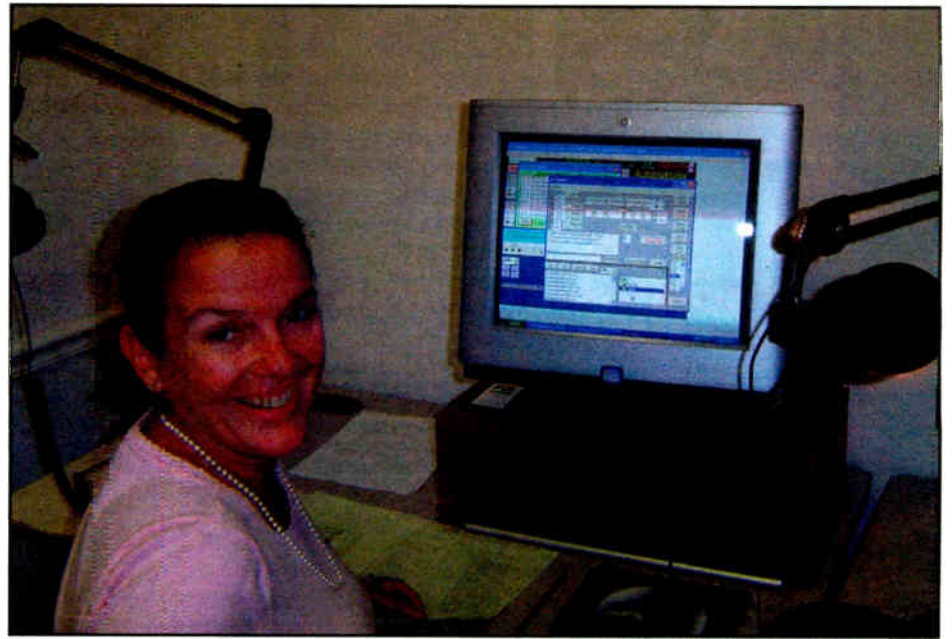
This article was to appear in the automation Buyer's Guide, Oct. 26, 2005.

JUPITER, Fla. When I was planning the construction of WJTW(LP), I knew I wouldn't have a chance of operating the station successfully without some kind of a radio automation program. In

promos and spots. The event window is the portion of the program that allows you to do this. For instance, you can set your spots to run at a certain time once a week, once a day or once an hour.

You also can set up random files, which is a great feature because it allows you to rotate spots, sweepers or station promos. For instance, we have about 30 station promos and we put them into a random file. When it's time to play one, the computer reaches into the file and selects one at random.

program has six hot keys you can program in sound effects, jingles or anything else you want. Even though we don't use this feature, Automatronix can be set up for satellite reception.



Kathy Greene, production supervisor for WJTW, and the Automatronix system.

Another nice feature is the internal silence sensor. You can set a time from one second to 60 seconds. If the computer stops playing, the silence lasts for whatever time you've set. It then triggers the next song.

that respect, I wasn't unique. Few low-powered FM stations can afford to pay a full-time staff or muster the necessary volunteers to run on a full-time basis. So when I started planning in earnest, I knew the automation system was going to be perhaps the most important component.

As I began researching systems, I decided that whichever one I selected, it was going to have to be easy to run, flexible enough to make the station sound as though it were live and inexpensive. The Automatronix system from JT Communications satisfied each criterion.

I looked at a number of other systems, from the extremely inexpensive — under \$100 — to the extremely expensive — \$15,000. Obviously, the more expensive the system the more features it has. But Automatronix had the most bang for my buck.

Download and go

I am not a technical person, so many of the systems I tried to use turned out to be far too complex. And honestly I almost gave up on the Automatronix system in the beginning, because before you can run this program you need to make a simple change in the Date, Time, Language and Region Options of your computer. But in a call to Jim Trapani at JT Communications, he talked me through it in two minutes.

After that, running the program was easy. Download your music to the hard drive and you're up and running. The system comes with a little program that allows you to tag your songs, so the computer knows when a song has ended and triggers the next one.

Being able to play music is great, but you also need to be able to play your station identifications, sweepers, station

Another nice feature is the internal silence sensor. You can set a time from one second to 60 seconds, and if the computer stops playing, the silence will only last for whatever time you've set the sensor. It will then trigger the

next song.

There are many nice features in this program that give you flexibility. You can run the program in Manual, Live Assist, Auto-once, Auto-Repeat, Auto-Random and Talk Show modes. I run the program most of the time in either Auto-Repeat or Auto-Random.

In the Auto-Repeat setting, it will play your song list from beginning to end, then go back to the beginning and start over. In the Auto-Random, it will do the same thing as Auto-Repeat, except that when it gets to the end it scrambles the songs and then goes back to the beginning and starts over. The

I've found the Automatronix program to be not only easy for me to use, but easy to teach to others. When you have to rely on part-time volunteers who come and go, such a system saves a ton of time. Most people are shocked when I tell them we run the station 24/7 with just myself and two or three part-time volunteers.

With a limited budget on which to build our low-powered FM station, Automatronix was a bargain at \$399.

For more information, contact JT Communications in Florida at (352) 236-0744 or visit www.jtcomms.com.



Tell us about your job change or new hire. Send news and photos via e-mail to radioworld@imaspub.com.

Joe Torsitano was promoted to director of engineering for syndicator **Talk Radio Network** in Central Point, Ore. He joined TRN in July as a staff engineer after leaving Educational Media Foundation (K-LOVE & Air 1 Radio Networks) in June.



Joe Torsitano

Gary Bluhm was named director of engineering for **WCPN(FM)** in Cleveland.

NextMedia Group Inc. hired **Wes Davis** as corporate engineer. He had been

chief engineer with **Cumulus Broadcasting**.

Broadcast Electronics appointed **Rex Niekamp** product manager for BE Transport Products. He had been in charge of tower and antenna equipment for **Dielectric Communications**.

360 Systems appointed **Philip Cox** as executive vice president. Prior to joining the company, he worked for **CalAmp**, **Signal Technology** and **M/A Com** where he held senior management positions.

Paul Miraldi was named VP of marketing for **Clear Channel's** Online Music and Radio Division. He had been director of marketing for **Clear Channel New York's** **WHTZ(FM) Z100** and **WAXQ(FM) Q104.3**.



Paul Miraldi

Prophet Systems Innovations promoted **Diana Stokey** to market manager. She joined the company in 2000, and has worked as marketing coordinator and later assistant marketing manager.

Paul Harvey received the Presidential Medal of Freedom. President Bush honored him and 13 other recipients at a White House ceremony Nov. 8.

Patrick Conde joined **Burk Technology** as director of operations. He had been district manager of customer service at **Imagistics International**.

Beth Webb was promoted to director of Portable People Meter Research for **Arbitron**. She had been manager of PPM methods and analysis.

Harris Corp. added three district sales managers to its Domestic Radio Field Sales Team. **Lynn Turner** manages sales within the mid-Atlantic region. **Lyle Garrison** serves customers in Texas and Oklahoma. **Andy Cole** manages sales within five states in the southern U.S.

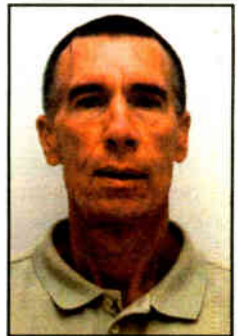
Todd Johnson was appointed director of corporate quality assurance for **ERI**. He had been director of technology and was responsible for new process implementation at **Hydro Aluminum** facilities in the U.S.



Patrick Conde



Lynn Turner



Todd Johnson

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An exciting new event that will co-locate with the annual NRB Convention. It's all about ENCOUNTER—bringing you face to face with the plans, projects, and people who are shaping the media world for the next generation. During an intense three days, we'll explore issues like culture change, innovation, production, international broadcasting, strategic thinking, perception, and developing media leaders for a post-modern culture.

A separate Reach 2006 registration is required. You can register at www.reachconference.org or add this to your Full NRB Convention registration at a discount.

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Schedule of Events

Thursday, February 16

7:00pm **Reach 2006 Conference**

Friday, February 17

9:00am - 5:00pm **Reach 2006 Educational Sessions**

9:00am - 9:30pm **Women in Christian Media Conference**

Saturday, February 18

9:00am - 2:30pm **Boot Camps**

12:00pm **Women's Luncheon**

3:00pm **iNRB Group Meeting / Mixer**

4:00pm **iNRB Al Sanders Paper Presentation**

4:00pm - 5:00pm **First-Timers Orientation**

5:00pm - 6:30pm **Industry Awards Reception**

7:00pm **Opening General Session**

9:00pm **Receptions: Radio, TV, International, Church Media & HNRB**

Sunday, February 19

9:30am **Worship Service**

12:00pm - 6:00pm **Exhibits Open**

12:00pm - 6:00pm **NRB Tech Lab**

1:00pm **TV Program Showcase**

3:00pm - 5:00pm **Job Fair**

8:00pm - 10:00pm **Aspire 2006**

Monday, February 20

9:00am - 6:00pm **Exhibits Open**

9:00am - 6:00pm **NRB Tech Lab**

9:00am - 10:15am **Educational Sessions**

10:30am - 11:45am **Educational Sessions**

12:00pm **Innovation Exchange**

2:30pm - 3:45pm **Educational Sessions**

4:00pm - 5:15pm **Super Session**

6:00pm **Numerous Affiliate Events**

7:00pm - 9:00pm **iNRB Student Awards Banquet**

Tuesday, February 21

9:00am - 4:00pm **Exhibits Open**

9:00am - 4:00pm **NRB Tech Lab**

9:00am - 10:15am **Educational Sessions**

10:30am - 11:45am **Educational Sessions**

12:00pm **Global Media Alliance Luncheon**

2:30pm - 3:45pm **Educational Sessions**

4:00pm - 5:15pm **Super Session**

7:00pm **Banquet**

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Church Media: *Documentaries - Storytelling - Faith Testimonies*

Radio/CMB: *Shaping Your Station's Image*

Internet: *Extreme Makeover: Tips and Tools To Enhance Your Web Ministry*

Educational Sessions

All day Monday and Tuesday you will have over 40 educational sessions covering a wide spectrum of topics to sharpen your skills and knowledge in communications. Here is just a brief sampling of what we have in store for you:

- **Ten Things Before You Launch A Media Ministry**
- **The Power Of Pitching: Making Your Dream Their Dream**
- **Christian Radio - The True Alternative**
- **Before You Roll Tape - The Brains Behind the Camera**
- **PR Makeover: Using Creative Techniques to Increase Your Visibility**
- **Branding Your Identity For Broadcast**
- **Management Buckets: The 20 Key "Buckets" That Guarantee Organizational Success**
- **Radio: Spreading the Word Without Busting Your Budget**
- **THIS IS NOT A TEST! When Disaster Strikes Your Market**

For further details or to register, visit www.nrb.org/conv or call 703-330-7000

World Radio History

Is There a Case for Podcasting?

Commercial and Public Radio Stations Hope for a Bigger Payoff Down the Road

by James Careless

Now that the initial glow is wearing off podcasting, more broadcasters are asking about the business case for this new tool. Is it possible to make podcasting pay? Or is it just a high-tech black hole that drains cash from a bottom line?

Not surprisingly, various people and companies have different answers. Broadcasters, it seems, are feeling their way around the business case for podcasting, trying to divine the approach that will make this phenomenon profitable.

Bullish

Clear Channel knows that Web fans want more than what's available on air; otherwise they'd be sticking to live radio. Moreover, "The number of people listening to radio online has grown fivefold over the past five years," stated Clear Channel Radio John Hogan a year ago in a corporate news release, so "it's time to step up our programming."

mances and artist interviews.

For example, on the Web site for New York's WHTZ(FM), Clear Channel offers interviews with Sean Paul and Ricky Martin. In line with the company's online strategy, these interviews are offered as downloads, streaming audio and podcasts.

Despite this multifaceted approach to online distribution, Clear Channel does see podcasting as "a very unique proposition," said Gerrit Meier, senior vice president and general manager of Clear Channel Online Music and Radio.

"We can take the business model that we've already developed for on-air and online, and simply adapt it to fit a portable time-shifted format. This means that we can insert ads into the content, and sell those ads to sponsors." At present, Clear Channel stations are selling "pod spots" by themselves or packaged with other media.

Clear Channel isn't the only radio media group selling pod spots; so is Virgin Radio in the UK.

casts as part of their membership. As a result, there's no longer any question as to whether consumers will pay to get the podcasts they want, Meier said: "Some con-



KCRW's site invites visitors to install a podcasting application: "You can download KCRW's very own Pubcatcher, which gives you one-click subscription to any of our podcasts and comes with a directory of other public radio podcasts."

Cridland, Virgin Radio's head of New Media strategic development. As a result, he said, "all our podcasts are profitable."

Pod spots may be just the beginning; the popularity of the Clear Channel podcasts posted on Apple's iPod-centric www.itunes.com — over 4 million downloads in a recent four-month period — has inspired the radio group to start thinking big. We're not just talking sponsorships; Meier believes that podcast consumers will actually pay for the content they want.

"Absolutely," he told Radio World. "What remains to be worked out are the deals with the music industry. They still have to decide what they want to charge for this content."

In fact, paid subscribers to the Rush Limbaugh Web site get access to Rush pod-

sumers already are." The trick will be to get them to do so for a wide range of podcasts.

Selling the package

Like many news/talk stations, WTOP(AM) in Washington is offering a mix of news headlines and short interviews on its podcasts. Although only available for a few months, "these podcasts have gained enough popularity to get the attention of the sales department," said Steve Dolge, director of Internet operations for Bonneville International Corp., which owns WTOP and three other DC radio stations.

"If we can begin to make money off podcasting, it won't be such a novelty anymore."

WTOP's plan is to aggregate all of its
See PODCAST, page 32 ▶

We can take the business model that we've already developed for on-air and online, and simply adapt it to fit a portable time-shifted format.

— Gerrit Meier

Clear Channel Online Music and Radio

This explains why the company has been posting special content for the more than 400 Clear Channel stations that offer audio streaming, such as in-studio perfor-

"We have monetized podcasts from our very first podcast, with 'podvertising' from large brand names like MasterCard, the UK government and Bose," said James

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Infinity's Podcasting Laboratory

'Open Source' Station in San Francisco Finds Lots of Content, If Not Yet Many Listeners

by James Careless

It's been more than a half-year since Infinity Broadcasting converted San Francisco's KYCY(AM) to KYOURADIO, dumping its syndicated news talk format in favor of listener-submitted podcasts.

Since then, Bay Area listeners and surfers who log onto www.kyouradio.com have been hearing an eclectic range of programming, all of it produced for free by podcast enthusiasts.

Manager Stephen Page. "But now I've gotten to the point where I can pick and choose, sometimes by asking people who have submitted good shows in the past to do more, sometimes by stumbling across creative podcasts and asking their producers if they want to get involved."

And then there are those shows that podcasters submit directly to the station site; at last count, Page estimated that he had "over 9,000 people signed up to listen to the online stream and about 2,000 offering to produce content."

Page expected to strike a 50/50 balance between music and spoken-word programming, but the balance soon tilted heavily in music's favor.

Not all of the shows have been by unknowns; for instance, the music history podcast "Rock 50 With Mike Stark" is co-hosted by Black Sabbath drummer Bill Ward, described by www.playlist-mag.com as being "a good deal more articulate than Ozzy."

"When KYOU took to the airwaves, I initially had to take what I could get," said KYOU/KYOURADIO.com Station

Part of the logic behind an all-podcasting station is to minimize staff costs, and Infinity has certainly accomplished this at "KYOU." Besides Page and an assistant who integrate the podcasts into a coherent broadcast day — supplemented by some paid infomercials on the AM to help pay the bills — KYOURADIO's staff consists of "seven board operators who make sure everything gets played

when it should be played," Page said.

KYOURADIO also has a staff of lawyers and screeners who audition the podcasts for legalities and content.

The process starts with the lawyers in Washington: "They listen for libelous/defamatory content, and items that could cause problems with the FCC," Page said. Once the podcasts get legal

soon tilted heavily in music's favor. Today, he estimates that only 20 percent of KYOURADIO's podcasts are spoken-word.

"It is much easier for someone to sit by a microphone and say a few words punctuated by their favorite songs, than it is for them to simply talk into the mic and say anything that is of real interest to anyone else," Page said. "This is why we are doing so much music programming; which we pay full rights for, by the way."

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approval from Infinity, they are shared among three "screeners" who work out of their homes — two in San Francisco and one in New York.

"The screeners act as another set of ears and review the shows for me, to tell me what they think works and what doesn't."

Should a podcast pass these two hurdles, Page has the option of scheduling it.

Music rules

When Page came to KYOURADIO after 20 years in radio and seven in online music, his goal was to strike a 50/50 balance between music and spoken-word programming. However, the balance

To say the least, the music lineup is varied. On the day this article was written, for instance, it included world beat, rock, Celtic, Japanese hip-hop, jazz and Latin, to name a few.

This said, KYOURADIO/KYOURADIO.com does have some interesting talk shows, at least judging by their program notes.

For instance, Dan Klass' "Bitterest Pill" podcast features "The tale of a man, his trusty broom and a vicious marsupial," while Rowland Cutler's "DarkCompass" features a Londoner "who records commentaries as he heads to and from work," Page said. "It seems to ramble at first, but

See KYOU, page 33 ▶

Podcast

▶ Continued from page 31

podcasts into a single advertising package, then sell the sponsorship to a single exclusive advertiser.

"The sponsor's name and message will be at the opening of every podcast we do," said WTOP Business Development Manager John Meyer. The cost would be \$7,500 a month for the entire package. To put this price in perspective, "a rotating banner ad on our Web site goes for \$1,500 a week," Meyer said. To sweeten the deal, WTOP intends to include access to its audio archives on its podcast page.

"The sales department is really excited about this package," Meyer said. Time will tell if sponsors feel the same way.

As a non-profit NPR affiliate, KCRW(FM) in Los Angeles has a dif-

ferent take on the podcasting business case. Managers see it as a way to increase access to potential listeners, which could eventually boost fundraising revenues.

"It takes an average of three years' listening to public radio before someone is persuaded to donate money to the station," said KCRW Assistant General Manager Jennifer Ferro. With KCRW delivering 100,000 podcast downloads daily through www.kcrw.com and iTunes, Ferro is hopeful that many podcast listeners will stick around for the long term and one day start supporting KCRW.

"What really made the difference to our numbers was when we started to be posted on www.itunes.com," she said. "It's not just a matter of reach; thanks to iTunes, we're no longer being marginalized as 'public radio.' People are paying attention to us because of our content, not because of who our network is." 📻

FIRST PERSON

Arbitron's Big Secret: Ken and Linda

by Ken R.

Well, they paid us; but they didn't pay us much.

Just a couple of crisp George Washingtons for my wife and myself. But if you ever wondered who filled out those Arbitron diaries upon which careers can skyrocket or crash, now you know: Ken and Linda.

My adventure started with a phone call from a polite woman who wanted to know if we would participate in a ratings survey in our area, Toledo, Ohio. We are the 84th largest market according to the Arbitron Web site.

My first question to her was, "Do you care if I write for one of the leading radio publications in the free world?" But before I could elaborate on the universal domination of Radio World, she told me she absolutely did not care, as long as I didn't work for a radio station or advertiser. Very well!

She told she would send us two diaries. Then she stressed how important it was that we write down everything we listened to and return the postage-paid surveys.

After I agreed, we got a letter from Arbitron telling us how important it was to send in our diaries. Then a guy called to make sure we were going to send in those diaries. Three days after I mailed them in, we got a postcard telling us to make sure and send in the diaries.

Do you think Arbitron might have had some teensy compliance issues in the past?

Compared to high-def TV shows starring the talented Jessica Simpson and cell phones with ring tones featuring rappers shouting "answer the damn phone," Arbitron's methodology is surprisingly low-tech. I know Arbitron continues to test the space-age Portable People Meter, but for now pencil and paper are all that are required.

The diaries arrived at our house within a few days. My wife and I filled them in at

the end of our week; we just didn't have time or energy to do it daily. I noticed that Linda was not good with call letters but was excellent at remembering dial posi-



tion, as that is what is visible on her car radio display. I wrote down call letters and air personality names. While I am sure Arbitron will look at all the data we entered, I wanted to make it easy for them.

In addition to requesting our listening habits for a week, Arbitron asked several "nosy-noodle" extra credit questions about our age, income and several other topics. Because our names were not on the diaries, Arbitron couldn't tie the information to us directly.

We filled in everything completely, trying to be good citizens. It felt good to give credit to our favorite shows and talk hosts.

I think this experience must be a little like going to the polls at election time. We may be only two of the 350,000 people living in Toledo, but every vote counts.

And yes, we mailed the darned diaries in.

Ken R. was paid four dollars to fill out his diary, which is coincidentally exactly what he earned per hour during his early radio career.

KYOU

► Continued from page 32 after a while it gets hypnotic. You feel like you're sitting next to him in the Tube."

Results

When it comes to podcast content, Page has an unlimited supply available to him. But what are his resources like when it comes to actual listeners? That's something else.

Based on hits at www.kyouradio.com, "We've got anywhere from 300 to 400 people listening at a time," he says. As for on-air audience? At press time Page was waiting for the summer ratings to come out, but admitted that he wouldn't be surprised if KYOU didn't show up in the book.

"That itself would not be a big deal," Page said. "KYCY(AM) didn't show up in its last three ratings sweeps."

Page said Infinity relied on word of mouth and occasional media coverage for promotion of the station — due not to tight budgets but a fear of alienating the podcast community by promoting KYOURADIO aggressively. However, he said, "I am start-

ing to get e-mails from people who tuned across the AM band in San Francisco, become intrigued with a particular podcast and then stuck with us."

Fortunately for KYOU, the money brought in by its remaining infomercials is enough to keep the station marginally profitable. This means Infinity has time to figure out how "monetize podcast content" over the long term, said Page.

Also, as a result of this station's podcasting experience, he said, KYOURADIO "has become an R&D laboratory for Infinity stations in general. For instance, the podcasts that are now running on Infinity's talk stations are a direct result of lessons learned at KYOURadio.com. Now we're doing the same kind of groundbreaking work for other Infinity stations. It has got to the point that, when an Infinity programmer has a question about podcasting, they give us a call."

Page is optimistic about the operation's chances, given the continually expanding popularity of podcasting.

"When Apple started linking podcasts on their iTunes web site, it really pushed the medium up a notch," he said. "Now that Yahoo is offering a directory of podcasts, it's leaped up a level again."

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Get Video to the Web in a Flash

by Joe Dysart

Used to be, creating Web video was a laborious process requiring deep technical knowledge, great patience, a flair for tweaking and hours — if not days — of production time. Consequently, many businesses shied away from adding video to their sites, concluding that while the medium represented a powerful communications and

Visual Communicator Studio 2, by *Serious Magic* (www.seriousmagic.com) (\$279): A few years back, Visual Communicator set the standard on quick-and-easy Web video, and it has never looked back. Winner of multiple awards, the software can be used to shoot and upload a simple video to the Web in about 10 minutes once you get the hang of it. One of the

ished video. Some basic background graphics are included with the package.

Ultra 2, by *Serious Magic* (www.seriousmagic.com) (\$495): An add-on product to Visual Communicator, Ultra 2 is a collection of elegant virtual background sets you can use in videos shot with a green screen backdrop. You've seen the effect on TV, people appearing to be reporting a news sto-

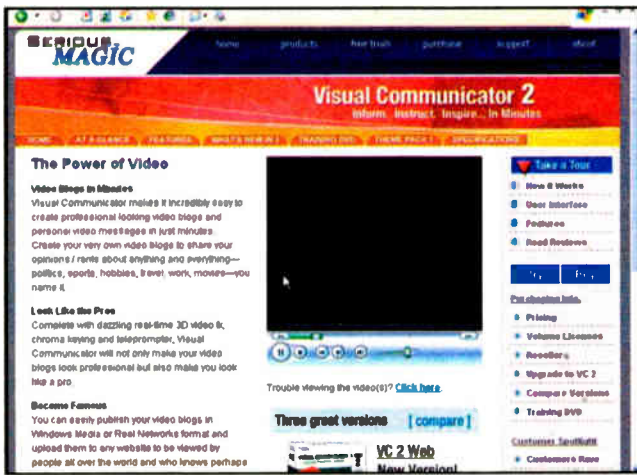
camcorder to your PC, this is another bare-bones, get-it-to-the-Web as fast as possible product. Dazzle come with its own software package — Pinnacle Studio Quickstart — which enables you to put together basic videos in minutes, and upload those mini-productions to the Web.

You may want to use this product in concert with *Blaze Media Pro* (www.blazemp.com/blaze_media_pro.asp) (\$50), a video format converter that enables you to convert digital video into most of the formats used on the Web.

iLife '05 Suite, from *Apple* (www.apple.com/ilife) (\$79): For posting quick videos to the Web, you'll be most interested in the iMovie HD component of this suite.

Essentially, the module enables you to load in raw video, which automatically adds transitions between your video clips, and will lay down a music soundtrack as well, if you'd like. A selection of background music is available from the packages iTunes library. And if you want to spend a little more time with your piece, you can add additional effects, modify transitions and add additional sound and/or music.

ShowandTell Pro 3.2, from *SoftTV* (www.softv.net) (\$499): ShowAndTell was designed with one purpose in mind: to enable non-technical users to combine a PowerPoint slide presentation with audio



Serious Magic provides software designed to create and upload video to the Web in minutes.



KBZT(FM) is adding sizzle to its site with videos of in-studio performances by top bands.

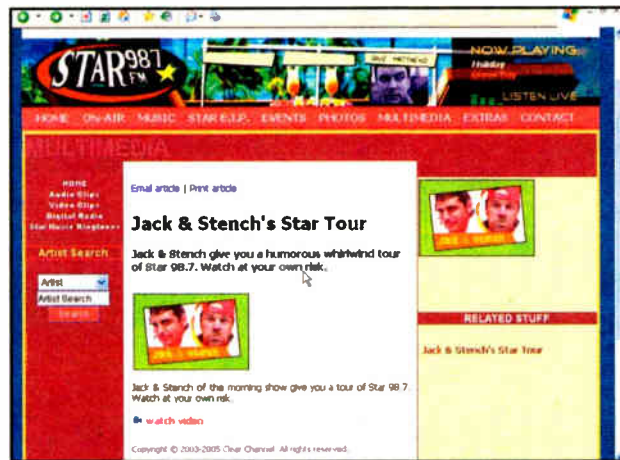
marketing tool, the learning curve was too steep.

No more. With the latest round of Web video authoring programs available under \$500, a person with a basic knowledge of the PC can shoot and upload a professional-looking video to a Web site in about 10 minutes.

As you might imagine, the implication of this ease of entry is substantial. For the first time, an everyday PC user at a station can now shoot and post Web video talent messages, press releases, breaking station news, company exec speeches, employee orientations films, worker safety tutorials and any number of other audio/video media that until now has simply been too cumbersome for most.

Plus, there's a good chance you'll find Web video will add more to your station's site than just flash. Chances are, people will notice, and get more excited about the station.

"We usually see a good response on the phones when we post a video on the Web," said Nick Upton, digital media program manager for Jefferson-Pilot stations KSON(FM) and KIFM(FM) in San Diego. "We've been doing it for about a year." The company's KBZT(FM) in the same market has posted videos of in-studio appearances by top bands.



KYSR(FM) posts videos of DJ clowning.



At WBBM visitors can download up-to-the-minute news videos.

reasons the software is so fast is that once you're done with a production, you can simply save it as a Windows Media or similar audio/video file, highlight that file and upload the finished video onto your Web site.

Another reason the software is easy to use is its onscreen teleprompter. Instead of fumbling in front of a PC camera with a paper script, you can load your script into the software, and read what you have to say off an onscreen teleprompter in

ry from the moon when they're actually standing in a studio in New York.

Ultra 2 enables you to achieve the same sleight-of-hand, using its virtual background libraries. For example, if your office furniture is looking a little dingy, you can use Ultra 2 to drop in the backdrop of a Fortune 500 corner office. The package comes with three background set libraries, which include a horrendously well-appointed conference room, complete with city skyline; a set of a major network-like TV talk show; dramatic inside shots of a world-class museum, and the like.

Vlog It, by *Serious Magic* (www.seriousmagic.com) (\$99): While still in development, this product promises to be the perfect solution to companies looking to add a little video to their corporate blogs. Vlog It will essentially be a stripped-down version of Visual Communicator 2. You won't get as many frills and special effects, and for the purposes of your corporate blog, you probably won't need them. Vlog It will specifically target corporate communicators who need to get information and breaking news to the Web in minutes.

Dazzle DVC90, by *Pinnacle Systems* (www.pinnacle.com) (\$79): A high-speed video cable that connects any video

voice narration that can be published to the Web in minutes. No post-production is necessary. The software can be programmed to keep PowerPoint slides moving in sync with your voice.

Additional Resources: If you'd like to get a feel for the spectrum of Web video on the Web, check out Podcast Alley (www.podcastalley.com). It's a super-directory of Web video representing virtually every interest area. Podcast Alley will list any Web video in its directory, including company news and/or marketing messages.

Another resource is a small directory of video-to-Web software that is maintained by RealNetworks (www.realnetworks.com/products/mediapublisher/index.html). As one of the Web's major audio/video formats, RealNetworks has a vested interest in showing non-technical people how to get video up to the Web as fast, and as effortlessly, as possible. Thus this heads-up directory.

Joe Dysart is an Internet speaker and business consultant based in Thousand Oaks, Calif. E-mail him at joe@joedysart.com.

Found a useful online resource that would benefit fellow readers? Tell RW about it. Write to radioworld@imaspub.com.

We usually see a good response on the phones when we post a video on the Web.

— Nick Upton

Clear Channel's KIIS(FM) in Los Angeles had been experimenting with the medium, featuring videos of some on-air clowning by DJ JoJo; its KYSR(FM) in Burbank offers more DJ clowning. Infinity AM station WBBM in Chicago offers video clips from CBS 2 News.

If you're looking to experiment with your own videos on your station site, here's a sampling of the latest software tools that will help you to make it happen:

real time. The software also comes with hundreds of customizable graphics, effects, titles music and templates you can use to give your production a finished look.

Another major perk is the software's background replacement module. With this feature, as long as you shoot with the manufacturer-supplied green screen as a backdrop, Visual Communicator will let you drop a new, virtual background into the fin-

Political Lessons for Radio DJs

It was boring, so I zoned out. A politician had come to a groundbreaking event at my synagogue. He was a good speaker but the material was dry. How many things can one say about constructing a building?

However, after his speech, he began circulating through the crowd. I found this part fascinating.

I'm watching an incumbent U.S. Congressman taking time out of what must be an incredibly busy day to focus on individuals who may not even be affiliated with his party.

I waited my turn to have the experience of speaking with him. When he approached me, he shook my hand firmly, introduced himself and waited politely to hear my name. Then, with totally believable interest, he used my name at least once during our 60-second conversation. He did not take his eyes off me even though there were others standing by to speak to him.

I thanked him for attending and asked him where he was off to next. He replied, with a big smile, that he had three more similar events to attend that Sunday afternoon. Saying goodbye to me, he moved on to the next person.

I never mentioned that I worked in media, nor did I give him any reason to think that I would even vote for him.

The experience blew me away. Why? Because I kept thinking about disc jockeys.

Jocks could learn a lot by watching politicians work a crowd.

Let's start with politicians' main objective. What is it? They want to be liked and remembered by whoever's around them. This isn't so different than trying to get a crowd to remember your station and "vote" for you by filling out your call letters in an Arbitron diary.

Crowds are won over by speakers who are poised and articulate, who take the time to mingle when possible.

You can also bet that when politicians address the public at even a small event, they are prepared. Politicians don't show up not knowing the crowd, the background about the event or the points they're supposed to make. Unfortunately, DJs often know little about the event they're working or what the crowd may expect of them.

Some blame goes to promotion departments and program directors who send their jocks somewhere without a briefing. Great promotion departments do event prep-sheets that detail everything about an upcoming event, including what the DJ should wear. And if the talent would take the proactive route and ask for this information even when it isn't handed to them, it would make for better business all around.

A politician would never go to a big event and then hide. DJs commonly find excuses for not mingling. Too often I've found DJs hanging out backstage when they should be out working the crowd.

I worked with a jock who would spend his assignment at a show walking up to people who were wearing station shirts or hanging out near the broadcast booth, introducing himself and acting like he was the host of a big party.

Self-isolation can also happen at small sales appearances. Instead of being available to yak with listeners or with clients who are fans of your format, DJs will often relax in a back room or ensconce themselves behind a counter when they're not behind a mic. What a waste of time.

Many folks believe that working a small crowd also is a waste, but evidence points to

the contrary. Interacting with small groups and knocking on doors gets politicians elected. Word of mouth spreads fast among people with whom DJs leave a good impression.

Politicians rarely leave without trying to close the deal. The speech or interaction typically will end with them encouraging you to vote for them in the next election, or they'll talk about how you can become involved in their political party or community activities.

DJs should do the same when leaving their place in front of a crowd. They should think of a way to encourage people to listen. If this doesn't come naturally to a DJ, someone from management should prompt him.

Speaking of acting naturally: Most of my advice presumes that a disc jockey can relate to people face-to-face. I realize some just can't handle live situations. They're comfortable behind a microphone; take them out of the studio and they become introverts.

However, there is hope. Many can improve their performance through coaching, practice and observing professional crowd-handlers.

Personal connection is everything when it comes to the ballot box. Get your jocks to connect with the crowds and those Arbitron diary votes will come rolling in.

The author is president of Lapidus Media. E-mail him at marklapidus@yahoo.com.

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by Mark Lapidus



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What Got Your Neighbors in Trouble

*Our Intrepid Legal Eagles Peruse
Recent FCC Fines Against Radio Stations*

by Harry Cole and
R.J. Quianzon

Schadenfreude. According to Webster's it's a German term meaning "enjoyment obtained from the troubles of others."

We aren't ones to suggest that readers get their kicks at the expense of colleagues; but often, valuable lessons may be learned from travails of those less fortunate ... plus, sometimes it is pretty funny to read about the stuff that happens to everybody else.

With that introduction, and with apologies and condolences to readers who may have suffered the indignities described, we offer a brief glimpse at some of the fines and forfeitures issued by the FCC over the last several months.

Expensive fence

Robert Frost gave us the classic line: "Good fences make good neighbors." And the FCC takes that notion to heart.

We all know that transmission sites are supposed to be securely fenced in, to keep vulnerable and oblivious passersby (or, worse, nuisance intruders) from undue RF exposure. So you can understand the FCC's chagrin when a commission inspector called the contract engineer for an AM in Puerto Rico to advise that the inspector would be stopping by the transmitter later that day.

No problem, said the engineer; if you need to access the tower, there's a gap in the fencing that you can slide through.

The admission that the fence was less than secure may have been a bad idea but the issue became moot when the inspector arrived at the site and found the fence gate completely removed and lying by

the side of the road. The FCC proceeded to whack the licensee for \$5,600 for the fence violation.



In a similar though less extreme vein, the commission fined a Richmond, Va., AM station \$4,200. These folks at least still had a gate that was connected to the rest of the fence, but they neglected to include a lock, making the site accessible to the world at large.

The licensee argued that the lack of lock was limited to a four-day period, a time frame so short as to not warrant any penalty. The commission disagreed (and then threw in an extra \$2,400 fine because the station had failed to reduce nighttime power).

Clean record, faded paint

The FCC expects towers not only to be protected from the great unwashed, but

also to be well painted and visible.

As one Alabama FM licensee has learned, "well painted" and "visible" are qualities that may vary from one observer to the next. An FCC inspector checked out the licensee's tower one day and concluded that it was neither well painted

nor properly visible. According to the report, the orange and white paint was "faded and chipped."

The licensee disagreed, pointing out that the inspector's observations had been

should have registered it.

They check the FCC's database, find no record of this particular tower and write the licensee up for a \$13,000 fine. (Note that open or non-existent fencing — exposing an unsuspecting public to the horrors of excessive RF — triggers fines in the \$5,000 range, but a failure to do the necessary paperwork with the FCC, well, now we're talking *serious* public interest problems worthy of twice the fine. Go figure.)

This story, however, has a happy ending, at least if you're the licensee in question. The station engineer rode to the rescue with an astute observation.

Sure, he acknowledged, the tower sections are each 10 feet in length — but they interlock, with 3.5 inches of each section nesting comfortably into the connecting section to keep the tower snugly secure. So the total height of the tower was not calculated by multiplying 20 (the number of sections) by 10 (the number of feet). Rather, the correct calculation produced a height of 197 feet 5 inches, and registration was not necessary.

A nifty save worth 13 grand.

Fines vs. files

On a less happy note, there's the story of the licensee of more than two dozen radio stations who inadvertently failed to file for renewal of an earth station license that it used as part of its operations. When the commission focused on this lapse, it fined the licensee \$4,000 despite

**One astute engineer saved his station
a \$13,000 fine by noticing that the
inspector had made a 31-inch error in the
calculation of a tower height.**

made not from a point immediately next to the tower but from 100 feet away, using binoculars. And since the weather on the day of the inspection was overcast and rainy, the inspector apparently didn't even get out of his truck. The licensee argued that the inspector's distant vantage point did not enable him to make a reliable determination about the condition of the tower's paint job.

The commission was not moved; apparently 100 feet is an "approved distance" for such observations as far as the *federales* are concerned. Total damage: \$8,000 due to the government (reduced from an original \$10,000 fine because of the licensee's clean record).

Not only does the FCC want licensees to keep their towers locked up nice and secure and vividly painted, but it also wants to make sure that those towers are registered properly. And woe be unto those who don't mind their registration "Ps and Qs." A West Virginia AM licensee almost learned this the hard way.

As you probably know, not all towers have to be registered; but those that are 200 feet or taller do. So out come the inspectors and they check this guy's tower and they count 20 separate 10-foot sections and they do the math and they conclude that, since the tower is 200 feet tall — that's 20 sections times 10 feet per section — the licensee

the licensee's argument that it had diligently renewed its full-service station licenses and a dozen or so auxiliaries.

Let's end on an upbeat but still cautionary note.

In January, the FCC inspected a tower in Florida and found problems. In April, it sent the tower owner a notice of apparent liability for \$10,000 and advised the owner that payment had to be made within 30 days.

Seventy days later, the FCC sent a forfeiture order to the tower owner demanding full payment and noting that if the payment was not made, the matter could be turned over to the Department of Justice. The only problem was that the payment *had* been made, on time, 40 days earlier.

Once the commission was, er, reminded of that payment, it backed off.

While this tale worked out well for the licensee, it underscores the wisdom of keeping your files in good order so that if the FCC does try to doublebill you (possibly because its own files are not kept in apple-pie order), you can easily demonstrate the error of their ways.

Harry F. Cole and Raymond J. Quianzon are attorneys in the firm of Fletcher, Heald & Hildreth PLC. Reach them at (703) 812-0400 or via e-mail to cole@fhhlaw.com or quianzon@fhhlaw.com.

STATION SERVICES

Ken R. Offers 1981's 'History of Rock and Roll'

Stations can obtain the 1981 radio documentary "The History of Rock and Roll" from Ken R. LLC. The company said the program is available on a cash, non-exclusive basis and can be run repeatedly with no time limit. Purchasers are responsible for ASCAP and BMI payments.

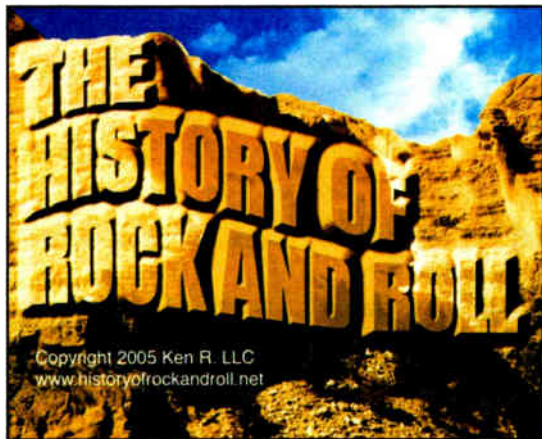
The 36-hour program originally was produced by Drake Chenault and voiced by programmer Bill Drake. It includes hours dedicated to artists like The Beatles, Elvis and Elton John.

"This is not an aircheck or a scoped program; it includes full versions of the original hits interspersed with frequent short interviews with the artists that made them," the company stated. Ken R. also is a contributor to Radio World, which is not involved in the project.

The show is delivered on CD without commercials; each hour is 53 minutes long to allow spots or other content. The show can be aired as individual hours, all at once or in any order.

Details of each hour including artists and segment lengths are available at the company's Web site, along with a 13-minute demo and downloadable artwork.

For information call the company in Ohio at (419) 537-0011 or visit www.historyofrockandroll.net.



SMALL-MARKET MANAGER

Do You Air Enough Local News?

by Ken Hawk

Radio news is the lifeblood of any small-market radio operation, along with local sports. Yet some station managers, especially at AMs, feel morning drive is enough. They offer little, if anything, past noon. Why?

Radio news is unlike any other medium. Breaking news can get on the air immediately, with full details.

The local paper will have the story tomorrow; if TV thinks it's worth covering, you'll have to wait until 4, 5, 6 or 11. With local radio, if it's happening now

little, if any fanfare. Miss a breaking news story later on in the day, guaranteed — it will be on the front page of tomorrow's paper, and they will make a huge deal of it. Let's not forget the stories they have that you don't or may seem to be old news. Read between the lines; you can sometimes find a story within another story.

"Not Enough Manpower" — This is where your support staff gets the chance to shine. If you have trouble keeping part-time help around long enough, offer your receptionist, administrative assistant or maybe even a salesperson an extra \$15

to \$25 to cover a meeting or event that evening. Give them a tape recorder to collect sound and have them write a story for your newscaster to use the following morning, or better yet, if they're knowledgeable in the production studio, have them produce a full wrap story.

If you're strapped, and you think it's worth covering, put yourself into service. I've seen broadcasters who keep recorders in their cars for breaking stories that they come near.

Another good idea is offer the listener who calls in with the best newscast of the week a check for \$10 or \$20. It's a great way to get listeners

involved, and it doesn't cost much.

"No Sponsorship" — Believe it or not, I have spoken with broadcasters who don't air newscasts in *morning drive* because they can't get a sponsor for them!

If you want to keep the sponsors that you have, you'll offer morning news at least once an hour, every hour in AM drive. Don't make your listeners suffer because a client doesn't want to pay for a sponsorship. Listeners are not afraid to get local news elsewhere.

Be creative. Make that 6 a.m. newscast a value-added sponsorship for a current ROS or sports client.

"There's Not Enough News Going On" — Really? Who says the news
See NEWS, page 38 ▶

Believe it or not, I have spoken with broadcasters who don't air newscasts in morning drive because they can't get a sponsor.

you can hear it now.

Thus, consumers can "read it tomorrow, watch it tonight — or hear it now." Which do you think your listeners would rather do?

Consider the arguments explaining why broadcasters skimp on their news:

"We Have No Competition; Why Bother?" — Just because you're the only radio station in the market doesn't mean the competition doesn't exist. Even if you have a story that the newspaper and a regional TV station are willing to cover, they won't have the story to the viewer or reader faster than your listener on your radio station. When you promote a "News First" policy, you're engraving your call letters into the minds of listeners and potential advertisers.

"It Cuts Into the Music" — You can air local news every hour all day without it so much as making a dent in your TSL. Air full newscasts during noon and both drive periods, with the remaining hours for a 60-second news brief. If you air network news during those hours, why not put a minute-long local brief in there with five-line versions of earlier stories? End the newscast with a tease to the next full newscast, so that listeners know when to tune in. It's also a great way to update them on what's happening during the day.

"The Paper Comes Out in the Afternoon" — Therefore your stories from this morning are all old, right? Wrong! Your stories from that morning may appear on the front page, but with



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Terms for the Network Trade

Arbitron recently released a presentation called "Network Radio Today, 2005 Edition" for the use of agencies, advertisers and networks. Included in the material was a glossary of "terms for the network trade." A radio network here is defined as an organization that provides programs, services and commercials to local affiliate stations.

The definitions are below. While some of the terms are specific to the company's RADAR service, many of the terms are more general, and the list thus may be useful to readers working with network radio.

For a copy of the report, which includes statistics on Americans' use of network radio, visit www.arbitron.com, go to National Radio and click on Free Studies.

Affidavit A signed or verified document from the affiliate station states if and when specific programs and/or commercials have been broadcast. Accurate and timely completion of the affidavit is a requirement of affiliation contracts between the station and the network or program syndicator. Completed affidavits can be returned to the networks or syndicator in printed form or by the Internet.

Affiliated Station A radio station that has a contract with a network or syndicator to clear national commercials in exchange for programs, services and/or compensation. Also called an "affiliate."

Audience Composition The demographic or socioeconomic profile of a network's or national syndicated program's audience in terms of makeup, usually including the percentages of the total audience that constitute each segment. These reports may express audience characteristics such as age, gender, location of listening, Census region, county size, household size, DMA markets, education, household income, ethnicity, race, work status, and presence of children in the household.

Audience Duplication The amount of one network's cumulative audience that also listened to another network within the specified daypart. Duplication can be expressed either

in terms of the actual number of exclusive listeners or as a percentage of the total cume.

Audience Estimates Approximations of the number of persons listening to or hearing a network radio commercial, network program or syndicated program. Audience estimates are not precise mathematical values and are subject to statistical variations and other limitations. For radio networks reported in RADAR, audience estimates represent radio listening as reported by respondents in Arbitron diaries matched with commercial clearances as reported by affiliates in affidavits. For non-RADAR networks and syndicated programs, estimates are based solely on listening as reported in Arbitron diaries and do not take into consideration commercial clearances. The estimated average number of impressions per quarter-hour of persons in the radio audience within a specified time period (e.g., a daypart) to a network broadcast as reported in RADAR, expressed in thousands.

Average Audience Rating The estimated average audience during a specified quarter-hour or a daypart, expressed as a percentage of the population of the target audience. Usually, carried one place past the decimal point.

Average Daily Cume The estimated average of cumulative audiences for each day of the week (e.g., Monday-Friday). This represents the average number of different persons reached per day.

Broad Dayparts Dayparts with multiple component dayparts (e.g., 6AM-7PM, 6AM-12Midnight).

Clearance An airing of a network commercial or program by an affiliate station. A station's confirmation that a commercial has aired at a specified day and time. It reflects commercial carriage information and is reported back to the network or syndicator via the station's affidavit.

Commercial Load The amount of commercial time or the number of units in a given period, usually stated on an hourly basis.

See NETWORK, page 39 ▶

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News

▶ Continued from page 37

always has to be bad? A simple blood drive from the local Red Cross can be a great community-based promotion for your station as well as a nice feature story on blood needs for local hospitals, which — all together now — spend lots of money on radio.

You get public service announcements in the mail almost every day. Story ideas are out there. There should never be any down time in your newsroom.

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Too many hometown stations these days are becoming irrelevant in their own communities. So be the hero. If you won't, someone else will. Cash in on this philosophy.

What's news now will be history at 6 or 11, or worse, tomorrow morning.

Ken Hawk is director of programming and promotions at Renda Broadcasting station WCCS(AM) in Indiana, Pa. Reach him at (724) 763-9545.

Got a smart tip for managing radio in smaller markets? Write to radioworld@imaspub.com.

Network

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County Size Definition A system of categorizing U.S. counties by population into five categories (i.e., AA, A, B, C and D). It was developed by Nielsen Media Research, except for the AA distinction, which is from the Arbitron RADAR service.

Coverage The percentage of the total U.S. Persons 12+ population contained within all of the DMAs where an affiliate's signal can be received. Also called "DMA Coverage" or "Percent Coverage."

Cumulative Audience The estimated total number of different persons who listen to a network or national syndicated program during a specified daypart for at least five minutes in a clock quarter-hour. Also referred to as "cume."

Designated Market Area (DMA®) DMA is the main geography for television measurement. The DMA is composed of sampling units (counties or geographically split counties) and is defined and updated annually by Nielsen Media Research, based on historical television viewing patterns. A county or split county is assigned exclusively to one DMA. Network radio as reported in RADAR includes only the DMAs located in the contiguous U.S., excluding Alaska and Hawaii. Arbitron's Nationwide service reports radio audience within DMAs, including Alaska and Hawaii. Almost all radio network and national syndication buys are based on DMA.

Effective Frequency The concept that a certain amount of exposure (often three exposures) to an advertising message is necessary before it is effective.

Exclusive Reach An audience that can only be covered by a specific network or program.

Full-Daypart Networks Networks whose broadcasts are found in all or virtually all component dayparts Monday- Sunday 6AM-12Midnight.

Full-Inventory Networks Networks with more than 100 minutes of commercial inventory.

Limited-Daypart Networks Networks whose broadcasts are found in only one component daypart (e.g., 6AM-10AM).

Limited-Inventory Networks Networks with less than 100 minutes of commercial inventory. A list of stations reflecting affiliates contractually obligated to clear the commercials associated with a network or national program. While the lineup is updated regularly, new affiliates can be added at any time and some stations may disaffiliate. Every affiliate on the list is not necessarily obligated to clear 100 percent of all commercials scheduled. By contract, certain stations may clear a single commercial more than once or may not clear all of the commercials due to special circumstances.

Long-Form Programming See "Syndicated Programming."

Media Rating Council (MRC) An independent body established to evaluate audience research services and ensure credibility. To obtain MRC accreditation, a rigorous evaluation of the methodology and processes of a product is performed on a yearly basis.

Monitoring A supplemental service offered under Arbitron's RADAR umbrella, Monitoring verifies the accuracy of the

RADAR clearance information. Arbitron samples network affiliates for one week, each month of the year. Selected periods of times for the sample station are recorded with broadcast programs and commercials transcribed. Affiliate affidavits are checked against the monitored record. Each network organization receives reports on its affiliates' reliability that allow the networks the opportunity to address an affiliate that might not be completing its affidavit correctly.

Multi-Daypart Networks RADAR networks whose broadcasts can air across component dayparts (e.g., 6AM-7PM).

National Advertising Advertising placed on networks or syndicated programs with at least 70 percent U.S. coverage. Differs from national "spot" in the number of markets and percent of coverage.

Nationwide Arbitron's national radio audience survey issued twice a year (Spring and Fall). Provides local DMA market radio listening data for national programs and aggregates to Total U.S. A broadcast entity that can provide programs, services and/or compensation to affiliated stations in exchange for those stations airing national commercials.

Network Radio Research Council (NRRC) An organization of researchers from networks reported in RADAR dedicated to improving the quality of national radio measurements.

Parts An application within the RADAR PC 2010 software package that allows analysis of commercial schedules based on daypart placement. Estimates include Average Audience and Rating, Gross Impression, as well as Reach and Frequency. Usually used

during the development of commercial schedules for specific advertisers and during the negotiation phase of a buy.

Post Analysis or Post Buy An analysis of a network commercial schedule after it runs based on affiliate affidavits to compare the projected audience estimates to the actual audience delivery. Requests for network posts are agreed to during the negotiation process.

RADAR Arbitron's syndicated measurement service providing audience estimates to cleared network radio commercials for networks that subscribe to the service. RADAR estimates are released four times per year and are based on an annual sample of more than 90,000 diary respondents.

Reach The estimated number of different See NETWORK, page 40 ►

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Network

► Continued from page 39

persons in the audience of a specified advertising campaign, station, network or syndicated program.

Response Rate The proportion of originally designated sample persons who provide usable data for the survey. Response rates are determined by dividing the total number of in-tab (usable) diaries by the total estimated Persons 12+ in the designated sample. Usually expressed as a percentage.

Run of Schedule (ROS) ROS commercials are scheduled to run across multiple dayparts within a broad daypart parameter.

Scan An application within the RADAR PC 2010 software package suite that allows analysis

of pretabulated RADAR data in several report formats including rank and trend reports, audience composition reports, program and daypart audiences and audience duplication.

Spots An application within the RADAR PC 2010 software package that allows analysis of commercial schedules based on specific commercial placement. Usually used as part of a post analysis. See "Post Analysis."

Standard Daypart Networks Networks that broadcast in most component dayparts.

Syndicated Programming Nationally distributed programs that stations are contractually obligated to broadcast. These programs have commercials associated with them that are usually aired within the programs. The length of these programs can be as short as a one-minute feature to as long as a multihour holiday special. The content of the program can include music, talk or sports play-by-play. Audiences to syndi-

cated programs are estimated using Arbitron's Nationwide service and can be based on dayparts or on expected commercial clearance times, but are not based on actual clearances.

System to Optimize Radio Network Schedules (SOS) An application within the RADAR PC 2010 software package that allows the development of an optimal network radio schedule by maximizing the number of persons reached or minimizing the costs required to achieve a specified reach.

Targets An application within the RADAR PC 2010 software package which allows the user to create custom electronic ratings books.

Total Radio Audience estimates to all radio stations, commercial and noncommercial, AM and FM.

Unit One commercial message regardless of length.

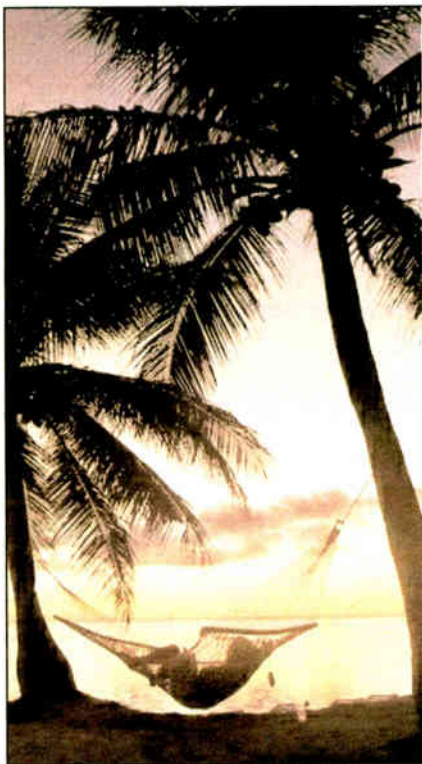
Volume 1 Data Within the RADAR service, a report of national radio listening that includes estimates for total radio listening, network-affiliated stations' listening, AM and FM stations, and other characteristics. Volume 1 does not contain cleared audience estimates for specific radio networks.

Volume 2 Data Within the RADAR service, reports listening for the specific RADAR-reported networks for all commercials aired on network-affiliated stations whether they are carried within or outside of programs.

Volume 3 Data Within the RADAR service, reports listening for the specific RADAR-reported networks for commercials aired on network-affiliated stations within programs only.

Weekly Cume The estimated average number of different persons reached in one week (i.e., Monday- Sunday 6AM-6AM).

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AUDIO PROCESSING (INCLUDES ON-AIR)

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CRL SEP-400A 1PMC-300A. spectral Energy Processor and Peak Modulation Controller. \$500 - Call Jerry Evans 775-884-8000

dbx 285A Mic/Preamp Processor \$100. Visa/MC Bob May 660-885-6141

Orkan 2000 Digital Audio Processor In service 16 month-works perfectly. Will pay shipping. \$2400 Visa/MC Bob May 660-885-6141

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WANT TO SELL

Now available, radio automation for the Linux operating system. Schedule music, voice track, create shells, auto or announcer assist mode, set intro and ending cues, hit the vocal every time with your voice tracks, execute exact time events, join networks, and more. Visit digitaldevelopment.net and click on RADIO AUTOMATION for screen shots. The software is free, there is a small duplication fee. For more info call 406.665.1832.

Digilink Systems, 4-Digilink DL2 with DL4 Software and 18 GIG Hard Drives. 4-Digilink DL4 Audio systems and 2-Digilink CD Controllers, Lots of Extra New Parts, Switchers, Hard Drives, Power supplies, etc. 12 Pioneer PD-TM3 18 Disc Cd Players available. All Digilink equipment \$2500. John Franks 740-522-8771 sales@wnko.com

Crown Air/Force/Starplus 96EX Air force automation system (?). The Starplus 96 Ex expansion KSU. Part SP4002-00 is some sort of audio processor...I think. Make offer. Call Jerry Evans 775-884-8000

WANT TO BUY

Enco OAD 486 Need Workstation with all cards, etc. in good condition for parts. Call Chuck 814-837-9711

CART MACHINES

WANT TO SELL

Some record, some play only - lots of tape carts-Will sell cheap! - make offer - Call 580-265-4496

FURNITURE

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WANT TO BUY

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Circuit Werkes HC-3 Time sync - Make offer. Call Jerry Evans 775-884-8000

DBX 150 Type I noise reduction system. Two available. Make offer. Call Jerry Evans 775-884-8000

Otari MX5050 Two available in good condition. Price \$350 each plus shipping. Call Jerry Evans 775-884-8000

Pioneer CAC - V3200 - 300 compact Disc autochanger. Two available \$300 ea. Call Jerry Evans 775-884-8000

Stanton 310 - Turntable amp - Two available. Make offer. Call Jerry Evans, 775-884-8000

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Electric Works AS-28 Switcher, Must be in clean, operable, good shape. Call Tommy Yarbrough 931-967-2201 or 931-703-2277 wcdt@bellsouth.net

TAPES/CARTS/ REELS/CDs

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Large or small collections of 16" transcriptions or 12" transcriptions, not commercial LPs. Bill Cook, 719-687-6357.

TELEPHONE EQUIPMENT/HYBRIDS

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Gentner SPH-4 Telephone hybrid w/manual- \$100. Call Jerry Evans 775-884-8000

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◆ READER'S FORUM ◆

Unsung Heroes

I agree wholeheartedly on your editorial of recognition of engineers ("But What About the Engineers?", Sept. 28). I have spent 20+ years in the industry and "the forgotten engineer" has been a reoccurring theme throughout.

However, I have spent the last eight years at a company that excels at recognizing all involved, including the engineers. Nassau Broadcasting President Louis Mercatanti and Senior Vice President of Engineering Tony Gervasi have always treated the engineers as a valued part of the team in all aspects — money, praise and access to and involvement in decision-making.

case of poor, sloppy analysis and reporting. In the worst light, it could be construed as an attempt to deliberately misrepresent Kahn's position in this important issue.

The issue here is not whether you support or oppose Kahn or Ibiqity IBOC nighttime operation. Rather, the issue is whether the industry can look to Radio World as a credible source of information. The treatment given to the Kahn comments in this issue indicates we should look for credibility elsewhere.

*D. S. Tacker
Tulsa, Okla.*

*Editor in Chief Paul McLane replies:
The author raises a valid point about the story in question. Please see my column in the Nov. 23 issue for more on this question. That issue also includes the full text of Kahn's filing.*

I am proud of the way Nassau Broadcasting has gone about treating us engineers decently and with respect.

— Dave Brown

I have never responded to an editorial before, but I am proud of the way Nassau has gone about treating us engineers decently and with respect. Too bad other operators don't see the value of including the whole team, and not just the selected and favored few.

*Dave Brown
President, LeChard Marine
Contracting
Vice President, Nassau Holdings
Manahawkin, N.J.*

Radio Not Much Fun Anymore

I've been a grateful RW subscriber for more than 10 years.

I started listening, before I was 5 years old, on portable transistor radios, stereos and CBs in the early 1970s. I later graduated with a degree in electronics from ITT. I've worked for radio manufacturers like Grundig and Sangean, and obtained a ham license (KF6OZU). I have been a novice radio announcer/DJ. I have worked on satellite communication payloads for Loral Space Systems.

But what I really am is a big radio listener. Or should I say "was"?

Sure, I sometimes listen when doing service work on a receiver, or in the car when I don't want to fumble with CDs. It's usually tuned to Radio Disney, because there are few commercials. Why do I listen a lot less now? Because the "radio" isn't much fun anymore. The commercials are excessive, annoying and sometimes a tad insulting. I listen to music on CDs because there are no commercials.

When I started listening to the radio more than 30 years ago, it was wonderful. Happy, polite radio announcers and DJs were a delight to listen to. AM was popular, FM was playing rock in stereo. Entertaining, simple, great! Yes, there were commercials, but there weren't as many. I sometimes listen to airchecks from the '60s and '70s and see — *hear* — what we've been missing.

But the thing that ticks me off the most is not only have we let programming go and get sloppy, but now we have decided narrowing bandwidth and adding digital interference will help things. Please.

For the eggheads who need to receive digital data, connect your computer. Don't pollute my airwaves.

*Robert J. Polhamus
San Bernadino, Calif.*

Kahn, Out of Context

As a station owner and developer, I have watched the comments filed by various parties in Docket Number 99-325 with interest.

I was astounded to see the treatment of comments filed by Leonard Kahn ("Good Digital Deal ... or Deal Breaker?", Sept. 28). Radio World quoted only a portion of the Kahn comments, which without more information suggest that Kahn questioned whether Ibiqity IBOC would destroy nighttime AM service. Anyone who has followed this proceeding knows that Kahn has argued forcefully against nighttime operation of the Ibiqity system.

When Kahn's comments are read in their entirety, it becomes clear that Kahn's statement — "there is some possibility that Ibiqity IBOC will not destroy nighttime AM service" — is used in a rhetorical sense, because Kahn thereafter provides a caveat to the statement that proposes very broad restrictions on nighttime IBOC operation. Radio World published only a portion of the comment, omitting the subsequent caveat. This was done without any indication that subsequent text was being omitted.

Looking at this story under conditions most favorable to Radio World, this is a

Radio World
The Newspaper for Radio Managers and Engineers

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Steve Tuzeneu
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Radio World, December 7, 2005

Zeke & EGOR: What's in a Name?

Read with a grin your article on naming automation systems ("Radio Terms of ... Endearment," Oct. 12).

Automation systems were not the only things to be named, by far. We are a high school public radio station with a remote control system, and we never had problems with it so we never seemed to name it.

However in the early 1990s I inherited a Moseley TV remote control from WPBY(TV) in Huntington, W.Va. This thing consists of two huge clunky boxes of buttons and stepping relays that apparently gave them trouble most of the time. Stenciled on the front was "Three Mile Island Remote Control."

It still sits in my garage. I show a picture of it to my remote control every once in a while to let it know it can be replaced should it give me problems.

Vernon Stanfill
WFGH Public Radio 90.7
Tolsia High School
Fort Gay, West Va.

Reading Ken R.'s story reminded me of my time at KCBS(FM) in San Francisco 1971 on the 32nd floor of Embarcadero Center. Long before most people ever heard of voice tracking, KCBS was totally "tracked" using a system made by IGM of Vancouver, Wash.

The machinery included six or eight (best I can recall) cart carousels that rotated to reject and add carts as needed, as well as numerous multiple-cart machines and two reel-to-reel decks. These decks held the day's voice tracks, which were recorded as much as a week ahead of time.

We recorded our tracks with the help of a union engineer who added the necessary 50-cycle tones at the beginning

Radio Terms of ... Endearment

There Was Something About That Automation System That Made You Want to Give It a Nickname



Oh, Zeke!
The first time I saw the direction of the automation system was in the 1970s. I was at the time in the automation room at WJLA-TV in Washington, D.C. I had just started working there and was in charge of the automation system. I had just started working there and was in charge of the automation system. I had just started working there and was in charge of the automation system.

The had old days
When I first got into radio, I was in charge of the automation system. I had just started working there and was in charge of the automation system. I had just started working there and was in charge of the automation system.

Even though the automation room had special carpeting, static would occasionally build up and a few carts would fire off at the same time, or the voice reels would spin ahead (or back) a few tracks. I have hours of air checks of myself, taken off the air in my apartment on Union Street, with me introducing the tune I played three songs ago, or three songs later. Segues were even better, naming two songs while playing two different ones.

It would go on and on until someone called the station and one of the engineers from the AM station came down the hall and hit the reset button.

The automation system didn't acquire a special name, although it was called quite a few things during that period.

Jack Mindy
Operations Manager
WGMC(FM)
Rochester, N.Y.

I haven't been in radio broadcasting in years. But back in the 1970s when many automation systems were crude cantankerous contraptions, I was the CE at WPXY(FM) in Rochester, N.Y. The jocks all called our automation system FRED, which was an acronym for Friggin' Ridiculous Electronic Device.

One dark day, our GM asked me, "Can you build us an automation system for the AM? Because we really can't afford to buy one." I homebrewed a simple, relay-based, four-device sequencer to semi-automate a rack of reel-to-reel tape decks and give the AM jocks time to do other things.

What "other things" they would do was never really clear, but I digress.

This simple device, programmed using several three-position toggle switches, was ALFRED — Another Lousy Friggin' Ridiculous Electronic Device.

A popular name for program automation systems used to be Otto. Full name: Otto Mation.

Dave Matthews
Reston, Va.

Ken R.'s article about automation systems brought back some fond memories. My first, and last, hands-on experience with a mechanical automation system was with "Zeke."

Zeke and I became acquainted in 1979, when I reported for duty at 93.7 MHz, Virginia Beach, Va. The calls at the time were WMYK(FM), aka K-94. The station was done on a shoestring by Barbara Benns and her sons Robert and Bill.

Zeke was a collection of a dozen SMC 350 stereo carousels distributed among six equipment racks. The racks were bolted together on a 12-inch riser centered just about in the middle of everything in the building. Zeke even had his name in lights, courtesy of a station fan who worked at a neon sign shop.

All of K-94's audio passed through Zeke — spots, music, voice tracks, everything.

Poor Zeke could not always hear the difference between a stop tone and aux tone, which tripped the next event.

When Zeke worked, everyone was happy. When Zeke acted up, it was obvious why the station was built in a cinderblock bunker with no windows. Those walls stopped many a Fidelipac cart hurled in disgust at nothing particular.

Zeke was purchased used and had turned over a few miles before he began cranking out the AOR at K-94. Carts would tray in and crash into the tape head if anything upset the carousel rotation. Because of Zeke's age, most of his capacitors had dried out. Poor Zeke could not always hear the difference between a stop tone and aux tone, which tripped the next event.

You can imagine the effect this had on air talent, when Zeke made them look like fools by getting the voice track cart out of sync with the play list. Also, in those days, a couple seconds of dead air was an emergency.

Art Williamson once got so frustrated with Zeke that he grabbed the rack assembly and began shaking it. Wynn Evers walked in the door and immediately froze in horror when he saw Zeke (all six racks!) rocking back and forth to about 20 degrees off vertical. The racks were a pastel green, but should have been bright blue from the verbal abuse hurled at this electro-mechanical monster.

The decision was made that I should take Zeke off-line and the station would go live until I could rebuild the circuit boards.

Then a curious thing happened. The station picked up a couple points in the book. Zeke's fate was sealed; he never went on-air again.

Zeke was left in place. I took the best five carousels, built a sequential controller and put Zeke to work playing hard rock on an FM subcarrier, which was sold to movie theaters and bars in the Norfolk, Va., area. No doubt he's been replaced by a computer by now.

Walt Lowery
Associated with
RF Specialties of Washington
Mukilteo, Wash.

I got into radio at age 15. It was a small-market AM/FM combo. The AM was live and the FM was running a Sono-Mag automation system they called "EGOR."

EGOR routinely blew no-longer-produced parts during electrical storms or if someone zapped it with a jolt of static electricity. The CE had purchased all the spare parts he could get his hands on when they were being discontinued. When the parts were gone, so was EGOR.

Before that day came, the station went with the RDS Phantom for both stations. EGOR was scrapped for office space. I remember that system well and the days I had to babysit and work with it.

Chris Erwin
Olive Hill, Ky.



Chris Erwin and EGOR

◆ READER'S FORUM ◆

GUEST COMMENTARY

Transmitters for
Emergency Relief

by Kent Koselke

Crown Broadcast IREC recently completed two relief efforts for areas devastated by Hurricane Katrina and the Pakistan earthquake. Teamwork enabled these efforts, and Crown Broadcast is honored to have been able to participate.

Responding to a request from Tom Kerber of Kerber Applied Research in Ontario, Canada, Crown Broadcast donated a 250-watt FM transmitter to help restore communication to New Orleans. The transmitter is in use onboard the ship Hope, operating out of the town of Gretna located on the Mississippi River in the center of the New Orleans metropolitan area.



The Canadian Navy helped in unloading Galcom radios as well as the relief supplies that Blessings for Obedience had on its truck.

The Hope is operated by Friend Ships Unlimited, and is dedicated to helping people in times of need and encouraging others to do likewise. The organization works through the collection, delivery and distribution of food, medical supplies, clothing and building materials, and by providing medical services and trade school education.

This all started due to Tom Kerber's dismay regarding the situation in New Orleans and the entire Gulf area.

Kerber Applied Research is a major supplier of key transmitter components to Crown Broadcast. When Tom contacted us with his idea to put together a turnkey package of transmitter, antenna and other

necessary components for putting a transmitter on the air, we could not have been happier to participate.

When we asked for assistance, organizations such as HCJB World Radio's Engineering Center immediately pledged whatever support or hardware needed to make it happen. Tom even arranged to have 800 fixed tune solar powered receivers from Galcom sent to the area; these units are normally used in mission environments overseas.

Once the package was complete and ready to ship, Kelly Coleman of Blessings for Obedience in Midland, Texas, arranged final transport to the disaster area. Kelly also was instrumental in acquiring a temporary license from the FCC to transmit legally in the New Orleans area; this constitutes the first time we know of the FCC has given such permission to a private organization.

Turnkey turnaround

Crown Broadcast then responded to an urgent request to provide turnkey transmission systems to the earthquake-devastated region of Kashmir.

The request from Sachel Technologies of Karachi Pakistan was straightforward: to provide them with two complete transmission systems in a shipping case that will be pre-wired to operate as a full FM broadcast station when it arrives in the earthquake area.

The problem was that although Crown Broadcast is a transmitter manufacturer, we sell through broadcast dealers who assemble the packages of equipment for the end user, so we do not normally have the resources to put together a turnkey package.

I contacted two of my dealers for assistance: Steve Ellison of Broadcast Connections and Wray Reed of RF Specialties. I quickly found that I would not be able to get the components quickly enough to build this system in the timeframe needed to get these systems out the door. In order to help, Steve was happy to provide me with a shopping list to find a local vendor.

Luckily we found one who could get the components to us immediately. Thanks go

Radios Should Get Smart

A notable benefit of the software age is our ability to improve devices by applying an update, patch or firmware upgrade. For the most part, though, consumer radio designs do not offer this capability.

The NRSC-5 standard has taken an arduous effort by Ibiquity, the CEA, the NAB and others. But even Ibiquity would agree the technology is far from perfect or "finished."

Meanwhile, most receiver makers, it seems, have decided to wait for big changes to stabilize, and for the FCC to make the IBOC standard official, before they start mass-producing digital radios. We suspect they would be more comfortable with their commitment to HD if they built radios that could be updated easily via software later.

The industry long has considered the basic radio receiver to be a low-priced electronic consumable. New features are built into the next model. If a consumer wants those features, he or she is forced to buy the new model and abandon the old.

The HD Radio system could shift this paradigm. We undoubtedly will see improvements that will make IBOC more appealing: 5.1 surround sound, better codecs, time-shifted programming, enhanced data content and improved interference mitigation, especially for AM-HD. But if we force listeners to buy replacement radios every year or two, we could cripple the success of this technology. Radios should endure the average lifespan of any new car, about 10 years.

Also, radios increasingly are becoming integrated into the computerized navigation, control and monitor systems in car models. Such receivers are not as easy to replace by after-market units. In such an environment, it's even more desirable that future radios be upgradeable, or "smart" — especially new models that will include both satellite and terrestrial services.

The public is becoming more accustomed to the notion that software upgrades can improve products beyond PCs and PDAs. Low-end Walkman and tabletop radios may not be candidates for "smart" technology; but why not car radios, higher-end portables and component tuners?

The technology to support smart radios is well developed and is common in a host of devices and applications. Such updating could be applied via various methods, including an integrated CD player, a USB port, replacement of a USB plug-in memory stick or internal Flash EPROM chip — someday perhaps even directly, over the air.

Each method has its advantages and disadvantages. But any upgrade procedure would have to be easy for dealer service centers and even consumers to perform. It must be durable and trouble-free.

We are pleased to see a USB service port on the feature list of Radiosophy's soon-to-ship Multistream HD receiver, for instance, and we encourage the electronics industry to give further support and promotion to the concept of smart radios that can accommodate feature set additions and enhancements via software updates in the field.

— RW

out to Tim Franco and Justin Huffman from Guitar Center in Mishawaka, Ind. They really saved the day by finding and having ready for pick up the components for this special need.

HCJB Engineering Center in Elkhart provided the broadband antenna systems and feed line, completing the package. The components were installed in some roadie cases we had and were sent on their way to Kashmir.

These are excellent examples of how great this industry is in helping others in times of need. I never encountered any hesitation from any of our suppliers or dealers. We work in a special industry where all competitive business principals go out the window to work for the greater good in a time of need and crisis.

Other transmitter companies have emergency products — such as Harris' "Flyaway" system and Armstrong's 1 kW emergency radio offering — which is great. The more these products and services are available, the better the opportunity for people to get them in the time of their greatest need.

Our response is a direct reflection of our primary mission statement set forth by our retired president, Clyde Moore. Clyde's main directive in our mission statement is to honor God, serve people and develop excellence while upholding Biblical principals. We at Crown Broadcast are pleased to honor that commitment and continue the legacy Clyde began.

The author is sales and marketing manager for Crown Broadcast IREC in Elkhart, Ind. 🌐

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