

M Street Journal

RADIO'S JOURNAL OF RECORD

Spring NAB 2002 Preview and Product Showcase

April 2002

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INSIDE

News from
Washington

FCC Updates
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M Street Publications
 P.O. Box 442
 Lebanon, NH 03561
 Phone: (800) 248-4242
 Fax: (603) 444-2872
 Website: www.MStreet.net

Publisher
 PAT McCRUMMEN
 Email: patm@mstreet.net

Editor-in-Chief
 TOM TAYLOR
 Phone: (609) 883-3321
 Fax: (609) 883-5696
 Email: MStreetTom@aol.com

Contributing Editor
 FRANK SAXE
 Email: frank@mstreet.net

Editor
 MICHAEL CRIDER
 Email: mcrider@mstreet.net

General Manager
 KENE MCKAY
 Phone: (877) 268-3755
 Email: genemckay@mstreet.net

Research
 KATHY DEVINE
 Email: cdevine@mstreet.net
 KELLY ELSWORTH
 Email: kelly@mstreet.net
 MIRENNE BROUSSEAU
 Email: dbrousseau@mstreet.net

Art Direction/ www.MStreet.net
 ELLI GRIZEZ
 Email: graphics@mstreet.net

Subscriptions
 RENE YEARGLE
 Email: iyeargle@mstreet.net

Advertising Sales
 BETH DELL'ISOLA
 Phone: (770) 831-4585
 Email: bethdell@mstreet.net

TRACEY HOMBERG
 Phone: (248) 594-4232
 Email: nicktracey@aol.com

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Where's the party? And where's the exhibit hall? Radio people come to Las Vegas to work. They also come to party.

The paradox of the Spring NAB is that you travel to the biggest party city in America – but radio people DO come prepared to work, because it's the best chance of the year to make decisions, make new relationships, and educate yourself.

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If you're in Las Vegas, go learn. And party. We'll be there when you get back home. If you're not at the NAB, use this Convention Issue to learn what's new.

Now – enjoy this special Convention Issue of the M Street Journal.

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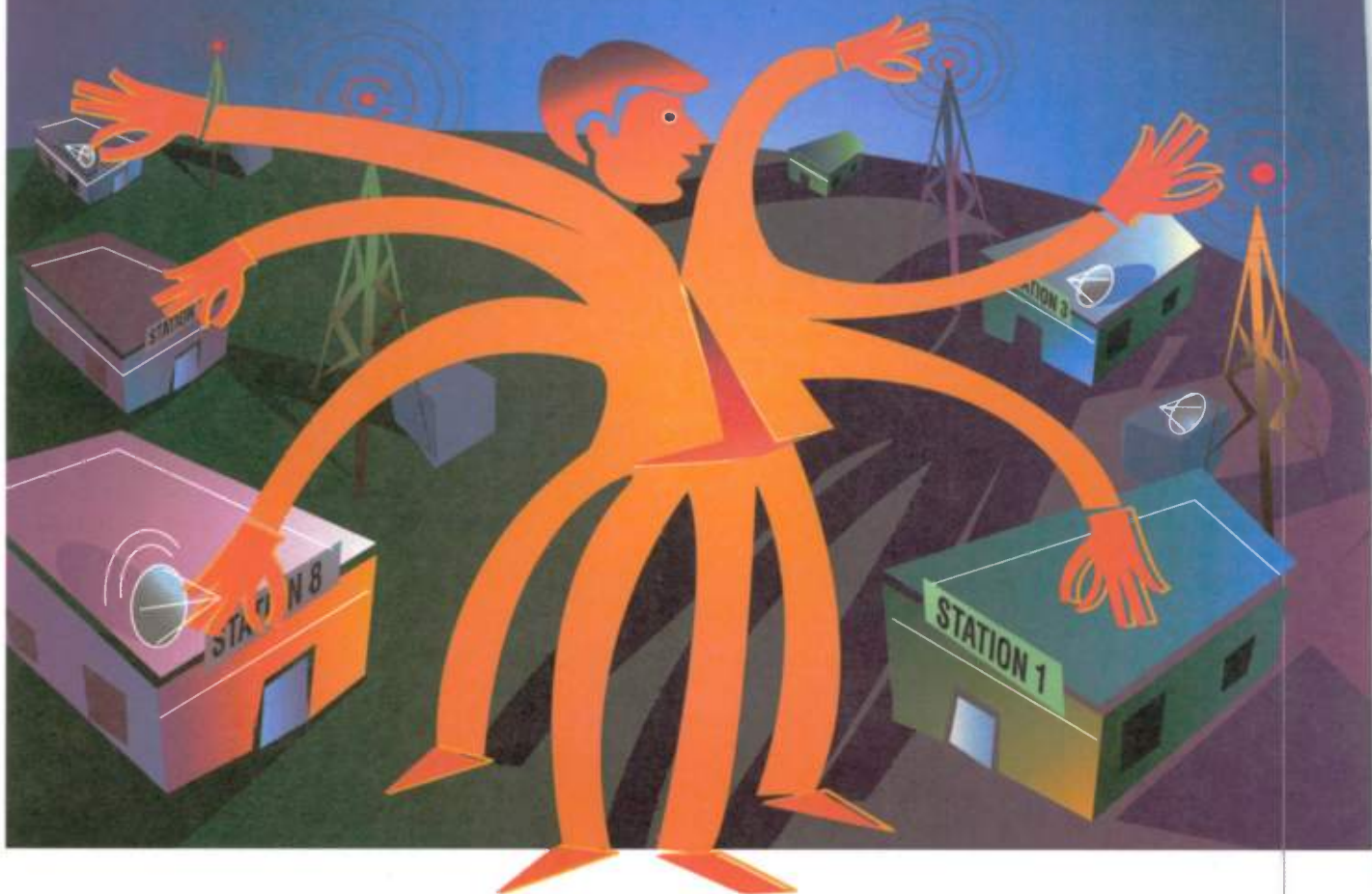
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PRODUCT SHOWCASE CONTRIBUTORS

(alphabetical order)

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HARRIS

Think Michael Powell is having fun? Sure ain't a week at DisneyWorld, that's for sure. The first 15 months of his Chairmanship turned out very differently from the way things looked when Bush nominated him for the Chairmanship in January '01. Back then, you could reasonably expect that a well-liked and well-equipped commissioner would be able to #1, get the Commission's sometimes-sluggish processes working smoothly. And #2, move on some policy issues that might produce further deregulation or at least clarify some murky areas (like terrestrial repeaters for XM and Sirius). In March 2002, the reality is quite different: M Street regularly hears complaints that filings which should be routine are gathering dust, and on the policy level, the D.C. Circuit Court of Appeals is treating the FCC like the underdog at a WWF event – and with about as much respect. Powell continues to be philosophical and even genial, and his health problems of earlier this year seem to be behind him. But as the FCC wades into a new fight over its “3 owners” policy, M Street has to wonder: Is Michael Powell having any fun?

Itching for a fight?

Maybe Fox TV can feature Tonya Harding and Michael Powell, eh? (We'd pick Powell.) Michael Powell and his three colleagues don't intend to start a melee over their proposed new “3 owners” rule – but that's going to be the result. The FCC chose the Charlottesville, VA market, and Clear Channel's app to acquire WUMX from Air Virginia, as the proving ground for its newly-announced policy about trying to leave three viable competitors in a market. Between them, Clear Channel

and Eure Communication control more than 80% of the market's revenue, and one of the odd things about this test case is that Clear Channel already operates standalone WUMX under an LMA. Technically, the Commission designed the WUMX transfer app for hearing on the issue of concentration – the first time it's done so on those grounds since 1969. It's attempting to justify its “3 owners” rule on its mandate to regulate in the public interest – and some outside communications attorneys are privately saying “lotsa luck” and setting aside large blocks of billable hours to fight it.

“It means you can't take out the last independent.”

Just to be a contrarian: What if the FCC's new “3 groups” test actually makes it easier for some deals to get done? One experienced communications attorney put it this way: “I think the WUMX decision [to designate the Charlottesville app for hearing] means that if a deal fails the 50/70 screen, but any other ‘viable competitor’ is left standing, then the proposed deal gets approved.” Translation: the “50/70” screen is the FCC's current processing guideline for a deal, where it red-flags deals where one entity would have 50% of the market, or two would control 70% or more. What our friend is saying is that the FCC's new “3 groups” test means the FCC would effectively be easing up: “A deal would have to shock the conscience to go to hearing. What this means is that the real screen isn't 50/70. It's more like 80/95.” Once again — things are not as they appear in Washington.

The battleground for the “3 groups” rule will be in smaller markets.

Nobody's worried about needing to preserve competition in Los Angeles or New York – but the FCC is going to be forced into looking at markets like Charlottesville, where the market has already ruled in favor of an effective duopoly. For starters, there's Binghamton, NY, where Clear Channel and Citadel have about 85% of the market revenue. New Haven, where Cox and Clear Channel also do about 85%. And Sioux Falls, where Southern Minnesota Broadcasting and Midcontinent do nearly 90%. One broker says in markets like these “Even if a new buyer came into the market and bought all the independents, they would still be a relatively weak competitor.” So how far is the FCC willing to go?

Minority ownership is down since the '96 Telecom Act.

An MMTC study conducted by Kofi Ofori and filed at the FCC as a comment on the ownership proceeding finds good news and bad news. “Minority stations have not realized the same economic potential realized by majority stations.” Ofori says the number of minority owners was steady between 1990 and 1996, but then “sharply declined.” We'd say that like many non-minority owners, they took the exit strategy in the form of a big offer from a public company. Speaking of public companies, Ofori says the “relatively superior performance of Entravision, Radio One, Radio Unica and Spanish Broadcasting System suggests that access to equity capital has been a significant factor in their ability to compete.” But Arthur Liu's privately-held Multicultural (29 stations) has also grown, “without the assistance of Wall Street.” It's a “paradox” deserving study.

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TECHNICAL RECORD

FORMAT CHANGES AND UPDATES

All data recorded for the week of March 20, 200

#=change accompanies new management, //=simulcast.

Gathered from M Street's ongoing research and our nationwide network of reporters.

STATE	STATION	CITY/MARKET	FORMERLY	BECOMES
AZ	KSWG-96.3	Wickenburg (Phoenix)	traditional country (KSWG moves from 94.1 MHz)	country
CA	KJAZ-1260	Beverly Hills (Los Angeles)	smooth jazz	KSUR, adult standards, "K-Surf"
	KVVY-1580	Merced	sports // KTIQ	adult standards
DE	WJNE-103.5	Bethany Beach (Salisbury/O.C.)	modern rock	adult contemporary, "Lite Rock"
HI	KKBG-97.9	Hilo	AC, ethnic	reported silent
LA	KXRR-103.1	Columbia (Monroe)	oldies	classic rock, "X-92"
	KQLQ-92.3	Rayville (Monroe)	classic rock	oldies, "Q103"
MD	WKHI-107.5	Fruitland (Salisbury/O.C.)	modern rock // WJNE	adult contemporary // WJNE, "Lite Rock"
	WXMD-92.5	Pocomoke City (Salisbury/O.C.)	WZJZ, smooth jazz // WQJZ	modern AC, "Max 92.5"
ME	WREM-710	Monticello (Presque Isle)	talk (WREM was knocked off due to a fire and should be back on in a couple of weeks)	silent
MI	WIMK-93.1	Iron Mountain (Upper Michigan)	classic hits	WWI - classic rock, "The Bear"
	WUPK-94.1	Marquette (Upper Michigan)	classic hits	WIMK, WWI - classic rock, "The Bear"
MN	KXSS-1390	Waite Park (St. Cloud)	adult standards	JRN - classic country
NC	WRCQ-103.5	Dunn (Fayetteville)	rock (WRCQ picks up the morning show from sister WKQB, which flipped to urban)	adds John Boy & Billy
	WKQB-106.9	Southern Pines (Fayetteville)	classic rock (WKQB drops John Boy & Billy to pick up Doug Banks mornings)	urban, "Power 107"
NJ	WKXW-1450	Atlantic City	adult contemporary // WFPG	talk, oldies // WKXW-FM, "New Jersey 101.5"
	WBSS-97.3	Millville (Atlantic City)	talk, oldies // WKXW-FM	hot AC, "Mix 97.3"
	WNSW-1430	Newark (New York)	Cantonese (Arthur Liu's WZRC and WNSW swap programming)	Korean
	WKOE-106.3	Ocean City (Atlantic City)	modern AC	hot AC // WBSS, "Mix 97.3"
NY	WZRC-1480	New York	Korean (Arthur Liu's WZRC and WNSW swap programming)	Cantonese
SC	WWWV-106.9	Bluffton (Savannah)	modern rock	adds Bob & Sheri
TX	KCCG-107.3	Ingleside (Corpus Christi)	rhythmic oldies	rock, "Rock 107.3"
	KIXC-100.9	Quanah	country	oldies, "Oldies 101"
WA	KREW-99.3	Naches (Yakima)	country (KREW's country format moves to 92.9 MHz)	KQSN, hot AC, "Q-99.3"
	KQSN-92.9	Toppenish (Yakima)	hot AC	KDBL, country, "The Bull"

CONSTRUCTION PERMIT ACTIVITY

*=non-commercial station, &=reapplication, +=competes with existing application.

STATE	STATION	CITY	ACTIVITY
AL	WDGM-FM-99.1	Greensboro	changes to 3200 w, 623 ft
	WTID-FM-101.7	Reform	increases to 22500 w, 725 ft, drop DA
CA	KCLU-FM-88.3*	Thousand Oaks	upgrades to class B1 from class A, increases to 3200 w, modifies DA
FL	WLAZ-FM-88.7*	Clermont	upgrades to class C3 from class A, changes to 5500 w, 384 ft, modifies DA, changes xmtr location to 28-38-56 x 81-43-56
	WXJZ-FM-104.9	High Springs	changes xmtr location to 29-49-16 x 82-34-25
GA	WECC(CP)-FM-89.3*	Folkston	decreases to 282 ft, drops DA, changes xmtr location to 30-55-54 x 81-42-30
	WWEZ(CP)-LP-94.7	St. Simons Island	license to cover for new station
IL	WYVR-FM-97.7	Petersburg	changes xmtr location to 39-54-35 x 89-43-01
KS	KBMP(CP)-FM-90.5*	Enterprise	license to cover for new station
ME	WRFR(CP)-LP-93.3	Rockland	license to cover for new station
MI	WMLZ(CP)-LP-107.9*	Temperance	license to cover for new station
MS	WMJY-FM-93.7	Biloxi	re-describes xmtr location as 30-29-09 x 88-42-53
	WKXI-FM-107.5	Magee	decreases to 98000 w, 951 ft
	WKNN-FM-99.1	Pascagoula	decreases to 99000 w

TECHNICAL RECORD

FACILITIES/PARAMETERS: APPLICATIONS (& reapplication) [docket number]

Applications by existing stations to change their currently-licensed operating parameters to the parameters noted.

STATE	STATION	CITY	ACTIVITY
AL	WBPT-FM-106.9	Birmingham	increases to 1,325 ft, changes xmtr location to 33-29-04 x 86-48-25
	WKXK-FM-96.7	Pine Hill	upgrade to class C2 from class C3, increase to 41000 w, 535 ft, add DA
FL	WBRD-AM-1420	Palmetto	direct measurement of antenna power
	WKEZ-FM-96.9	Tavernier	increases to 223 ft
GA	WHTA-FM-107.9	Hampton	change to 29500 w, 565 ft, change city of license to Hampton, GA
ID	KYZK(CP)-FM-107.5	Sun Valley	modify CP to upgrade to class C from class A, change to 53000 w, 1,909 ft, change xmtr location to 43-38-36 x 114-23-49
ME	WYFP-FM-91.9*	Harpswell	decrease to 174 ft DA
MN	KNUJ-FM-107.3	Sleepy Eye	increases to 4000 w, 407 ft, redescribe xmtr location as 44-19-38 x 94-43-41
MO	KCSX-FM-97.3	Moberly	upgrade to class C1 from class C3, increase to 55000 w, 1,172 ft, change xmtr location to 39-05-26 x 94-28-18
MS	WPRG(CP)-FM-89.5*	Columbia	increase to 6000 w, 322 ft, change xmtr location to 31-29-24 x 89-59-31
NH	WMEX-FM-106.5	Farmington	change to 780 w, 774 ft, drop DA, change xmtr location to 43-24-10 x 71-11-22
OK	KOCU(CP)-FM-90.1*	Altus	change to 5000 w, 85 ft
OR	KLFR-FM-89.1*	Reedsport	change to 700 w, 358 ft
	KFIS-FM-104.1	Scappoose	build new auxiliary facility
PR	WHYO-AM-1210	Salinas	direct measurement of antenna power
SC	WCSZ-AM-1070	Sans Souci	direct measurement of antenna power
TN	WAYM-FM-88.7*	Columbia	change to 6000 w, 1,060 ft, change xmtr location to 36-02-08 x 86-50-55
	WAYW-FM-89.7*	New Johnsonville	change to 3100 w, 466 ft, redescribe xmtr location as 35-56-17 x 87-53-39
TX	KMFA-FM-89.5*	Austin	build new auxiliary facility
	KIXK-FM-99.3	Linden	decreases to 40000 w, change xmtr location to 32-35-17 x 94-58-53, change city of license to White Oak, TX
WA	KNRK-FM-94.7	Camas	change to 8400 w, 1,184 ft DA, change xmtr location to 45-29-20 x 122-41-40
	KLUKN-FM-94.5	Kelso	change to 3000 w, 476 ft, add DA, change xmtr location to 46-16-49 x 122-52-34
WI	WVSS-FM-90.7*	Menomonie	change to 590 w, 427 ft, add DA, change xmtr location to 44-54-56 x 92-04-34

FACILITIES/PARAMETERS: GRANTS (& reapplication) [docket number]

Applications by existing stations to change their currently-licensed operating parameters to the parameters noted.

STATE	STATION	CITY	ACTIVITY
AZ	KQST-FM-102.9	Sedona	build new auxiliary facility
FL	WTYS-FM-94.1	Marianna	increase to 4400 w
	WVHT-FM-105.7	Monticello	increase to 515 ft, redescribe xmtr location as 30-31-45 x 84-00-13
MI	WTRX-AM-1330	Flint	direct measurement of antenna power
NM	KLYT-FM-88.3*	Albuquerque	upgrade to class C from class C1, increase to 4100 w, 4,245 ft, change xmtr location to 35-12-48 x 106-26-58
TN	WCDZ-FM-95.1	Dresden	upgrade to class C3 from class A, change to 25000 w, 295 ft
WA	KLES-FM-98.7	Mabton	change to 4000 w, 823 ft, change xmtr location to 46-31-20 x 120-19-59

Q: What do LA's [POWER106.FM](http://www.power106.fm), Toronto's [KISS92.FM](http://www.kiss92.fm) and Denver's [MIX100.FM](http://www.mix100.fm) know about the Internet that you don't? 

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TECHNICAL RECORD

CALL SIGN/ STATION NAME CHANGES # indicates sale

Former call letters and newly-assigned call letters with station identifiers where available.

STATE	STATION	CITY	NEW CALL SIGN	GRANT DATE	STATION NAME
AR	KOWS-103.9	Ashdown	KPGG	03/04/2002	
HI	KRTR-1460	Honolulu	KHRA	02/26/2002	
MD	WZJZ-92.5	Pocomoke City	WXMD	03/08/2002	
NJ	WFPG-1450	Atlantic City	WKXW	03/11/2002	Lite Rock 96.9
NY	WKOP-1360	Binghamton	WYOS	03/07/2002	Oldies 1360
UT	KCSL-103.9	Nephi	KMDG	03/01/2002	Mad Dog
	KSUR-1400	Parowan	KZEZ	03/07/2002	
VA	WSLC-610	Roanoke	WVBE	03/13/2002	The Vibe

PROPOSED STATION TRANSFERS (314 asset sale, 315 transfer of control, 316 reorganization)

STATE	STATION	CITY	FORM	APPLICANTS
AL	WRSR-FM-96.9	Decatur	316	from Paul Nielsen (deceased) to Penelope Nielsen/ Larry Gilley
	WGAD-AM-1350	Gadsden	314	from Coosa Broadcasting Co., Inc. to Dekalb County Community Radio, Inc.
LA	WBOX-AM-920	Bogalusa	314	from Bogue Chitto Communication Company to Best Country Broadcasting, LLC
	KBCE-FM-102.3	Boyce	315	from Dorothy S. Randolph et al. to Urban Radio Communications, LLC
MO	KCWJ-AM-1030	Blue Springs	315	from Frank B.W. McCollum, Receiver to KCWJ, Inc.
NC	WYZD-AM-1560	Dobson	315	from Dobson Broadcasting, Inc. to Gospel Broadcasting, Inc.
ND	KGBZ-FM-100.7	Harwood	315	from Randy K. Holland to Thomas E. Ingstad
SC	WCEO-AM-840	Columbia	314	from Udel Richardson to Eastern Broadcasting Group, Inc.

GRANTED STATION TRANSFERS (314 asset sale, 315 transfer of control, 316 reorganization)

STATE	STATION	CITY	FORM	APPLICANTS
AR	KSEC-FM-95.7	Bentonville	315	from Kimberly Hope Duke to Norman D. McChristian
CA	KOCP-FM-95.9	Camarillo	316	from Gold Coast Broadcasting Company to Gold Coast Broadcasting LLC
	KGMX-FM-106.3	Lancaster	316	from High Desert Broadcasting Company to High Desert Broadcasting LLC
ID	KDZY-FM-98.3	Mccall	314	from Charles H. Wilson to KSPD, Inc.
LA	KCIJ-FM-106.7	North Fort Polk	314	from Burwell Broadcasting to West Central Broadcasting Co., Inc
NV	KCLS-FM-101.7	Ely	314	from Reed, Inc. to Virtual Concepts
TX	KXAL-FM-100.3	Tatum	316	from Dean Broadcasting, Inc. to Hunt Broadcasting, Inc.
VA	WJYA-FM-89.3*	Emporia	314	from Educational Media Corporation to CSN International
	WJYJ-FM-90.5*	Fredericksburg	314	from Educational Media Corporation to CSN International

TRANSACTION BRIEF

The following items are based on recent, noteworthy ownership-transfer applications filed with the FCC. The information is based on FCC contracts filed with the Commission and made public within the last few weeks. Market and revenue information is based on data culled from Duncan's American Radio from M Street's own databases. When known, broker notices are included. Fax releases to Tom Taylor, (609) 883-5696.

Denver, CO

Local billionaire Philip Anschutz, is financing an effort to acquire a heritage African-American AM station in Littleton, CO for \$2.7M – and enrolling experienced radio hands Ray Skibitsky and Alan Eisenson for its operation. The station is James Walker-owned **KDKO** at 1510, currently doing urban as “Power 1510.” The Denver Post reports that Walker and his “Peoples Wireless” are selling KDKO to the “Newspaper Radio Corporation” — 58.4% owned by the Anschutz Company. M Street discovers that other partners in Newspaper Radio Corp. include Colorado radio veteran Ray Skibitsky, who'll be President and COO with 3.6% of the equity (he's a former GM at **KBCO**, Boulder). And Tim Brown, Chairman and CEO, with 29.5% (Brown is Anschutz' son-in-law). The Post suggests that the urban format may change to news/talk, which seems logical since former **WEVD**, New York PD Alan Eisenson is apparently on board as programmer for KDKO.

Even more intriguing, there's speculation that the Denver Newspaper Agency, the JOA that operates the business functions of the big dailies, the Denver Post and Rocky Mountain News, will provide content in the form of news and/or on-air reporters. KDKO's technical facility is for 10-kw days and 1300 watts night, DA-2, though Skibitsky's talking about improving the signal. Financial backer Phil Anschutz has extensive interests in railroads (he owns the Union Pacific), oil and energy, agribusiness, entertainment (the Regal Cinemas and United Artists chains, Concerts West) and sports (including the L.A. Kings).

Gadsden, AL

News/talk/sports **WGAD** (1350) is being acquired by Gerald Dilts' DeKalb County Community Radio for \$180,000. The Dilts group owns oldies “W-One” **WWON**, Waynesboro, TN (930), and **WGAD** becomes their second property. **WGAD**'s got 5-kw day, 1-kw night, DA-N. Seller is Ed Carrell's Coosa Broadcasting, and Carrell (whose initials spell “E.Z.”) has a 25% interest in a couple of stations in Guntersville, AL: **WGSV** and **WTWX**.

Ferndale, WA

Just north of Bellingham along I-5, in extreme northwest Washington State, the non-profit Pearl Broadcast Corp. sells religious **KCCF** (1550) for \$600,000 to a group led by Bhag Khela. This looks like the first acquisition for Khela's BCC Broadcasting. “Heritage 1550” **KCCF** has lots of power in its high-band location: 50-kw day and 10-kw night, DA-2, which should throw a signal up toward Vancouver, B.C.

Paducah-Cape Girardeau

It's a family affair, as Ben Stratemeyer buys two stations from his father Eugene, and a third station from his brother Dan. From his dad, Ben Stratemeyer's picking up country/talk **WKRO**, Cairo, IL, a 1-kw ND full-timer at 1490, and soft AC **KZMA**, a class C2 at 103.5 licensed to Poplar Bluff, MO. Ben assumes the remaining

debt on both properties: \$65,000 for **WKRO** and \$800,000 for **KZMA**. From brother Daniel Stratemeyer, Ben adds classic hits **WIBV**, a class B1 at 102.1 licensed to Mount Vernon IL. That's worth \$1.25M. M Street notes that father Eugene Stratemeyer is still on the acquisition trail: he's got a pending app for a new FM licensed to Naylor, MO.

Price, UT

Southeast of Salt Lake City, Halloran Broadcasting sells the oldies simulcast of **KRPX** (1080) and **KPRQ** (100.9) to Against the Wind Broadcasting, a partnership of Brent Larson, David B. Smith and Randy Timothy (Timothy's the president). Larson has interests in **KSOS** and **KXOL**, Brigham City, UT, and Smith has an interest in **KEVA**, Evanston, WY. Here's what they're buying in Price, UT: **KRPX** is a 10-kw directional daytimer at 1080, which drops to 5-kw in critical hours (morning and afternoon). **KPRQ** is a class A at 100.9. Halloran runs the combo as “Q101.”

West Point, GA

Southwest of Atlanta along I-85, Dan Savadove-run Root Communications owns country **WCJM-FM** (100.9) and now it's adding an AM station licensed to the same town: black gospel/urban AC **WPLV**. The seller is Taylor Family Broadcasting and **WPLV**'s facility has 1-kw day and 31-watts night, at 1310 kHz.

Millenium Consoles



CT-6 Clocks



DI-2000 Phone Hybrids



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THE FUTURE OF DIGITAL TECHNOLOGY.

For at least the past decade, there has been talk of radio's conversion from analog to digital. Today, it has become more than just a pipe dream – it is reality. To meet the needs of engineers, who have been given some of their biggest budgets ever to bring their stations into the digital age, M Street Journal asked many of today's best known manufacturers to tell us more about themselves and the new products they are showcasing at NAB2002.

Articles submitted by individual corporations. Edited by M Street Editor, Frank Saxe.

STUDIO AUTOMATION



Automation and datacasting for a digital radio world.

ENCO will be showing the latest version of DADpro32, their digital audio delivery and automation system. Providing full support for everything from live-assist to totally automated operation and everything in-between, DADpro32 is a feature-rich product that still retains a focus on ease of use for operators and engineers alike. ENCO Systems will also be displaying technologies from several partners in 'real-life' environments, from digital radio to networking to newsroom technologies.

ENCO Systems will be showing the IBOC datacasting capabilities of DADpro32, teaming up with iBiquity and Impulse Radio to show the potential involved in Program Associated Data (PAD) for broadcasters embracing the new DAB standard. In their booth,

ENCO will feature a complete digital studio, including digital exciter and IBOC receiver to show the entire process from end-to-end. Attendees will see and hear DADpro32 running with the Impulse Radio software enabling real-



time editing and modification of PAD simulating the live-assist features that will be available as the IBOC standard is established.

The robust Wide Area Networking (WAN) capabilities of DADpro32 will also be on display, with a live link to the Audicity display in the Orban booth. Using the Gateway product from ENCO Systems, virtually any level of

intercommunication is possible between any number of radio installations and all without the need for human involvement.

AirPLAY, the fourth generation live-assist user interface for DADpro32 will also be featured. AirPLAY was designed for demanding major market live assist applications providing easy operation of a playlist or schedule, combined with complete access to the entire audio library all from within a single, easy-to-use screen.

Also on display will be NewsBoss, the newsroom automation software system distributed by ENCO Systems. NewsBoss is a complete wire capture, editing, archiving and prompting package designed to make newsroom operations efficient and cost-effective for broadcasters in all market sizes.

Other partners on display are Logitek and SADiE, both distributed by ENCO Systems. The Logitek NuMix console will be an integral part of the digital studio display showing the synergy between a modern digital console and DADpro32. SADiE will be showing the RADiA digital audio workstation, a powerful production tool that integrates with a DADpro32 network.



The "NexGen" of studio equipment

NexGen Digital Broadcast from Prophet Systems Innovations has long been considered the premiere digital automation system for stations and groups with complex needs. Features such as VoiceTRAC help large market stations maximize use of their top talent. WANcasting, Prophet's exclusive wide-area networking product, allows stations to share programming across thousands of sites.

With the introduction of NexGen Digital NS, Prophet's new low cost system that stores audio directly on workstations, smaller stations are now able to access the same leading edge technology.

Chip Jellison, Manager of Broadcast

Software Development, says "Some companies take their less expensive product and tack on features to create a larger system that's only a marginally better product. NexGen Digital NS is exciting because it's an affordable option based on the same technology as our server-based system." He says it can also be expanded as a station's needs grow.

NexGen Digital can operate in live assist, satellite or automation modes. The Digital Reel-to-Reel module can simultaneously capture dozens of satellite feeds at a system level to accommodate even the most demanding schedules.

With VoiceTRAC, air talent can do a quality four-hour show in less than 30 minutes, complete with smoothly segued intros, liners and breaks. The integrated time and temperature module inserts current conditions in the talent's voice, giving you a live sound even when there's nobody at the station.

Another essential tool for broadcasters is CD/Extractor, which allows music and

audio tracks to be stored on one hard drive. Using the latest .WAV and compression technology, users can load cuts and music simultaneously across multiple CD-ROM devices, as well as extract a perfect digital copy of an original CD track in a fraction of real time. Prophet's software automatically calculates and normalizes levels, so distortion-free, consistent audio can be stored locally or shared across a wide area network.

NexGen Digital's exclusive Audio Format Converter was designed to complement Prophet's CD/Extractor. The AFC converts audio files into formats that NexGen Digital can use. Users can convert to and from both PCM and MPEG 1 Layer 2 in a wide range of bit rates. They can even convert Dolby AC2 to either of these formats.





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B



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BROADCAST ELECTRONICS

AUDIOVAULT

Tapping the power of the Internet

The Internet isn't a new concept. AudioVAULT users have been using it for years to share resources between multiple stations. Over the last year, the Internet has become an even bigger part of Broadcast Electronics applications in three main areas: its new m/FROME music delivery system, its SoniXstream offering, and the release of the software suite for AudioVAULT.

The m/FROME music delivery system

takes AudioVAULT technology and enhances its ability to let multiple stations work together, sharing resources that include programming and voice talent. m/FROME uses the Internet to deliver schedules and audio files and a host of automation tools to integrate these files from remote locations into a local system. m/FROME can be used in traditional radio environments with practically no user involvement at the remote site.

SoniXstream offers Internet sites new revenue potential by bringing programmed music 'channels' and specifically targeted advertising to the web. It is made possible through a custom designed skinnable 'tuner' launched from a station web site that offers ad space, rotating banners, and e-commerce click-throughs.

Broadcast Electronics' 8.2 release for AudioVAULT, VaultXPRESS and Vault2 also

takes advantage of the Internet with enhancements to its AVExplorer product. AVExplorer has grown into an efficient inventory management tool for all AudioVAULT hardware platforms, allowing users to change categories, rename files, delete files, do advanced sorts and searches and even preview audio. AVExplorer can be used within a local area network using TCP/IP or over a wide area connection including the Internet.

The server side of AVExplorer has also been enhanced, primarily in its AutoImport capabilities. New is the ability to support non-audio files like AVScheduler schedules and music logs. Dial-up support and advanced scheduling options are also new to the system.

AVAir has also been improved, with additional logging capabilities, event lookahead and additional options for live and automated users. ■

Scott Studios

Phone tracker and dual touchscreen are new features

Phone Tracker is a full-featured phone recorder/editor that automatically records every call in the air studio in that jock's password protected personal area. Phone Tracker allows addition of audio from unlimited Hot Keys at any step of recording or editing. VU meters always display levels and timers show lengths of the full cut and before and after the current position. Phone Tracker uses your choice of jog wheel control panel, keyboard or touchscreen for unlimited and ultra-fast editing. Announcer or caller tracks can be separated or locked and either can slide separately to change timing. Jocks can easily insert newly recorded parts at any time. Phone Tracker

makes extremely fast edits, and includes graphic waveforms and can audibly "scrub" or "rock reels" at any speed. Phone Tracker is available imbedded in the SS32 digital system or as a stand-alone phone editor.

SS32 Plus is available with a second flat panel touchscreen LCD monitor for extra Hot Keys, more Cart Walls, log editing, and Voice Tracker or Phone Tracker recordings in the air studio without losing any of the operational SS32 displays.

Scott Studios also introduces SS Flex, which separates each benefit of SS32 into modules that can be included in a custom-tailored package so a station gets only the features it wants and needs, without having to pay for those it won't use.

Also introducing Scott Jocks, where freelance announcers with experience voice tracking air shifts for distant city stations can now "rent" Scott's "Wet Voice Tracker" for use in their home studio.

When announcers pre-record with Scott's Voice Tracker, their shows will sound better than live. Jocks will be able to think of better things to say (and better ways to say them) because they can talk when they're ready, instead of being forced



to perform when songs end. Good talent is less likely to get bored and more likely to deliver enthusiastic creative content when they use Voice Tracker for their shows. Announcers can

pre-record great shows in a fraction of the time it takes to do them live. In fact, a four hour show takes just 20 minutes to Track. ■

CONSOLES

HARRIS

HARRIS/PACIFIC DIGITAL AUDIO

The age of digital consoles has arrived

Building on the tradition of the Harris Pacific BMX Series of analog audio consoles and featured at NAB again the year, the Harris BMXdigital offers functionality, modularity, durability and contemporary styling in a fully digital console. The BMXdigital boasts any number of industry firsts including: two times the mixing buses of any previous digital console for unprecedented broadcast versatility, independent analog AND digital inputs for both A and B inputs on each module, and frame sizes with up to 38 input module capacity.



The Harris Pacific Legacy Digital Audio Console can be an answer to a "slimmed down" version of our BMXdigital. Legacy still offers more primary and



secondary mix buses than other digital consoles, while the company has added more user interface with an all-new family of switches, buttons and knobs.

Legacy Console features include four program buses and a Stereo Send bus with digital and analog outputs, selectable Off-Line Mix for Telco/Codec foldback, up to four Telco/Codec modules with mix-minus output, Telco Record Mix outputs, all-digital design with hot-swappable panel modules, and input modules featuring digital/analog input. ■

continued...



A new generation in console technology

Klotz Digital's VADIS D.C. II audio console for production is a multi-format mixer designed for radio stations that require semi-custom, digital audio production consoles. Integrated as part of the VADIS 880 digital audio platform, the VADIS D.C. II Production Console provides the flexibility and capability not found in analog, digitally controlled analog or digital audio consoles designed using the analog mixing console as a model.

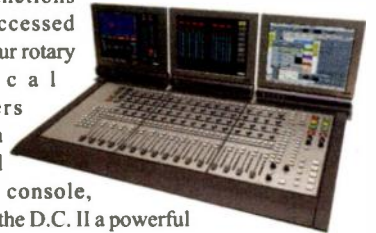
VADIS 880 Platform frames are positioned around the plant and connected via fiber optic technology. Any source connected to the 880 Platform can appear on any fader of the D.C. II Production Console. Typical mixers merely

provide source select per fader or several fader channels connected to an external router. At the push of a button the VADIS D.C. II's entire setup of sources, mix-minus, dynamics, equalization, bus assignments and more can be recalled.

The technical aspects involved with integrating an audio mixer, external DSP audio processors, an audio router, logic follow capability and distribution of digital audio sync is a formidable and expensive task. Instead, Klotz Digital engineers use the 880 Platform technology with the VADIS D.C. II Production Console to seamlessly integrate all these functions and more for production applications. Thanks to the VADIS 880 Platform technology, multiple control rooms with one of the various Klotz consoles can share sources, logic, control and DSP functions for truly redundant and flexible audio control rooms while eliminating miles of copper wiring with just a couple of fiber optic lines.

The Klotz D.C. II offers modular construction and is available in 4 to 24 fader mainframe sizes. It has a variety of bus assign-

fader, EQ and dynamics control panels. The amount of DSP power is user-determined and since it is modular and scaleable, expansion of DSP power is simple. Five band parametric equalizers, various graphic EQs, limiters, gates, compressors, expanders and delay modules are all available. The DSP functions are accessed using four rotary optical encoders on each channel of the console, making the D.C. II a powerful production audio console. The system has mic, analog line and a variety of digital audio format inputs and outputs ranging from AES/EBU and SPDIF to Yamaha Y2 and MADI. Machine control logic follows each source no matter where it appears on the console. The VADIS D.C. II Production Console even has MIDI interface to Pro Tools digital audio workstations. ■



Turning the studio into a digital workspace

No longer simply control devices, today's digital audio consoles are designed for full interoperability with other equipment in the studio. Logitek consoles are a perfect example of this new functionality.

A Logitek console starts with the Audio Engine, a router that handles all audio in the facility, both analog and digital. The Engine performs A/D and D/A conversions, mixing, and routing/distribution of audio among other functions. It is designed to "talk" to most hard disk systems, providing control of and from these

systems. Multiple Engines can be networked, permitting the sharing of up to 500 stereo audio sources among studios. Supervisory software gives the user the ability to control which studios have access to audio as well as setting up complex, multiple functions that can be triggered by a single button.

A single cable connects the Audio Engine to a Logitek console. Because the console does not carry the actual wiring, it has a low profile, which permits visibility across the studio and among talent. Logitek consoles can also be "split," allowing each member of a multi-talent team access to his or her own bank of faders even when separated by many feet.

Logitek is introducing two consoles at the NAB show: a re-designed Numix and the new Remora console.

The Numix console comprises two main sections, the Selector Wedge and the Fader

Wedge. One Selector Wedge is used per system along with as many Fader Wedges as needed for operation. The new Numix Selector Wedge, which is used for control, talkback and source selection, features a large LCD panel with full color graphics, improved intercom functions, programmable buttons for executing custom commands, and more. The re-designed Fader Wedge also has a full color LCD panel, and button placement has been altered for better functionality as well as a more attractive appearance. An important addition to the Fader Wedge is a dedicated talkback switch per fader. ■



Upgrade is the focus in 2002

This year Radio Systems has begun to offer owners of its 6, 12, and 18 channel RS-series consoles with a kit to completely upgrade and overhaul their existing boards. The "Millenium Upgrade" includes new metalwork, new wood side panels and trim, new faders and control circuitry, and new channel and monitor push buttons.

The upgraded components add a host of new features including enhanced remote control, monitor switching banks and on-board, programmable channel logic. All console switches for channel on/

off, input and output busses and monitor select are also replaced with urethane soft-touch keypad style buttons. The buttons are all high-brightness LED



back-lit, ending forever the need for incandescent lamp replacement.

Cosmetically, the console now takes on a brand-new and much more modern appearance with the ruby-colored LED lit push buttons. The buttons themselves are made of soft-touch rubber pads that

are tactile and silent. In an unusual combination of form and function, these buttons look and feel great while also providing unparalleled dependability since they are rated for over 10 million operations. There simply are no mechanical parts in them to break or wear out! These push-buttons, in combination with the new lighter coloring scheme of the re-styled metalwork and red mahogany wood side panels, give the re-built boards a brand-new factory fresh look.

Company president Dan Braverman says the upgrade gives stations an improved feature set and a brand new look for a fraction of the cost of a new console. Of course, Radio Systems is also more than willing to sell brand new Millenium consoles. ■



Preparing for the arrival of IBOC

The ownership and operation of community broadcast tower sites is a relatively new business. Until recently broadcasters generally owned their own towers or worked collectively with other stations to own and operate the sites they utilized. Demand for better use of broadcaster capital and the transition from analog to digital television transmission created a new industry in the late 90's.

As the dust settles, American Tower Corporation has emerged as a leading independent owner and operator of broadcast towers in North America. Owing more than 13,000 towers, American Tower has its roots in

broadcast ownership. Once a subsidiary of American Radio Systems, ATC built its tower company as a means of upgrading its stations' facilities and then continued to own and grow the company after selling its radio stations to CBS in 1998.

"What differentiates ATC from other tower consolidators is our broadcast experience" says Gary Hess, ATC Vice President of Engineering and one of the original employees of the company. Hess adds, "Our team is comprised of broadcast professionals, chief engineers, general managers and owners—people who have sat in the shoes of our clients and know what is important to them."

But experience alone is not enough. ATC also places high importance on providing complete and accurate site information. ATC Broadcast Account Manager Mary Merkley says the ATC website www.americantower.com has been a great resource for her clients. According

to Merkley, "Potential clients need answers fast. They can log on and search for a tower and then get specific useful information within seconds."

The broadcast business is a 24/7 endeavor. Responsive site management is also a



hallmark of ATC's success. ATC maintains a professionally staffed Network Operations Center, 24 hours a day, at 1-800-830-3365. Broadcasters can report routine and emergency site issues with confidence, knowing that their call will be responded to promptly. ■

Dielectric

Its merger with Central Tower is creating new possibilities

The acquisition of Central Tower by Dielectric Communications early in 2001 created a partnership that has brought together two teams of RF and mechanical engineers to provide a single source for compete broadcast systems including antenna, transmission line, combiners/filters, tower manufacture, installation and ongoing maintenance services.

Shortly after the companies joined forces, Cumulus Media approached Dielectric regarding WWKL, Harrisburg, PA (92.1). Cumulus had learned that the existing tower would require

replacement to meet current structural code, but available land was extremely limited, thereby restricting the placement of the tower guy wires. The guy wire placement would orient the tower in a less than favorable direction with respect to their prime service area.

To solve this problem, Central Tower custom designed a rotatable index plate and tower top section. The index plate allowed the station to rotate the new antenna to take advantage of the pattern distortion created by the tower top and to maximize coverage over Harrisburg. In addition Dielectric designed an FM (frequency matched) Tower section specifically for their new DCR-H4 Dielectric antenna at 92.1 MHz. This section is designed to match the spacing of the antenna bays, thus producing a uniform azimuth pattern from each bay.

Cumulus accepted the proposal and the project began in the Spring of 2001. The Central Tower and Dielectric teams worked together to draft for Cumulus a pattern study prior to manufacture of the antenna and tower. In addition, Dielectric provided project management for all aspects of the tower manufacture, antenna and line installation and demolition of the old tower. In order to meet the on-air scheduled date it was necessary to design the tower and antenna and have the new steel on site in 30 days. The new tower was up and antenna on-air a week later.

The successful completion of this project is just one example of the benefits of relying on the experience of both Central Tower and Dielectric resources. ■



SpectraSite

Size is never an issue.

Formed in January of 2000, SpectraSite Broadcast Group united the companies with the strong core competencies in the industry: Staink Inc. and Doty Moore. Since then, it has become a leader in owning, operating, manufacturing, and constructing tall towers.

A wholly owned subsidiary of SpectraSite Communications Inc., SpectraSite Broadcast Group combines the knowledge of the industry's



most notable companies with one of the top companies in wireless communications. This enables us to deliver fully integrated services adaptable to the unique needs of individual clients.

SpectraSite Broadcast Group successfully builds the tallest structures in the world under the most difficult conditions imaginable. Our team has built over 50% of US tall towers. We maintain designs, drawings and documentation for over 50% of US broadcast towers.

SpectraSite Broadcast Group maintains the largest staff of structural engineers in the tower industry and has registered professional engineers in all 50 states. ■



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continued...



Showcasing the values of a single system approach...

Electronics Research Incorporated's attitude towards towers and antennas is unique in that their approach is from the "Systems" point of view. Most, if not all, other antenna-tower combinations are supplied by at least two different vendors. When there is a mechanical match achieved, the ERI fine-tuned the electrical match. This system approach is only available from ERI and results in a finely matched unit, verified by one of the Western Hemisphere's most comprehensive and sophisticated antenna proving ranges. A finely matched system assures uniformity of pattern, pattern optimization (as appropriate), and that all revenue-producing areas are covered for maximum revenue return. Also, placement of antenna on structure is



engineered into the plan.

The company's LAMBDA mounting system combines antennas with ERI's structural steel which assures maximum efficiency, coverage, and revenue potential.

Since ERI's beginnings in 1943, its evolving antenna designs constantly pushed the state-of-the-art envelope, restricted only by technology limits of the time. These advancements resulted in many patents and

legendary installations. The addition of tower and steel eventually became necessary to fill the demand of their growing customer list and to complete the systems approach.

Among ERI's current projects are a new 1107 ft, 10 ft face tower to be the main hub of the public broadcast system for the State of North Carolina. This tower is designed to support more than 70 different kinds of antennas and dishes including DTV and NTSC transmitting antennas.

The ERI and Richland Tower are also working together near Nashville. Scheduled to be operational next month, there is a candelabra, 12 feet on a face. In addition to the candelabra for TV use, the structure will also support an ERI FM Panel Antenna, cellular antennas, and dishes. Also used in this project is software co-developed by ERI. This ERITower software saves significant time in planning tall steel. The two companies plan to continue working together, due to ERI's vertical integration of engineering, antennas and high steel, design, structural analysis, and expert installation. ■

TRANSMISSION



A trio of IBOC-ready products to be unveiled

Broadcast Electronics will introduce three new products at NAB 2002. The first is the latest in the digital FM exciter technology, the FXi-60. This direct-to-channel digital exciter offers greater input. Input selection and all other operating parameters are programmable from a full-color front panel LCD screen. The FXi-60 can be used as the

only exciter in a low level combined FM IBOC installation. With the use of an optional IBOC input card, the FXi-60 will accept the input from the IBOC signal generator and will then drive a BE IBOC transmitter with the combined IBOC signal. This eliminates the need for a costly separate IBOC exciter and external combiner and filter.

Broadcast Electronics will also introduce the FSi-10 IBOC signal generator. This third generation IBOC signal generator takes advantage of the ability of the FXi-60 to accept a direct digital input and provide a combined analog FM and FM IBOC signal. This versatile unit will also act as the IBOC

signal generator for an AM IBOC. The phase and amplitude output can be fed directly into a solid state AM transmitter.

Broadcast Electronics will also introduce a complete new line of IBOC compatible transmitters, the FMi solid state IBOC transmitter line, based on the highly successful solid state FM products now in production, the "C" series and "S" series FM's. The FMi series transmitters use advanced linearization techniques that allow these products to be used in either a high-level combined system or common amplifier system. The new FXi exciters and FSi IBOC signal generator make up the rest of the IBOC system from Broadcast Electronics. ■



Longtime digital advocate readies stations for digital

Harris Corporation, a longtime leader in radio transmission and a driving force in IBOC development and testing, will offer an expanded portfolio of IBOC products at NAB 2002. Harris has led the charge for a digital broadcast standard since 1991, providing its AM and FM transmitters for early, over-the-air, field tests by the leading developers of IBOC systems.

Harris has applied its engineering expertise to the reference exciter issued by iBiquity to develop a distinctive model that provides maximum reliability and signal quality in anticipation of the approval of the IBOC technology by the National Radio Systems Committee and the FCC. This includes

redesigning circuitry to enhance reliability and properly packaging the exciter with its IBOC transmitters to experience a smaller bit error rate in the transmission chain.

Harris' new Dexstar series IBOC exciters are designed to provide the right combination of user-friendly features and diagnostics, superior



IBOC signal performance, high reliability and ease of maintenance. For AM, the Dexstar exciter will be shown integrated into a DX-10, 10 kW AM IBOC transmitter. The DX-Dexstar combination offers AM stations, a seamless path to IBOC broadcasts. DX-10 IBOC transmitters offer the exclusive Dexstar series exciters, digital amplitude modulation, field-

proven designs, and low operating costs.

To complement its fully digital DX line of AM transmitters, Harris will launch a new Z line of FM transmitters that will require no modifications in order to pass the IBOC signal. Several changes to the standard Z line have been made to render it truly digital including adding Harris-proprietary linearization circuitry designed to optimize digital audio broadcast performance. Called the Z "Extreme Digital" Series, transmitters will be available in power levels from 2.5 to 20 kW.

An IBOC compliant studio-to-transmitter-link is critical in an all-digital air chain. Harris will demonstrate its IBOC-ready Intraplex STL PLUS T1 STL. This new STL PLUS offers a 44.1 kHz sample rate for digital transport of 20 kHz CD quality stereo, linear uncompressed, program audio over leased T1, microwave radio, or fiber links. ■

continued...



IBOC becomes a reality

NAB 2002 is the inaugural event for one of the most exciting changes in the history of radio: the commercial launch of IBOC digital AM and FM broadcasting. IBOC is no longer a coming attraction. At this year's NAB, it is a reality. This is a monumental occasion for iBiquity Digital and radio broadcasting as radio follows the lead of recorded music, television, DVDs, and all other major consumer mediums into the digital age. Major transmission equipment manufacturers BE, Harris and Nautel will be introducing IBOC exciters at the show. These IBOC exciters will bring radio broadcasting into the digital world by enabling

stations to transmit a digital signal alongside their existing analog signal. This digital signal will provide listeners with much improved audio without interference, and new data services, including station identifiers, artist names and song titles. Eventually more sophisticated services will enable broadcasters to generate revenue from their data stream with enhanced advertising and information services.



In addition to the launch of commercial exciters, other manufacturers will be displaying IBOC compatible products, such as transmitters, filters and combiners and consumer electronics.

The introduction of IBOC broadcast equipment at NAB is the first step in a three-

step commercialization process. The second step is to rollout IBOC at AM and FM stations in six markets: Chicago, Los Angeles, Miami, New York, San Francisco and Seattle, which will begin later this year. The six markets were selected on the basis of audience size and potential for receiver sales. Adoption in these markets will create the momentum necessary for widespread adoption of digital

AM and FM. Other target markets for early implementation include Atlanta, Boston, Dallas, Denver, and Detroit. However, rollout will not be limited to these markets. A grassroots movement comprised of smaller, but future-thinking and technically savvy broadcasters is expected to extend IBOC implementation to many markets throughout the country. ■



Bringing IBOC to the marketplace

Nautel, a leading designer and manufacturer of solid state AM and FM transmitters for over 30 years, will display its latest innovations, including IBOC compatible transmitters, at NAB2002.

Nautel is now licensed to manufacture and sell transmission equipment utilizing iBiquity Digital IBOC technology and will launch a new IBOC Digital Exciter at NAB2002. Designed to tune within the AM and FM bands, this new exciter provides an In-Band-On-Channel modulated waveform in accordance with the iBiquity defined service modes. It performs the encoding of the digital audio input to be

transmitted in the IBOC waveform and supports supplementary data services. Capabilities are incorporated to allow predistortion of magnitude and phase of the individual IBOC subcarriers in order to correct for transmission system variations. The Exciter's system time can be synchronized to an external precision GPS time reference.

Nautel's new generation of 1kW to 60kW solid state AM transmitters provide enhanced performance and IBOC digital transmission compatibility. The Interphase Pulse Duration Modulator employs an ultra linear extended band filter. The phase and amplitude linearity of these transmitters contribute to superior signal-to-noise



ratio when transmitting the digitally encoded signal. The NAUTEL ND and XL series 1kW to 60kW transmitters provide direct interface with the new NE IBOC Digital Exciter.

Nautel will also feature the new Q20/20, 40kW solid state FM transmitter. Two standalone 20kW transmitters are fully integrated to operate as a 40kW Active Reserve system. The Q20 is the first and only solid state FM transmitter to achieve 20kW using Nautel's unique patented single stage combiner instead of conventional cascaded hybrid networks. The design requires no balancing loads resulting in a compact, cost effective transmitter. The dual Low Voltage Power Supplies provide redundancy with automatic changeover capability. Overall efficiency of 68% contributes to cool, reliable operation. ■



Data transmission is also possible with Xstream

Telos Systems' Zephyr Xstream is the newest release from the Zephyr family of ISDN codecs. The Zephyr Xstream features powerful MPEG AAC coding, the newest high-fidelity compression algorithms from MP3 inventor Fraunhofer Labs. MPEG AAC is the first coding system to fulfill the

ITU requirement that stereo output be indistinguishable from source at 128 kbps — true CD quality.

Even more impressive is low-delay MPEG AAC-LD, which delivers audio quality comparable to Layer-3 while reducing transmission times by up to 80 percent. This groundbreaking new algorithm means that true high fidelity two-way remotes over ISDN are now a reality. Zephyr Xstream is also fully backward-compatible with existing codecs, featuring MPEG Layer III and Layer II coding as

well as G.722.

Zephyr Xstream gives broadcasters other exciting capabilities as well, such as the ability to transmit end-to-end ancillary data in MPEG Layer III and AAC modes. This allows 9600bps serial data stream and eight bi-directional contact closures for control of remote devices. A 10base-T Ethernet port allows remote control and streaming capabilities of MP3 coded audio over LAN, WAN, or the Internet. TCP/IP network connectivity also allows easy upgrades of system software via FTP. ■



There's a new member in the Omnia family

Omnia announces Omnia-4.5fm, the newest member of its award-winning family of digital audio processors. Omnia-4.5fm offers clean, clear, loud audio using powerful technology — like 96 kHz sampling (pioneered for broadcast by Omnia), 24 bit A-to-

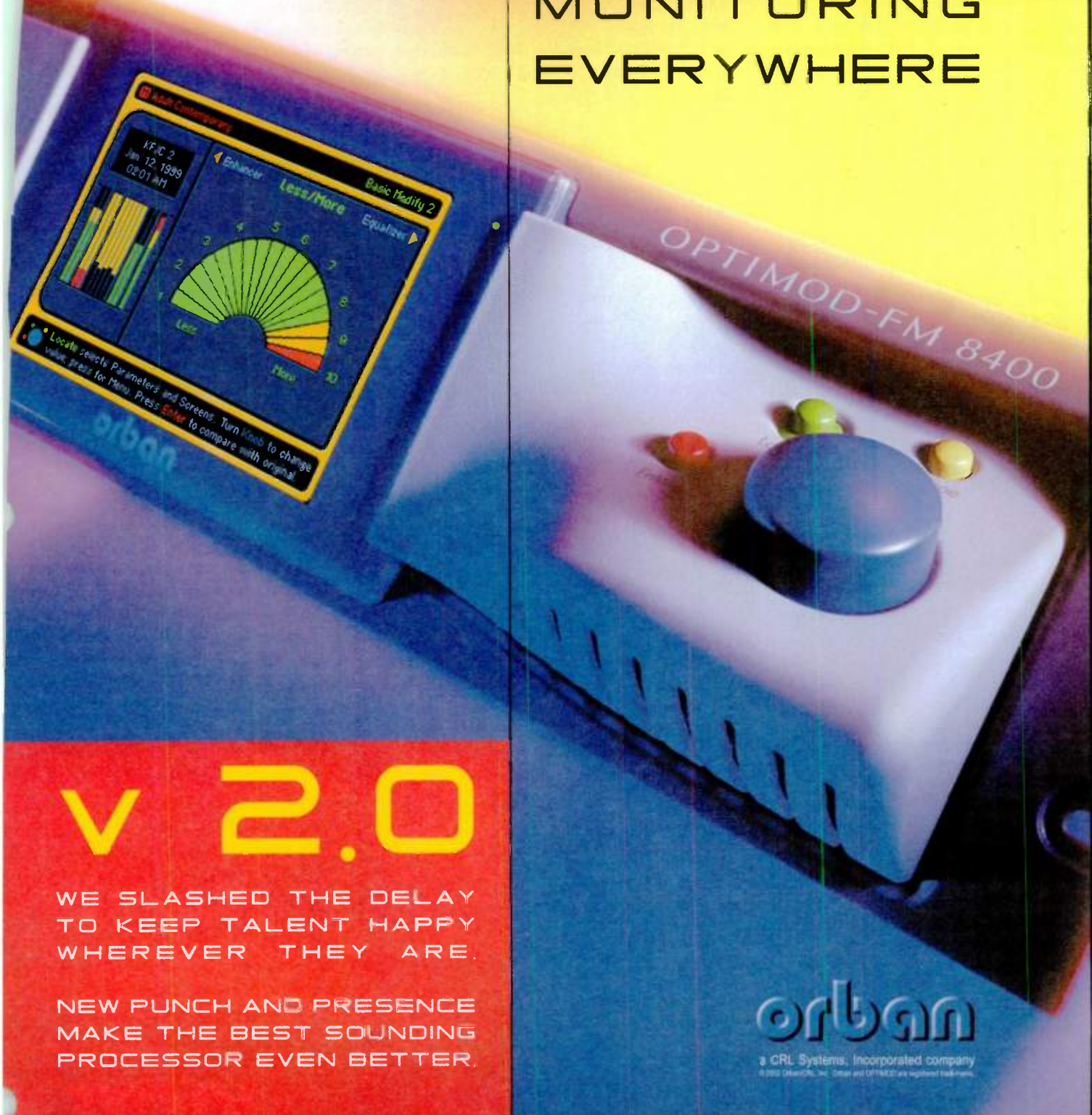
D conversion, five-band limiter and smooth, precise AGC, and exclusive bass management features.

Like all Omnia processors, Omnia-4.5fm is designed around an exclusive PC-Card based software architecture that makes updates a snap. Additional features include Ethernet remote control, digital I/O with automatic sample rate conversion, pilot-protected distortion canceling composite clipper and a bright, full color active-

matrix TFT display. Omnia-4.5fm is also DAB compatible.

Omnia audio processors power 4 of the 5 leading stations in New York, 2 of the top 3 in Los Angeles, and 5 of the 6 most listened to stations in the USA. Omnia is also on the leading stations in Paris, all of the BBC's FM stations, and the number one stations in Canada, Ireland, Germany, Finland, Australia, China, Denmark, and Sweden. ■

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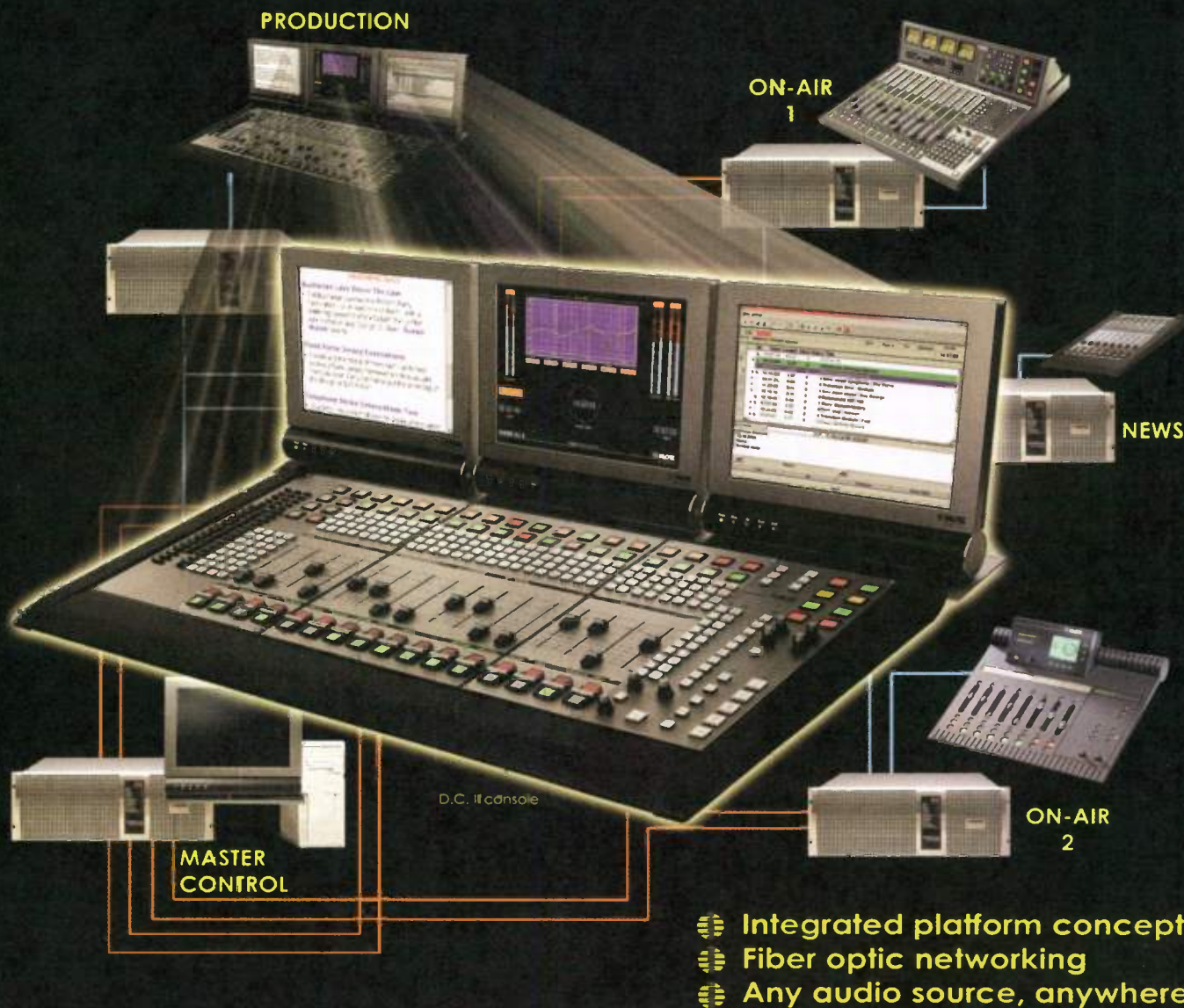
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KLOTZ DIGITAL
5875 Peachtree Industrial Blvd.
Bldg. 340
Norcross, Georgia 30092
Phone: +1-678-966-9900
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