

NOVEMBER 16, 1998

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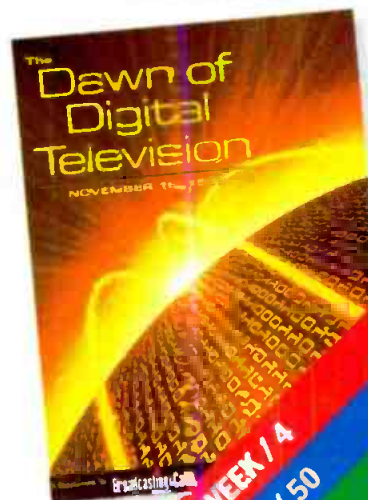
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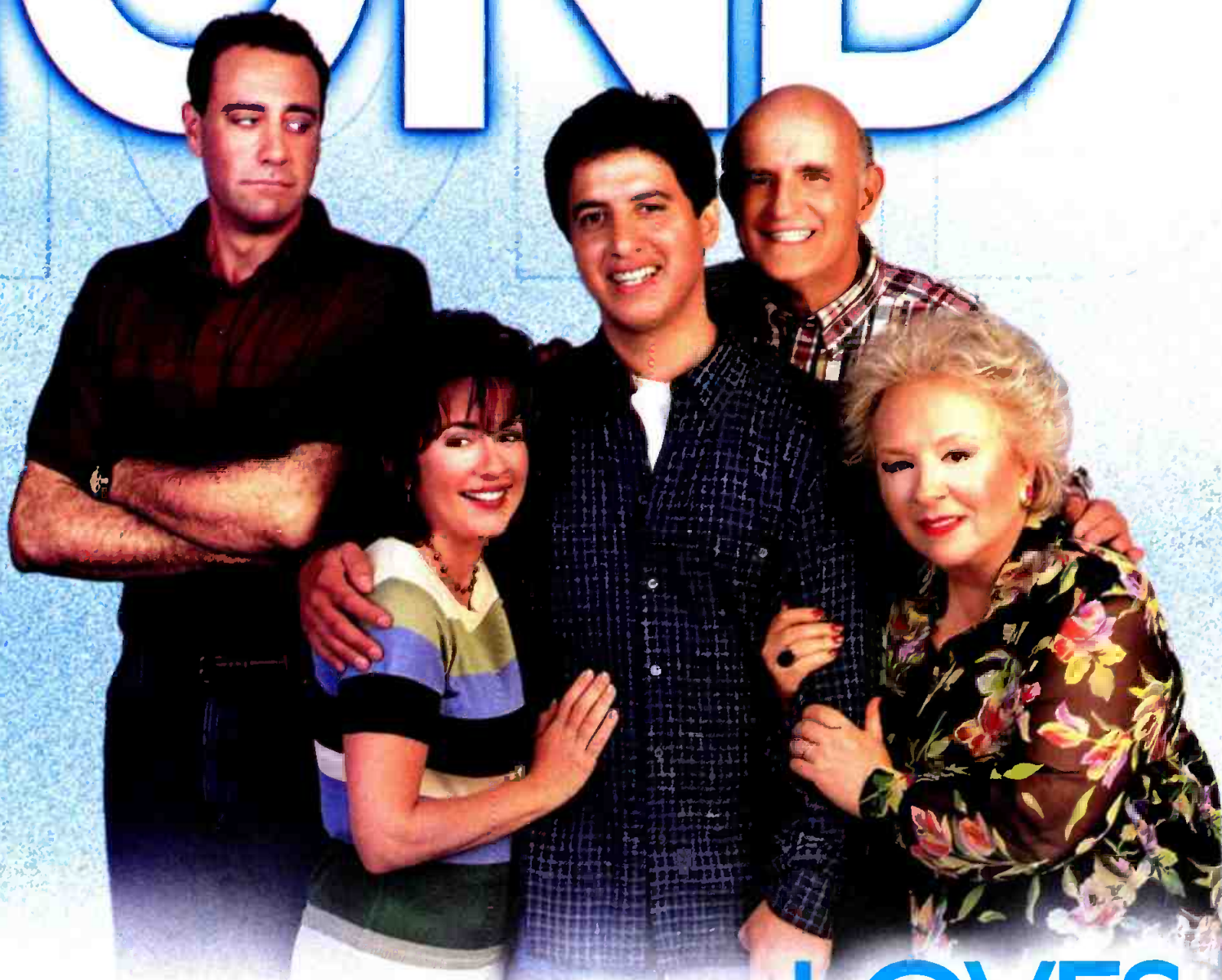
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TOP OF THE WEEK / 4
BROADCASTING / 50
CABLE / 56
TECHNOLOGY / 61
INTERNET / 63

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TOP OF THE WEEK / 4

SRO for Fox IPO Investors rally to buy shares and News Corp. earns \$2.8 billion from the stock offering. / 4

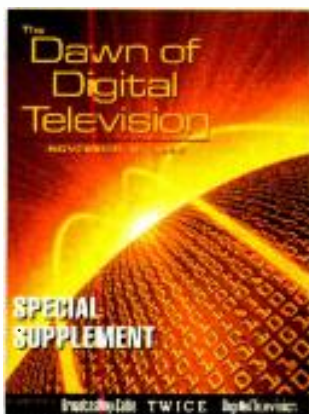
Gore commission plan to move forward

Despite objections from broadcasting and cable interests, the Gore commission plans to recommend that digital broadcasters who fulfill minimum public interest standards should receive cable carriage. / 24

For more late-breaking news, see 'In Brief' on pages 80-81

HALL OF FAME

Adding to the Honor Roll BROADCASTING & CABLE inducts 11 new members into its Hall of Fame at a black tie gala in New York. / 43



The future is now

This week's issue contains a 60-page supplement proclaiming "The Dawn of Digital Television" and including special coverage from the vantages of BROADCASTING & CABLE, *Digital Television* and *TWICE* (This Week in Consumer Electronics). It is published coincident with the Monday (Nov. 16) celebration of the new medium by

B&C and 19 major industry sponsors: ABC, CBS, Clyron, DirecTV, Faroudja, Harris, Kodak, NBC, Panasonic, PBS, RCA, Runco, Samsung, Sarnoff, Sharp, Silicon Graphics, Sony, Tektronix and Zenith. / **Follows Page 42**



COVER STORY

FCC moving, cautiously, on ownership

FCC Chairman William Kennard is pushing for action on a long-awaited review of the agency's broadcast ownership rules by year-end. But any movement probably will be a few small steps rather than a major rollback of regulations. / 27

BROADCASTING / 50

Judy presides over highest court Worldvision's half-hour *Judge Judy* is burning up the syndication market, with ratings up 100% from last year. / 50

SRI seeks SMART investors Statistical Research Inc. has retained Veronis Suhler to find potential investors for the company's new SMART national TV ratings service. / 50

CABLE / 56

A&E unveils digital networks Its first offerings—The Biography Channel and History Channel International—launch today on TCI's digital Headend in the Sky. / 56

TCI leans forward, looks ahead MSO meets with advertisers, agencies to ponder the potential of interactivity over its TCI Digital Cable. / 56

TECHNOLOGY / 61

CBS broadcasts NFL in hi-def It transmits the New York Jets vs. Buffalo Bills game to seven stations—the first of four such NFL telecasts on tap this season. / 61

INTERNET / 63

CNN streams Bill Gates Using Virage software, the CNN Website lets PC users search and download the Microsoft CEO's testimony in the Department of Justice antitrust case. / 63

Changing Hands.....65	Editorials.....82	In Brief.....80
Classified.....67	Fates & Fortunes.....78	Nielsen Ratings.....54, 58
Closed Circuit.....18	Fifth Estater.....76	Station Break.....51
Datebook.....75	Get w/the Program.....52	Washington Watch.....26

HOLLYWOOD

In N.Y. & L.A.

Forgive or Forget

BEATS

Judge Judy

In Women 18-49

Hosted By
Mother Love

FORGIVE OR FORGET

Renewed for Fall 1999

20

SRO for Fox IPO

Investors rally to buy shares; News Corp. earns \$2.8 billion from offering

By Steve McClellan

What market turmoil? That's basically what the folks at News Corp. asked Wall Street last Tuesday after they launched the biggest-ever media-related initial public offering. Investors gobbled it up and then some: It was oversubscribed by almost 50%, with News Corp. reaping \$2.8 billion for just under 19% of the Fox Entertainment Group.

News Corp. officials, restricted from talking for the next two weeks, must feel pleased. "In the short term, they definitely achieved their goals," says Blair Treisman, senior research analyst at Midtown Research Group, New York. "They got the deal done in a stinky IPO environment, within the price range they had been hoping for. And it has held up in the first two days of trading."

On the first day of trading, Fox stock climbed \$2 to \$24.50. By midday Friday, the stock fell 3%, to \$23.88, but still well above the initial asking price. "People just decided to step back and not overpay in the short term," Treisman says.

News Corp. said in filings with the

SEC that it would use the proceeds of the deal to reduce its outstanding debt of about \$9 billion. It also may buy back some of its stock, company executives told analysts last week. It has a \$1 billion stock buyback program and already has purchased some \$300 million worth of its stock. "Nothing is going to change with respect to how they use the money, so now it's just a question of growing shareholder value over time," Treisman says.

News Corp. Chairman Rupert Murdoch told analysts last week that no huge acquisition deals are in the works. But the company has a lot of buying power—including \$2.1 billion in cash on hand; another \$2 billion—plus in stock and cash from the soon-to-close sale of *TV Guide*, and added power on top of that.

High on News Corp.'s shopping list are TV stations, although it will take



Murdoch couldn't talk last week, but he could certainly smile.



'Ally McBeal' is one Fox asset that makes its stock attractive.

FOX ENTERTAINMENT GROUP PRIMARY ASSETS

Fox Filmed Entertainment
(theatrical movies)

Twentieth Century Fox TV
(TV production)

Twentieth Television
(TV syndication)

Fox Stations Inc.

Fox Broadcasting Co.

Fox Family Worldwide
(49.5%)

Fox/Liberty Networks (50%)

Fox News Channel

Sports assets, including Los Angeles Dodgers

maneuvering on the regulatory front to expand the company's 22-station portfolio, which already reaches the FCC limit of 35% coverage of the U.S. But Fox has proposed investing up to \$150 million in minority-owned stations in exchange for a waiver of the cap.

News Corp. also wants to expand its sports franchise holdings. Earlier this year it bought the Los Angeles Dodgers, and there's a deal in the works to buy one of the UK's top rugby teams for \$1 billion.

News Corp. also has an option to acquire 40% of the Los Angeles Kings, just under 10% of the L.A. Lakers, and a 20% stake in a new arena—the Staples Center—that will host both teams. The company says it intends to exercise all those rights.

While the Fox IPO is a big hit, investors punished parent News Corp. last Thursday (knocking its stock price down \$2, to \$26.31) for an unexpected drop in first-quarter profits. Profits fell 18%, to \$196 million—due largely, News Corp. says, to start-up losses for Fox Family Entertainment, Fox Liberty Sports and international satellite ventures.

Revenue was up 12%, to \$3.2 billion. But the company says the owned TV stations posted lower earnings, primarily due to the GM strike during the summer. Revenue at the network was up as a result of higher pricing in upfront ad sales.

News Corp. COO Peter Chernin told analysts the company remains "quite confident" that it will break even on the rights for NFL games. Ratings and ad sales are up this season, Chernin said. ■



CBS ready to EyePO

Buoyed by Fox's success, CBS has priced its IPO for 16% of its radio and outdoor assets under the Infinity Media banner and says that it expects to raise a tad under \$3 billion. The company begins a road show next week and expects to launch its offering in early or mid-December.

Is there any reason to think that CBS's IPO will be any less successful than Fox's? "None that I can think of," says Bishop Cheen, media and entertainment analyst for First Union Capital Markets. That is, he clarified, no reason based on issues concerning the company or the offering.

What's impossible to predict these days, say Cheen and others, is what outside forces may or may not spook the market in December. The Iraqi conflict, the impeachment process, actions taken (or not taken) by Alan Greenspan and the Fed all are factors that could prompt investors to reach for their checkbooks or for their brokers (with sell orders). Developments in Asia, Russia and Latin America continue to influence stateside investment decisions.

—Steve McClellan

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Game of Fox and mouse heats up

Fox Sports is making moves on top sports franchise, Disney-owned ESPN

By Joe Schlosser

The race for sports supremacy in cable is heating up, and newcomer Fox Sports Net is stealing headlines from longtime frontrunner ESPN.

Fox Sports Net, a band of 22 regional cable channels that were merged into a pseudo-national network last January, last week signed two former ESPN anchors, Keith Olbermann and Chris Myers, for its nightly sports highlight program, Fox Sports News (see box).

Shrewd maneuvers by Fox executives landed the personalities and attracted the national spotlight on Fox Sports Net and the potential ratings race between the channel and cable giant ESPN.

Beyond the network race, there also is a battle brewing in the competitive arena of nightly sports highlights, where Fox Sports News is trying to overthrow ESPN's dominant *SportsCenter*.

Fox Sports Net and its nightly highlight shows trail far behind ESPN in Nielsen ratings, but that doesn't mean Fox isn't trying to catch up and catch up quickly.

"ESPN has something like a 15-year lead, and a 15-year lead is like being in a mile-long race and the other guy already has run half a mile," says Fox Liberty Networks COO Tracy Dolgin. "I think we've made up the first lap, and we're gaining on them. But those guys have been doing it for so long, and they have a big lead. We are really proud of the ground we have

made up so far and so quickly."

ESPN debuted in September 1979. John Walsh, ESPN senior vice president/executive editor, says that comparing the two networks is like comparing apples and oranges. ESPN is a national cable network, Walsh says, while Fox Sports Net comprises 22 regional networks airing local programming and national shows in prime time.

"That's not real competition for ESPN," Walsh says of Fox Sports Net. "It's not that it's not real competition. It is competition, but it's not competition on the level that challenges the leader and originator of the form. That's what ESPN has been and still is today. As a regional network they are terrific, but it's not the same."

John Mansell, senior analyst with Paul Kagan Associates, says the difference is in the ad revenue generated by local cable networks versus national cable channels, such as ESPN. Mansell says that combined, all regional cable networks and Fox Sports Net will bring in some \$300 million this year. ESPN and its other networks, ESPN2, ESPN-NEWS, ESPN Classic Sports, alone will attract nearly \$750 million.

But Mansell says there are good signs on the regional front: "The regionals are growing ad revenue



'Fox Sports News,' with Kevin Frazier and Van Earl Wright, has posted ratings increases for four straight quarters.

somewhere in the 12%-14% range. That's probably twice as much as over-the-air broadcasters and a little more than national cable services like ESPN. But again, that's on a smaller scale for the regionals."

No matter what ESPN and Wall Street says, Fox Sports Net executives are gunning for ESPN.

Fox Sports Net's 22 regional networks own local cable broadcast rights to 69 of the 75 teams of the National Hockey League, National Basketball Association and Major League Baseball. And Fox executives hope the flow from those regional games stays on their channels for use in Fox Sports News highlights.

Fox is in the middle of a \$2 million media blitz this month, trumpeting just that—that they are closer to the action than ESPN because of local coverage.

Ratings show that's true, to a certain extent. Fox Sports News has posted increases for four straight quarters. From fourth quarter 1997 to third quarter of 1998, Fox Sports News' ratings have increased

Olbermann, Myers join team at Fox Sports Net

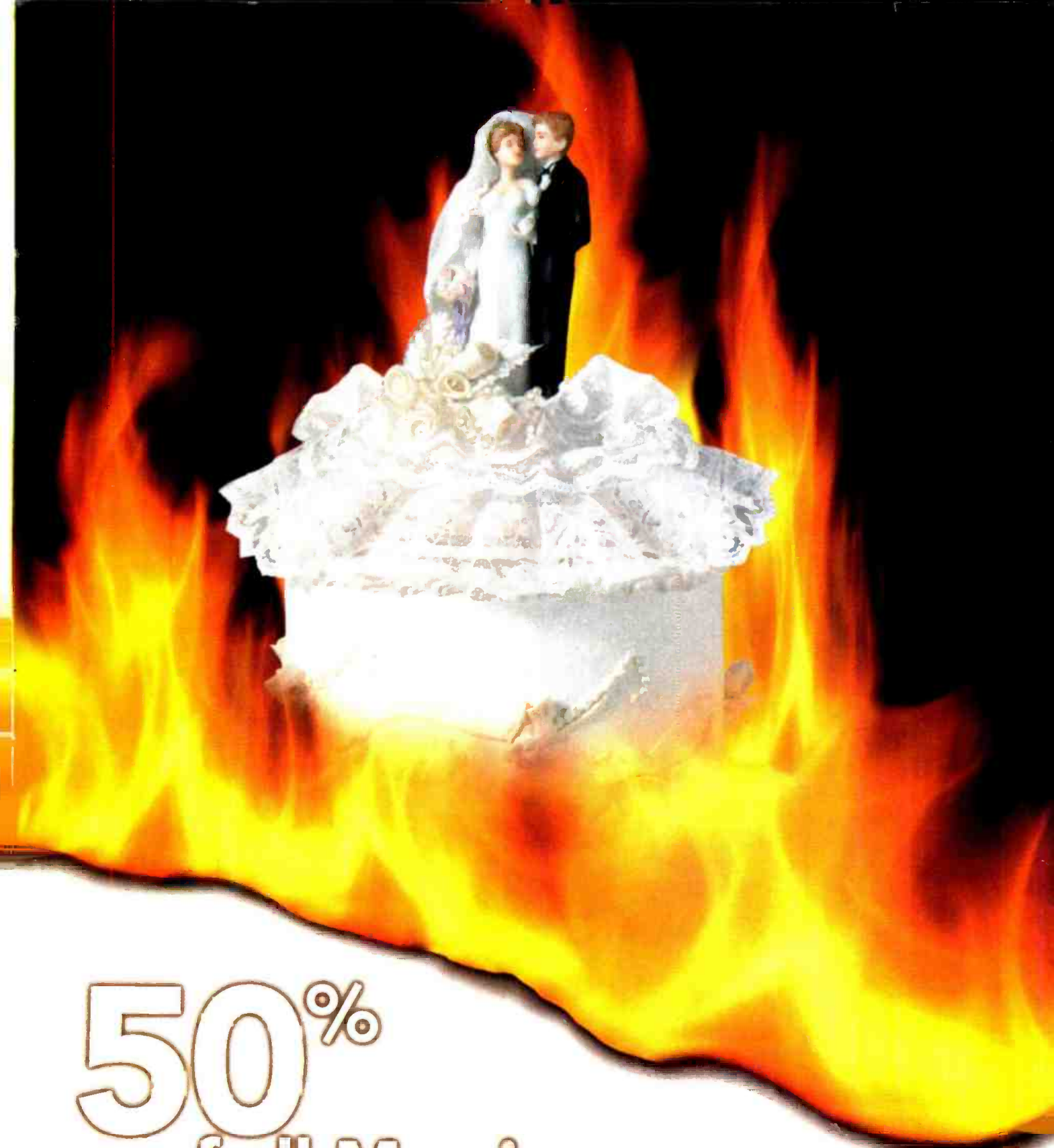
Fox Sports Net has added two familiar faces to its ever-growing cast of sports anchors, hiring Keith Olbermann away from NBC and Chris Myers from ESPN last week.

Olbermann, a longtime *ESPN SportsCenter* fixture and most recently host of MSNBC's nightly political talker *The Big Show*, signed a \$1 million annual contract with Fox to be an anchor and senior correspondent on Fox Sports News. In an unprecedented move, Fox paid \$1 million to NBC for the right to steal Olbermann out of the final two years of his contract. Olbermann, who left

ESPN in 1997 in a huff, says he made a career "mistake" in leaving sports and that therapy has helped him see his way back.

Fox Sports Net also beefed up its national presence by adding Myers to the roster, an 11-year veteran with ESPN and most recently that network's host of the daily *Up Close* series. Myers will be paid a reported \$400,000 annually to host Fox Sports Nets' weekly magazine series *Goin' Deep* and work as an anchor on Fox Sports News.

—Joe Schlosser



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from .58, .62, .82 and .94, respectively.

But those numbers still fall well short of ESPN's *SportsCenter* when the two are compared head-to-head. During October, *SportsCenter*'s 11 p.m. ET show outdrew Fox Sports News' program by 817,000 cable households per night (956,000 versus 139,000).

Fox's Dolgin says local sports pro-

gramming, such as the Los Angeles Lakers on Fox Sports West or the Seattle Mariners on Fox Sports Northwest, is their version of Must See TV on a market-by-market basis.

"No matter what else is going on in the world, you're going to have a large core audience in a team's market watching the games," Dolgin says.

"There is no way we could have gotten to the point we are at today so quickly without the inherent business model."

Fox Sports Net also has weekly series that are climbing in ratings, among them national sports personality Jim Rome's daily series *The Final Word* and the weekly *Goin' Deep*, which soon will be hosted by Chris Myers. ■

PolyGram goes on 'Blind Date'

New relationship show will give a lipstick cam's-eye-view of an awkward ritual

By Joe Schlosser

PolyGram Television is going to make viewers a third wheel on blind dates next year.

PolyGram is teaming up with Gold Coast Entertainment to produce a half-hour strip, *Blind Date*, that will go behind the scenes to take a lighthearted look at the mating ritual.

Roger Lodge, who has been the weekend host of E! Entertainment's popular series, *Talk Soup*, has been selected as the show's host and will



'Talk Soup' host Roger Lodge has a date with PolyGram's romantic effort.

guide the audience on two different dates each episode. *Blind Date* also has a team of comedy writers, a dating expert and a staff psychologist who will give on-screen analysis, pointers and criticism.

"We're going to edit down the dates to eight or nine minutes of video and allow the viewer to really be a voyeur to

the ups and downs of blind dates," says Bob Sanitsky, PolyGram's president.

Each date will be sent out with a two-person camera and sound crew, with "lipstick" cameras placed inside cars for the "stuff that takes place on the way," Sanitsky says. The couples will be sent to three or four different events on the date; most dates will last about four hours, PolyGram executives say.

"Coming from *Talk Soup* is the perfect background for Roger," Sanitsky says. "What we need him to do is very quickly explain to our viewers what they are going to see, set up the situation and give it a comical overview."

PolyGram executives are selling the show for daytime, early-fringe and late-night time periods on a cash-plus-barter basis. ■

Sweeps race tightens

NBC leads, CBS, Fox are close second in HHs, demos

By Michael Stroud

Fourteen days into the November sweeps, NBC is being dogged by CBS and Fox in key demographics, while The WB continues to be the only network to show substantial ratings gains.

Boosted by the strong performance of its *Temptations* miniseries and its Thursday lineup, NBC was still in the lead in households through Wednesday, Nov. 11, with a 9.6 rating/16 share. But CBS, bolstered by surprisingly strong perfor-



NBC's Thursday night shows (including 'Frasier') helped NBC maintain its household lead.

mances from *Becker* on Monday night and *JAG* on Tuesday night, was a close second at 9.5/16, according to Nielsen Media Research. ABC was third, at 8.6/14, and Fox was fourth, with 7.9/13. The WB had a 3.5/5, and UPN trailed with a 2.0/3.

Fox, boosted by the sixth-season premiere of *The X-Files* and theatrical "Lost World," was hot on NBC's trail among 18-49s—just a tenth of a rating point behind NBC's 6.0/16. ABC had a 5.0/14, CBS had a 4.0/11. The WB had

a 2.0/5 and UPN had a 1.2/3.

With less so-called stunting going on, "This sweeps period is going to give you an honest picture of the success of their regular schedule," says Bill Croasdale, president of national broadcasting for Western International Media Group.

While there may be less stunting, networks are attempting to present their best face for the month by at least temporarily pulling their weaker shows. NBC has benched comedy *Encore! Encore!* and the John Wells drama *Trinity* for the month, and ABC pulled drama *Vengeance Unlimited*.

The WB's numbers, up sharply from last season, were boosted by strong performances from its returning shows—*Dawson's Creek*, *Buffy*, the *Vampire Slayer*, and *7th Heaven*—and promising performances from freshman shows *Charmed* and *Felicity*. UPN, struggling to reshape its schedule, is down from the first two weeks of sweeps last year. ■

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First-run at a crawl

'Squares,' 'Judy' stand out among slow-moving pack

By Joe Schlosser

Petry Television's syndication analysis for October provided the proof of what most television industry analysts have been saying all along this season: Almost everything is under-delivering in both ratings and demographics.

Petry's 25-market sampling for last month, a survey that represents close to 50% of the country, showed declines across the board in talk, magazine, sitcom and other syndication genres. "I think the overall assessment on the new first-run shows has to be dismal, with the exception of *Hollywood Squares*," says Dick Kurlander, vice president and director of programming at Petry. "There are some bright lights in the off-net sitcoms, as some would expect. Obviously *Judge Judy* is on a roll and *Jerry Springer* con-



'Squares' is up in the key demos.

tinues to increase. But talk [shows] appear to be in general decline, the magazines have been in decline for years and other genres, including games, showed some erosion."

In daytime talkers, *Regis & Kathie Lee* lead the charge, but their household numbers are down 16% from a year ago, and key female demographics are down as well, Kurlander says. Among the talk shows in early fringe, *Oprah* is still the boss but showed declines in households and in all demographics.

On the magazine front, *Hard Copy*'s move out of key access time periods and into daytime and early-fringe slots hasn't hurt the former tabloid show. The new, softer format has shown some strength in daytime and other time periods, Kurlander says. *Entertainment Tonight* is still the leader in access, but even that long-

running Paramount-produced series showed declines in the Petry results.

Among the off-net sitcoms, *Seinfeld* continues to rule the domain in the lucrative time periods, but it too showed drops, according to the Petry results. *Seinfeld* averaged a 6.9 rating/11 share in access, according to Petry's numbers, with decreases in all demographic areas. *The Simpsons*, tops in early fringe, pulled in a 4.6/9 in the Petry-surveyed markets and even showed increases in key teen and 18-to-34 demographic areas.

In the game-show arena, King World's new revival of *Hollywood Squares* was the only series on the rise, according to Petry. *Squares* averaged a 5.5/10, maintaining the household numbers and posting gains in key demos, Kurlander says. *Wheel of Fortune* and *Jeopardy!*, King World's long-running access tandem, are still the leaders in their respective time periods—but they are slipping in both households and demos, Kurlander says.

Judge Judy is the leader in the court genre and the top gainer over a year ago among all syndicated shows. Kurlander says *Judge Judy* "dramatically" improved the show's time periods from 1997 in most dayparts. The other court series, Petry executives say, are performing "respectably."

Carsey-Werner to sell 'Profiler'

Will handle domestic distribution in syndication for NBC

By Joe Schlosser

Carsey-Werner is branching out with a full-service syndication division. The longtime network sitcom producer, which distributes such hits as *3rd Rock from the Sun* and *Grace Under Fire* in syndication, is getting into the first-run and distribution business on a new level.

In addition to using its own distribution company to handle in-house products, Carsey-Werner Distribution is taking on the sales duties for other producers, the first being NBC. The distributor was tapped by NBC Enterprises last week to sell *Profiler* into syndication for a fall 1999 launch. The initial package of *Profiler* will include 62 episodes of the series, which airs Saturday on NBC and stars Ally Walker and Robert Davi.

"What this means is we are spreading our wings," says Stuart Glickman,

Carsey-Werner's vice chairman. "We are looking to distribute other people's programming, and this is the first step in that direction. We are talking to a number of other producers about distributing their product."

Glickman says Carsey-Werner does not have an overall deal to distribute NBC-produced product (some say that the network eventually will increase its domestic distribution presence) and that they will work with NBC on a per-show basis like "any other distributor." As for *Profiler*, Glickman says the sales plan is currently being drawn up, and he did not rule out a possible cable sale. The distributor also is close to bringing out the CBS sitcom *Cosby*, a show that will be available to stations in fall 2000, for off-net syndication. Glickman says that Carsey-Werner executives are "talking internally" and working on a sales strategy.

Carsey-Werner is also getting into



'Profiler' is the first outside program that Carsey-Werner plans to distribute.

the first-run syndication business, another first for the company. Glickman says the company is looking at a few first-run projects but nothing that will be available at next January's NATPE Conference. Sources say Carsey-Werner will likely be teaming with another production outfit to distribute a weekly action series.

Cable anxious about FCC study

Industry hopes survey of subscriber rates won't lead to more regulation

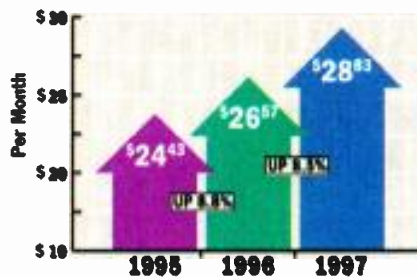
By Bill McConnell

Cable industry officials are warily eyeing an FCC report examining the impact of rising programming costs on cable rates. The study is expected to be released shortly.

The FCC's Cable Services Bureau last week presented Chairman William Kennard with a draft of the report, which is based on surveys of the top six multiple system operators—Time Warner, Tele-Communications Inc., Cablevision, MediaOne, Cox Enterprises and Comcast.

The survey was launched following an 8%-10% jump in cable rates in 1997. Kennard and key lawmakers

Cable rates on the up and up



Source: FCC

have complained that a lack of competition puts too little pressure on cable companies to keep prices low.

There is trepidation in the industry that a harsh report will give Congress sufficient ammunition to impose new rate restrictions. Current rate regulation of upper-tier programming will end on March 31, 1999. Senate Majority Leader Trent Lott (R-Miss.) warned cable industry officials in August that they were

"playing with fire" and predicted that lawmakers would take action if the pace of rate hikes continued. Representatives Billy Tauzin (R-La.) and Edward Markey (D-Mass.) even introduced legislation that would allow local cable authorities to demand FCC rate regulation if community officials found that a company did not provide enough programming choices.

But cable industry officials say that the data provided to the FCC prove that new rate restrictions are unwarranted. They say that the data show that higher programming costs, especially for sports, are driving the rate increases and that cable systems are passing on only a portion of their cost increases to customers. "Despite allegations that cable companies that produce content would raise programming costs to get rate hikes through the back door, the evidence shows a healthy sense of restraint on the part of the industry," says Arthur H. Harding, who represents cable companies for the Washington firm of Fleischman & Walsh.

"No consumer and no politician wants rates to go up. We understand that," says Alexander Netchvolodoff, lobbyist for Cox Enterprises. "But customers said they want more programming choices, and that means more costs. We hope the FCC thinks so too. ■"

'Jury out' on Primestar plan

By Price Colman

Primestar Inc.'s announcement last week that key shareholders support its continued pursuit of the medium-power DBS business and its launch of a high-power service left analysts underwhelmed.

"It appears they may not have received a reasonable bid on their assets," says Bear Stearns analyst Vijay Jayant. "The only other option is to continue business as usual. The jury is still out on whether the cable guys will back them if they need capital."

Primestar President Carl Vogel won't discuss specifics of what that "support" means, although he does acknowledge a capital component.

Vogel says that the business plan presented to Primestar's board—which includes members from TCI Satellite Entertainment, Time Warner, MediaOne, Comcast and Cox—focuses on cutting expenses to maximize cash flow from the medium-power

business and delivering a high-power business from 119 degrees.

Primestar has about \$215 million to fund fourth-quarter operations and expects to enter the first quarter with about \$120 million. It is cutting cash burn from some \$155 million a quarter to \$75 million—\$90 million a quarter. Primestar's also seeking to cut subscriber acquisition costs—at \$700-\$800 per subscriber, the highest in the DBS sector—to \$500 or below.



Analysts wonder whether cable will support Carl Vogel's new strategy.

Those measures will buy the company time before a liquidity crunch hits, but a crunch is inevitable if Primestar can't come up with additional money. Moreover, launching a high-power service from

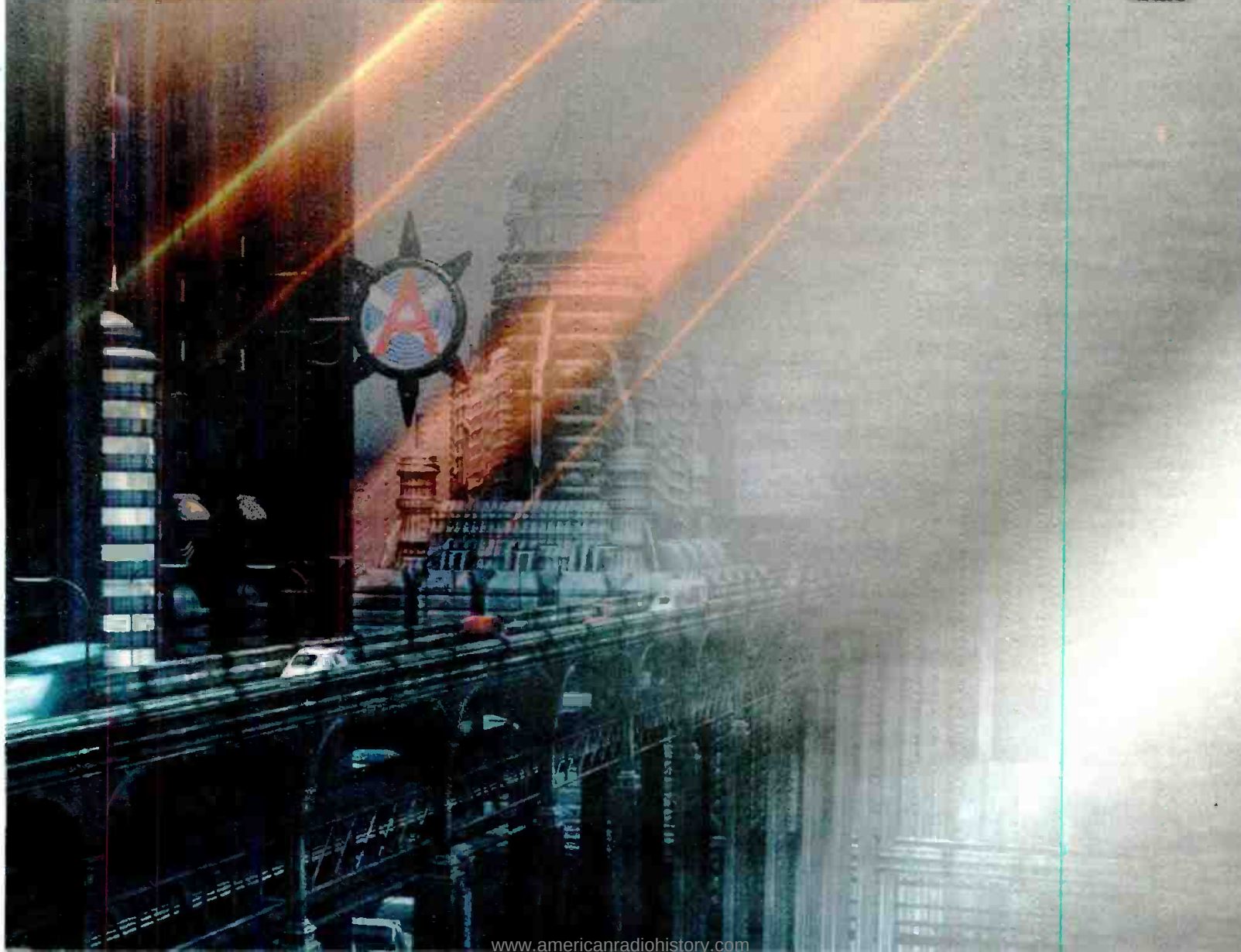
119 will take at least an additional \$75 million, according to recent estimates.

Sources for capital include debt and vendor financing, although Vogel acknowledges that high-yield debt markets aren't likely to be receptive until Primestar lowers churn, down from a staggering 50%-plus annualized in September to about 32% annualized now. He also acknowledges that major shareholders want to see churn cut and a workable business model for 119 presented before they'll chip in more money.

Primestar's general blueprint for 119 includes a retail high-power offering of 80-85 channels and a wholesale product that would target channel-locked cable operators, multiple dwelling units and MMDS or SMATV operators. FCC approval of a high-power service is unclear. DirecTV and EchoStar have similar plans for a supplemental DBS offering.

Janco Partners analyst Ted Henderson speculates that shareholder support could be in forms other than cash. "To me, the support of cable partners could include identifying cable subs who won't get digital anytime soon, giving them to Primestar to go after and helping Primestar on marketing." ■

TOTAL SCI-FI



Networks ready for war

TV news operations deploy troops in anticipation of Gulf conflict

By Dan Trigoboff

As U.S. and allied forces mobilized late last week in the Persian Gulf region for increasingly likely air strikes against Iraq, American television networks were mobilizing as well and remained on a state of alert in anticipation of military action.

Despite widely reported cutbacks that specifically target foreign reporting—as well as talks that could lead to cable's CNN providing international coverage for the Big Three broadcast networks—all the networks report significant commitments to the story. As of late last week, no network pools had been established except in Kuwait City. There five networks (ABC, CBS, NBC, CNN and Fox News Channel) will share a satellite dish in the city,

where they believe that the military would set up a joint information bureau. A broadcast executive commented, however, that additional pools may be set up to cut costs, since the networks are at the end of the budget year.

■ At ABC News, which has locked out members of the National Association of Broadcast Employees and Technicians—Communications Workers of America in a contract dispute, management acknowledges that the reduction in technical expertise will make things more difficult. "We have to go a little slower than we otherwise would," says Bob Murphy, senior vice president for hard news. "We've probably had more drills than usual to make sure systems work the way they're supposed to, to give people

practice dealing with incoming feeds. Audio is always a problem when you're dealing with multiple-origination programming." The network will have a team in Baghdad, another in Kuwait City and a third in Bahrain, and it will be beefing up its staffing in Jerusalem.

■ CNN, which rose to a new level of credibility during the 1991 Gulf War, will have several teams, led by correspondent Christiane Amanpour, Amman bureau chief Brent Sadler, Cairo bureau chief Ben Wedeman and Jane Aruff, who runs the network's Iraq operation. "We have a deep bench," says Eason Jordan, president, international networks and global news gathering, who adds that "as a rule, CNN objects to pools. We spend what we have to spend on big stories. The last thing we're going to do is let anyone beat us in Iraq."

■ CNN rival Fox News Channel also will draw from international resources, in London and Amman. Greg Palkot will be its lead correspondent in the Gulf. "We've only been in existence for two years," says John Moody, vice president. "We're still vastly smaller than CNN. But we're growing, and we've been working on some graphics and some animation. We're confident in our ability to cover breaking news."

■ NBC says it has teams in Baghdad, Cairo, Amman, Kuwait City and Tel Aviv. Ron Allen from NBC's London bureau is expected to lead the coverage. Linda Vester will report for cable net MSNBC, but NBC says technical services as well as reporting likely will be shared by both networks.

■ CBS has Rome-based correspondent Allen Pizzey in Baghdad, and London-based correspondent Tom Fenton also will be in the region. Regarding military control of the news, Lane Venardos, executive producer and director of special events, commented, "We're still at risk. This time, with no ground war, it's a very different circumstance. There aren't half a million ground troops there. Our only source of information for many things is the military." ■

Paxson: It's crossownership or bust



Bud Paxson: "There are too many outdated rules creating high hurdles for companies trying to build healthy and strong forces in an increasingly competitive communications world."

Digital television will be a bust unless the FCC removes its ownership restrictions, Pax TV Chairman Lowell "Bud" Paxson said last week.

"The broadcast, cable, satellite and computer industries are not strong enough individually to sustain the digital revolution envisioned by Congress," he told the Federal Communications Bar Association. "The revolution will become an overnight sensation only when our industries sit down and negotiate equitable and strategic financial relationships."

He called on the FCC to eliminate rules restricting media crossownership, dual networks and ownership of more than one station in a market. He also said that the cap on national audience reach should be lifted.

The FCC's ownership review is taking too long, he added. (Some of the issues have been under consideration since 1992.) "The broadcasting industry deserves modern ownership rules and not just a bunch of pending rulemakings," he said. "The FCC should act—or admit that it can't act and turn the issue back to Congress."

If the restrictions are not eased, Paxson said, broadcasters and cable companies will continue their technical disputes and cable will not be able to carry digital signals of local stations. He also predicted that few TV viewers will invest in digital antennas.

"Local stations will find their [digital] antenna and transmitter investments have gone for naught," he said.

Consequently, DTV will become a niche market for HDTV enthusiasts and will be dominated by the cable industry. He predicted that most viewers will stick to analog TV sets, killing the government's plan to take back analog spectrum.

—Bill McConnell

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Klose to head NPR

By Elizabeth A. Rathbun

Former *Washington Post* reporter and director of the U.S. International Broadcasting Bureau, Kevin Klose, has been selected as president of National Public Radio. He replaces Delano Lewis, who resigned in August to spend more time with his family.

Klose has been director of the IBB, a federal agency that includes Voice of



Kevin Klose comes to NPR from the U.S. International Broadcasting Bureau.

American, Worldnet Television and the Office of Cuba Broadcasting, since April 1997. Before that, he was president of Radio Free Europe/Radio Liberty, a private, nonprofit radio news organization. Before that, he served for 25 years at the *Post* as Moscow bureau chief, Midwest correspondent and deputy national editor. His parents were radio producers and writers in the 1930s and '40s.

"If I had been anywhere in my life and had the opportunity to lead NPR, I'd have taken it," Klose said last Wednesday at a news conference announcing his appointment. "NPR is without parallel in its presence in the American dialogue."

Klose will take charge of the 604-station public radio network in mid-December. He reportedly was recommended out of some 200 candidates by an executive head-hunting firm. ■

CLOSED CIRCUIT

BEHIND THE SCENES, BEFORE THE FACT

WASHINGTON

Paxson powwows with Kennard

Pax TV Chairman Lowell "Bud" Paxson met with FCC Chairman William Kennard last week, urging him not to restrict the way that broadcast ownership is measured. Paxson wants to preserve the single majority shareholder rule, which exempts minority stakes in broadcast stations from being counted toward national audience caps as long as one shareholder owns 51% or more of the voting stock. Elimination of the rule is among a host of ownership rule changes the agency is considering. Paxson urged the FCC to maintain the rule as a tool for promoting female and minority ownership—a priority for Kennard. Paxson has asked the FCC to approve the sale of five stations his company owns to minority-controlled Epcom Inc., as long as Paxson's 49% stake is excluded from the 35% national audience cap. To ease Kennard's concern that too much power would be in the hands of secondary shareholders, Paxson suggested that majority shareholders be prohibited from selling out to investors who take advantage of the measurement exemption. As for Kennard's reaction, Paxson would describe the meeting only as an "excellent exchange."

McCain eyes Iowa

The broadcast and cable industries may soon get some relief from the ever-watchful eye of Senate Commerce Committee Chairman John McCain (R-Ariz.). Word is trickling out of Iowa that McCain is beginning to round up staff to work the Iowa presidential caucuses, which take place 15 months from now. McCain recently talked to Steve Grubbs, chairman of the Iowa Republican party, about potential jobs, although no offers have been made, Grubbs notes. "In my conversation with

[McCain], he said he's serious and interested in the national race and that he may pursue it. He's going to see if he can pull it together," Grubbs says.

DENVER

Taking stock of MediaOne

Since early November, big chunks of MediaOne Group shares (NYSE:UMG) have traded, peaking with more than 15 million shares moving last Friday. The 30-day average through October was about 1.6 million shares daily. Shares closed at \$36.375, up 31.25 cents. There were conflicting reports regarding the heavy trading. One was that billionaire Paul Allen was selling his 3.3% chunk—some 20 million shares—of MediaOne; another was that it was somebody else who was selling large blocks. Representatives at Allen's Vulcan Ventures did not return phone calls, although they reportedly told CNBC that Allen wasn't the seller. MediaOne officials declined comment.

WASHINGTON

Taking a spin

Chancellor Media Corp., already involved in radio and TV stations, billboards and advertising rep firms, is considering creating its own record label. Chancellor and Capstar Broadcasting Partners Inc., with which it is merging, claim to be responsible for selling one of every four country records in the country because they own more country-formatted stations than any other radio group. So why not eliminate the middle man, says Chancellor Radio Group President Jimmy de Castro. A Chancellor record label would allow an artist to be promoted across all appropriate radio stations (Chancellor also owns the most urban-formatted stations). And "the branding of the artist is as important as selling records," de Castro says.

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# 2	Jerry Springer	WPIX	4.7	3.7
# 3	Forgive or Forget	WWOR	4.0	3.0
# 4	Oprah Winfrey	WABC	3.4	4.1
# 5	Jenny Jones	WWOR	3.2	2.0
# 6	Montel Williams	WWOR	2.8	2.1
# 7	Rosie O'Donnell	WABC	2.5	3.3
# 8	David Letterman	WCBS	2.2	1.9
# 9	The Tonight Show	WNBC	2.1	2.6
#10	The View	WABC	1.9	2.6

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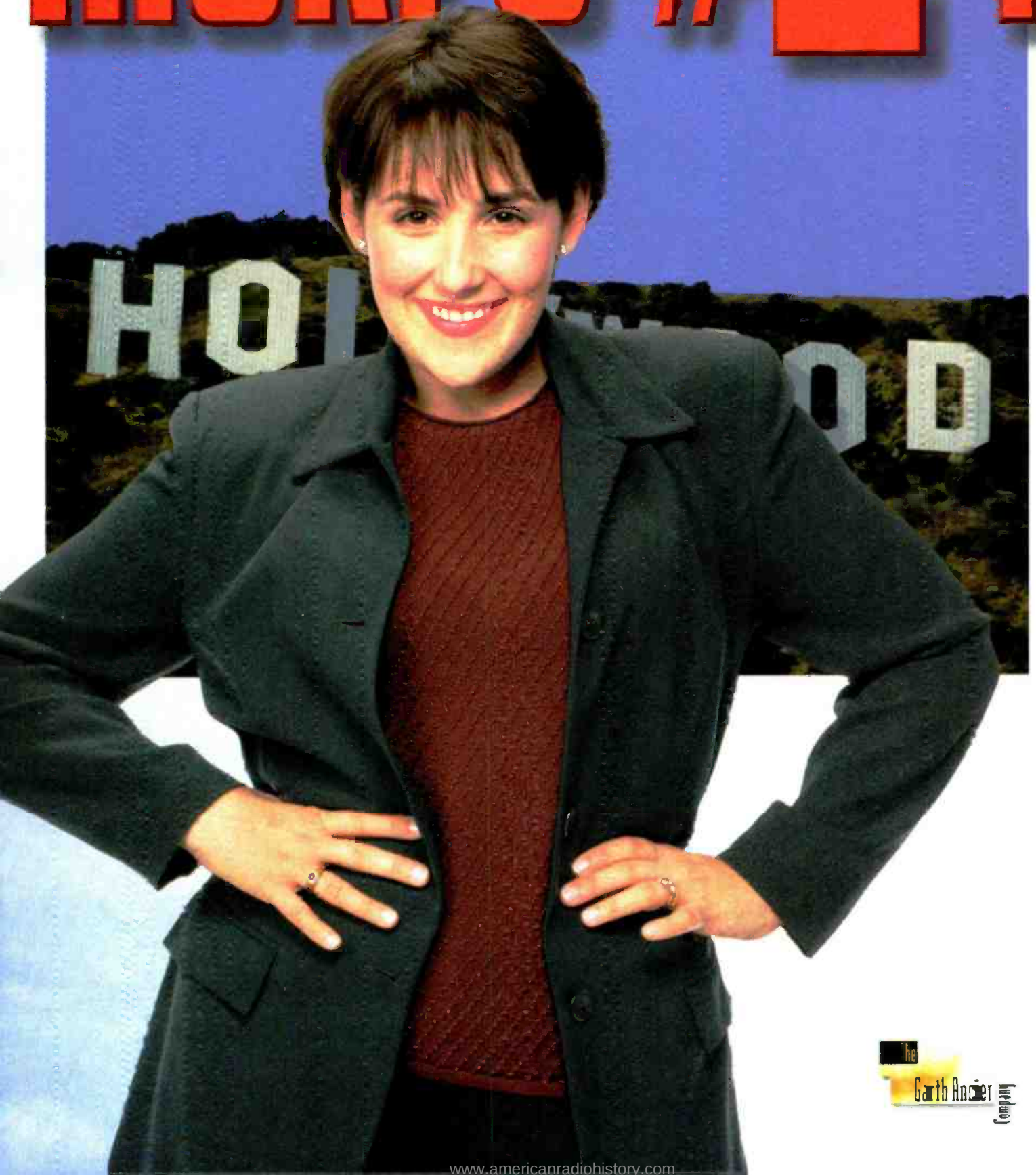
The 5pm Franchise!

Source: NSI, SNAP, Oct. '98 Primary telecasts, ranked by W18-34

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IN LOS ANGELES!

*RICKI LAKE is the #2 Talk Show in Los Angeles
Among Women 18-34 and 18-49 in All Dayparts!*

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# 1	Jerry Springer	KCAL	5.3	4.4
#2	Ricki Lake	KCOP	4.1	3.4
# 3	Rosie O'Donnell	KNBC	3.1	2.8
# 4	The Tonight Show	KNBC	2.7	3.4
# 5	Jenny Jones	KCOP	2.7	2.1
# 6	Montel Williams	KCOP	2.4	2.3
# 7	Forgive or Forget	KCOP	2.3	1.8
# 8	Oprah Winfrey	KABC	2.2	2.9
# 9	Conan O'Brien	KNBC	1.4	1.7
#10	The View	KABC	1.4	1.5



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Gore plan to move forward

Broadcasters object to specific public service requirements for DTV

By Paige Albinia

Despite the objections of the broadcast and cable industries, the Gore commission still plans to recommend that digital broadcasters who fulfill minimum public interest standards should receive cable carriage.

Some broadcasters do not like the plan because they do not want any kind of code that mandates what they should be doing to serve the public—even if it gets



CBS Television President Leslie Moonves

them the digital must-carry requirement they want. The Gore commission, formally known as the Advisory Committee on the Public Interest Obligations of Digital Television Broadcasters, has agreed that cable carriage

should be awarded to broadcasters who offer a certain amount of public interest programming.

Committee co-chairman and CBS Television President Leslie Moonves has vigorously opposed listing any specific public service requirements that broadcasters should be required to fulfill. He eventually said he could agree that broadcasters should supply a mandatory minimum of public service, but he complained that he would "probably be made a pariah in the broadcast industry for this."

In return for Moonves's agreement that he would sign off on a report recommending some mandatory efforts, the rest of the panel agreed that the report wouldn't be too precise in defining what those obligations should be.

"It's important that this report not get too specific," says Robert Decherd, chairman of A.H. Belo Corp. and panel member. "If I get hit over the head with this committee's report, it's going to be a bad starting point."

Broadcasters are just beginning to make the transition to digital television, with more than 40 stations expected to flip the switch before the

end of this year. Their public service obligations in the digital world have not yet been defined. The Gore commission's task is to write a report on the subject (after evaluating the issue over the past year) and then submit that report to Vice President Al Gore by Dec. 18. Gore likely will hand the document over to the FCC for evaluation.

The commission also will ask broadcasters to voluntarily commit to spend a total of five minutes per night on local, state and/or federal campaigns during the 30 days before general elections. But the panel also plans to ask Congress to pass campaign finance reform in order to make broadcasters' contribution meaningful.

Broadcasters have been staunchly opposed to offering any free airtime for politicians, but most say they already

dedicate five minutes of airtime per night to campaigns during elections.

"It's sort of asking broadcasters to take a pledge to do something that they are already doing because it makes good business sense as well as good public policy sense," says a broadcast source.

The public interest advocates on the committee are not happy with the commission's watered-down request for broadcasters' voluntary free airtime contribution. Gigi Sohn, executive director of nonprofit law firm Media Access Project and a panel member, plans to write a dissenting report recommending that the FCC require broadcasters to offer free airtime to candidates. Sohn hopes to get a majority of the panel to sign on to her report. ■

FCC to levy fees for digital services

Commission aims to set rate at level that will not discourage broadcasters from offering ancillary services

By Bill McConnell

Broadcasters offering digital TV subscription services will pay the government a share of the gross revenue they take in from those businesses under an FCC proposal expected to be approved at the commission's Nov. 19 meeting.

The fees are required by Congress as part of the 1996 Telecommunications Act to prevent broadcasters, who received their digital spectrum at no cost, from gaining an unfair advantage over wireless operators offering similar services. Lawmakers argued that wireless operators, many of whom obtained their spectrum at auction, would be saddled with higher costs than broadcast competitors.

Congress required the FCC to levy fees on any digital services for which stations receive compensation other

than commercial advertising.

FCC officials have not disclosed how high the fees will be, but industry sources predict the rate will be set at between 4% and 6% of revenue from ancillary services.

The commission is aiming to set a rate sufficient to compensate the government for the share of spectrum that will be devoted to ancillary products but not so high that broadcasters will be discouraged from offering new services.

Among the services envisioned are CD-quality audio signals, data transmission, telephone directories, stock market updates and computer software distribution.

The National Association of Broadcasters and the Association for Maximum Service Television have argued that fees should be as low as 2%. Public advocacy group Media Access Pro-

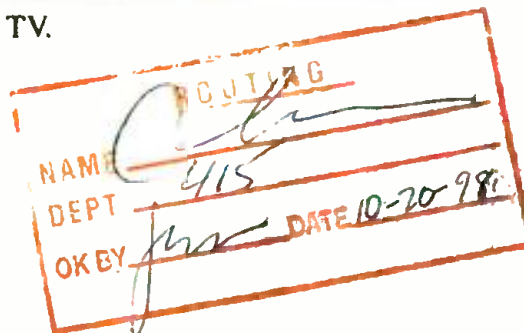


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ject called for a 10% fee.

Beside the gross revenue option, other fees proposed by the FCC last December include a levy on profits from subscription services or a charged base on a combination of a flat rate and a revenue percentage.

Still unclear is whether home-shop-

ping services or advertising revenue based on the number of viewer inquiries also will be subject to the fees, as requested by Media Access Project. NAB countered that the fees should be imposed only when payments are a condition of access to the television service.

The commission also is expected to propose separate standards for public broadcasters and other noncommercial stations. PBS and the Association of America's Public Television Stations have argued that federally funded broadcasters should be exempt from fees. ■



WASHINGTON WATCH

By Paige Albinak and Bill McConnell

Big Four fight back

The four major broadcast networks and their affiliate organizations last week countersued EchoStar Communications Corp. in Miami, charging that the direct broadcast satellite company infringed their copyrights by selling imported network signals to ineligible subscribers. EchoStar last month took ABC, CBS, Fox, NBC and their affiliates to court in Denver, asking the judge there to clarify which subscribers legally can receive imported signals via satellite. CBS and Fox in March 1997 sued distant network signal provider PrimeTime 24 in the same Miami federal district court. That court in July issued a preliminary injunction against PrimeTime 24 and its distributors, ruling that the companies had to turn off the signals of all satellite TV subscribers who can receive a broadcast signal over the air using a rooftop antenna. The broadcasters have requested that the same judge who presided over the PrimeTime 24 case, Lenore Nesbitt, hear the broadcasters' countersuit against EchoStar and that EchoStar's suit be moved from Denver to Miami. Broadcasters think the Miami court will be more receptive, because it

already has heard the PrimeTime 24 case.

NAB, MSTV tell FCC to watch closely

The National Association of Broadcasters and the Association for Maximum Service Television (MSTV) last week asked FCC Chair-



NAB's Fritts is concerned about digital TV, cable compatibility.

man William Kennard to form an inter-industry group to ensure that consumer electronics manufacturers include in new digital

TVs by the end of next year an interface—the so-called firewire standard—that passes digital TV signals from cable set-top boxes to digital TVs. “[T]he commission should rigorously oversee the implementation process to ensure that the American public will enjoy the benefits of the new standard,” wrote NAB President Eddie Fritts and MSTV President Margita White. “Otherwise, there will be an indefinite continuation of the lamentable situation we face over the next 12 months, with DTV sets unable to work with digital cable to receive the DTV programs broadcasters will

be transmitting—a predicament that will not only discourage DTV set sales but also will discourage cable carriage of DTV signals.”

The Consumer Electronics Manufacturers Association said it was “just astounded” by the letter, said CEMA’s Michael Petricone. “We managed to push through what I think is the most rapid standards-setting process in CEMA history. We should be commended by the broadcasters, not criticized.”

Tristani warms up to AT&T/TCI

FCC Commissioner Gloria Tristani last week gave a tentative thumbs up to the AT&T/TCI merger, predicting that it will jumpstart local phone service provided over cable.

“There are some upsides to this merger. It could be an opportunity to stimulate



Tristani is likely to support the AT&T/TCI merger.

competition in the residential market by giving TCI specialized expertise, greater financial resources, and a trusted brand

name,” she told the National Association of Regulatory Utility Commissioners in Orlando, Fla. Tristani’s endorsement is significant because

she is a Democrat and has voiced reservations about telecom consolidation.

High court to decide whether media can accompany police

The U.S. Supreme Court decided last week to hear oral arguments on whether police who allow news media to accompany them on searches can be sued for violating people’s constitutional rights. Two couples, one in Maryland and one in Montana, sued local and federal police after the police raided their homes, seeking to make arrests.

In the case of the Maryland couple, Charles and Geraldine Wilson, police entered their home looking to arrest their son and brought a newspaper reporter and photographer with them. The Wilsons sued, based on the Fourth Amendment, which forbids law enforcement agents from entering homes without just cause. But the Fourth Circuit Court of Appeals in Richmond, Va., ruled that the officers had immunity because they did not exceed the scope of their search warrant.

In Montana, federal agents brought along a CNN crew when they raided Paul and Erna Burger’s home to seek evidence that they were poisoning wildlife. The Ninth Circuit Court of Appeals in San Francisco ruled that the federal agents exceeded the bounds of their warrant. A split in circuit court decisions often causes the Supreme Court to take a case.



FCC moving, cautiously, on ownership

Commissioners try to meet end-of-year deadline to review regulations; changes expected in newspaper crossownership, one-to-a-market limit, LMAs

By Bill McConnell

FCC Chairman William Kennard is pushing his fellow commissioners to act on a long-awaited review of the agency's broadcast ownership rules by the end of the year.

But, reflecting Kennard's cautious approach to deregulation, the commission is likely to take only a few small steps to ease ownership restrictions on TV and radio owners rather than rolling back rules in a big way.

The biggest expected change: allowing media companies to own newspapers and radio stations in the country's most populated cities, but not newspapers and TV stations.

FCC staffers, who still are working out the final details for relaxing the 23-year-old broadcast/newspaper crossownership ban, are expected to provide their recommendations to the five commissioners within the next two weeks.

The agency also is expected to relax the ban against owning more than one TV station in a market. But, again, it will be in a modest way. Companies still won't be able to own two stations in a market, but they will be able to own stations whose fringe (Grade B) signals overlap. That means a company with a station in Washington could acquire one in Richmond, Va. (114 miles away) but not Baltimore (only 41 miles away).

The commission also may loosen its one-to-a-market rule to permit ownership of TV and radio stations in the top 50 markets. Currently, the FCC grants waivers to the ban only in the top 25 markets.

As further evidence of the FCC's hesitance, the agency also is likely to impose new restrictions on local marketing agreements (LMAs) and to tighten rules that define media ownership.

LMAs, which allow one station to control another without actually owning it, effectively permit broadcasters to circumvent the duopoly ban: Kennard's fellow Democratic commissioners, Susan Ness and Gloria Tristani, have argued that LMA investments should be counted in the agency's ownership measurements.

Kennard's caution stems from his concerns about the consolidation that hit broadcasting, particularly radio, after the Telecommunications Act of 1996. The law eliminated the cap on the number of TV stations that could be owned nationwide, raised the national audience-reach cap to 35% and increased the number of radio stations that can be owned in a local market.

Since the 1996 law was enacted, the number of radio station owners has dropped 11.7%, to 4,507, and the total number of radio outlets has declined 2.5%, to 10,222, according to the FCC. In the average metro market, the top four owners now account for 90% of the total advertising revenue.

Although most in the industry presume that Congress intended the rules to be relaxed further, Kennard is concerned about how consolidation is affecting broadcast diversity.

"The pace of consolidation has proceeded faster than most people anticipat-

ed when the act was signed," he says. "We must make sure whatever we do does not compromise our country's long-standing principles of diversity and competition in the broadcast industry."

Although major rollbacks do not appear in the offing, media representatives are happy for whatever relief they can get. "Newspapers bring a solid tradition of local news," says John Sturm, president of the Newspaper Association of America. "Letting newspapers operate radio stations would provide audiences with a strong new source of information about community affairs."

The ban has unfairly prevented newspaper companies from growing, says Tribune Co. lobbyist Shaun Sheehan. "Many newspaper owners are effectively locked out of buying more print properties because of their radio holdings. For some reason the government says it's all right for AT&T, TCI and Disney to grow—but if you own a printing press, you can't."

Tribune, which owns the *Chicago Tribune*, five other newspapers and more than a dozen broadcast properties, was permitted to keep its WGN(AM) and WGN-TV Chicago when the crossownership ban was implemented in 1975. Sheehan says there is no evidence that Chicago or any other market where newspaper/broadcast combinations were permitted to continue has suffered. "The government has never been able to show how New Yorkers are worse off because the *New York Times* owns a classical station on the FM band."

But Tribune is barred from buying newspaper properties in Denver, where it owns stations KOSI(FM) and KKHK-FM, and in New York, where it owns WQCD(FM). Radio purchases similarly

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FCC readies to rewrite these rules

The FCC is aiming to issue seven new mass media ownership rules by the end of the year.

1. Newspaper/radio crossownership:

The FCC prohibits ownership of newspapers and radio stations in the same market. Although existing combinations were generally grandfathered when the rule was created in 1975, waivers are permitted only in rare occasions. Only one permanent waiver has been granted.

What's being considered: The FCC may relax the current waiver policy to permit combinations in larger markets with a certain minimum number of voices. Industry sources say that the agency standard may mirror the radio/TV policy, allowing combinations in top-25 markets with more than 30 voices.

Status: Under review since 1996.

Next step: Final rule by the end of the year.

2. TV duopoly:

Ownership of stations with overlapping grade B contours is prohibited.

What's being considered: Whether to allow common ownership of stations in separate markets as long as grade A contours don't overlap. This

means a company with a station in Washington could acquire one in Richmond, Va. (114 miles away) but not in Baltimore (41 miles away). (The commission already has allowed waivers for combinations that meet this criterion, conditioned on the outcome of this proceeding.) The FCC also is considering waiver policies to allow UHF/UHF or VHF/UHF combinations; acquisition of economically distressed stations; operation of long-vacant or new channel allotments; combinations involving stations with a small audience or ad revenue in markets having a minimum number of independently owned stations and for owners who pledge to offer public interest programming.

Status: Under review since 1992.

Next step: Final rule by year-end.

3. Radio/TV "one-to-a-market" rule:

Waivers are routinely granted for combinations in the top 25 markets in which more than 30 independent broadcast voices would remain postmerger or if the merger involves an economically distressed station. Waivers also are granted on a case-by-case basis, taking into account whether the merger provides public benefit; the number of media outlets the applicant will own in the market; whether the stations are small or UHF TV; the financial status of the stations, and the impact of competition and diversity.

What's being considered: The FCC has proposed extending the standard waiver (at a minimum) to the

top 50 markets. The FCC also has asked for comments on whether to extend the waiver standard to all TV markets that meet a minimum independent ownership test. Other questions: Should the standard waiver be extended to TV owners that want to acquire more than one radio station? Should the number of required independent voices be reduced from 30? Should the criteria for case-by-case waivers be changed? Should the rule be repealed?

Status: Under review since 1996.

Last change: 1996 Telecommunications Act directed the FCC to extend the waiver if it would be in the public interest.

Next step: Final rule by year-end.

4. TV local marketing agreements:

TV LMAs do not count toward local and national ownership caps.

What's being considered: The commission has asked for comment on whether LMAs should be counted in ownership caps and whether existing ones should be grandfathered.

Status: Proposal under review since 1996.

Next step: Final rule by year-end.

5. Broadcast attribution:

Investments in radio and TV properties are counted toward national and local ownership caps when an active shareholder's stake equals 5% of voting stock or a passive shareholder's stake is 10%.

What's being considered: Whether to increase the benchmarks for

active and passive holders to 10% and 20%, respectively. The FCC also is looking at whether to attribute ownership to an interest holder that exceeds the investment threshold and also is a program supplier to any broadcaster in the same market. In addition, the FCC is considering whether to attribute joint partnership interests and limited partnerships.

Status: Under review since Nov. 1996.

Next step: Final rule.

6. Cable horizontal ownership:

A cable company's national audience reach is limited to a 30% pass-by of all households.

What's being considered: Whether to retain or make changes to the horizontal limits.

Status: Under review since June 1998.

Next step: Final rule by year-end.

7. Cable attribution rules:

Cable companies face more restrictive attribution rules than broadcasters in order to limit their ownership stake in wireless cable operators. For instance, 5% stakes, even when the stock is nonvoting or a limited partnership interest, are counted toward the ownership cap.

What's being considered: Whether to eliminate those more restrictive rules in order to encourage more investment in the struggling wireless cable industry.

Status: Under review since June 1998.

Next step: Final rule.

Biennial review

The 1996 Telecommunications Act requires the agency to review its ownership rules every two years. The FCC asked for comments in March on six proceedings. Proposed changes to the following rules are expected by the end of the year.

1. National television ownership cap:

Audience reach is capped at 35% of households.

What's being considered: Should the cap be changed because of the impact of industry consolidation?

Next step: Proposed change.

Last change: The Telecom Act eliminated the cap on the total number of stations that may be owned and increased the audience-reach limit from 25%.

2. UHF TV discount:

UHF stations' audience reach is now counted at 50% for purposes of calculating a group's 35% national coverage cap.

What's being considered: Now that cable carriage requirements have extended the audience reach of UHF stations, should the FCC eliminate the measurement discount?

Next step: Proposed change.

3. Dual network rule:

ABC, CBS, NBC, and Fox are prohibited from merging with each other or acquiring The WB and UPN, although they are permitted to launch second networks.

What's being considered: Should the rule be lifted?

Next step: Proposed change.

Last change: 1996 Telecom Act eliminated ban on dual networks.

4. Local radio ownership caps:

In markets with 45 or more commercial stations, a company may own no more than eight stations and no more than five in the same service. For smaller markets there are tighter restrictions.

What's being considered: The FCC has asked for comment as to how consolidation has affected competition, advertising rates and diversity.

Next step: Proposed change.

Last change: Congress eliminated national ownership cap and relaxed local limits in 1996.

5. Newspaper/broadcast crossownership:

Newspapers and broadcast stations in the same market may not be commonly owned.

What's being considered: Lifting the rule.

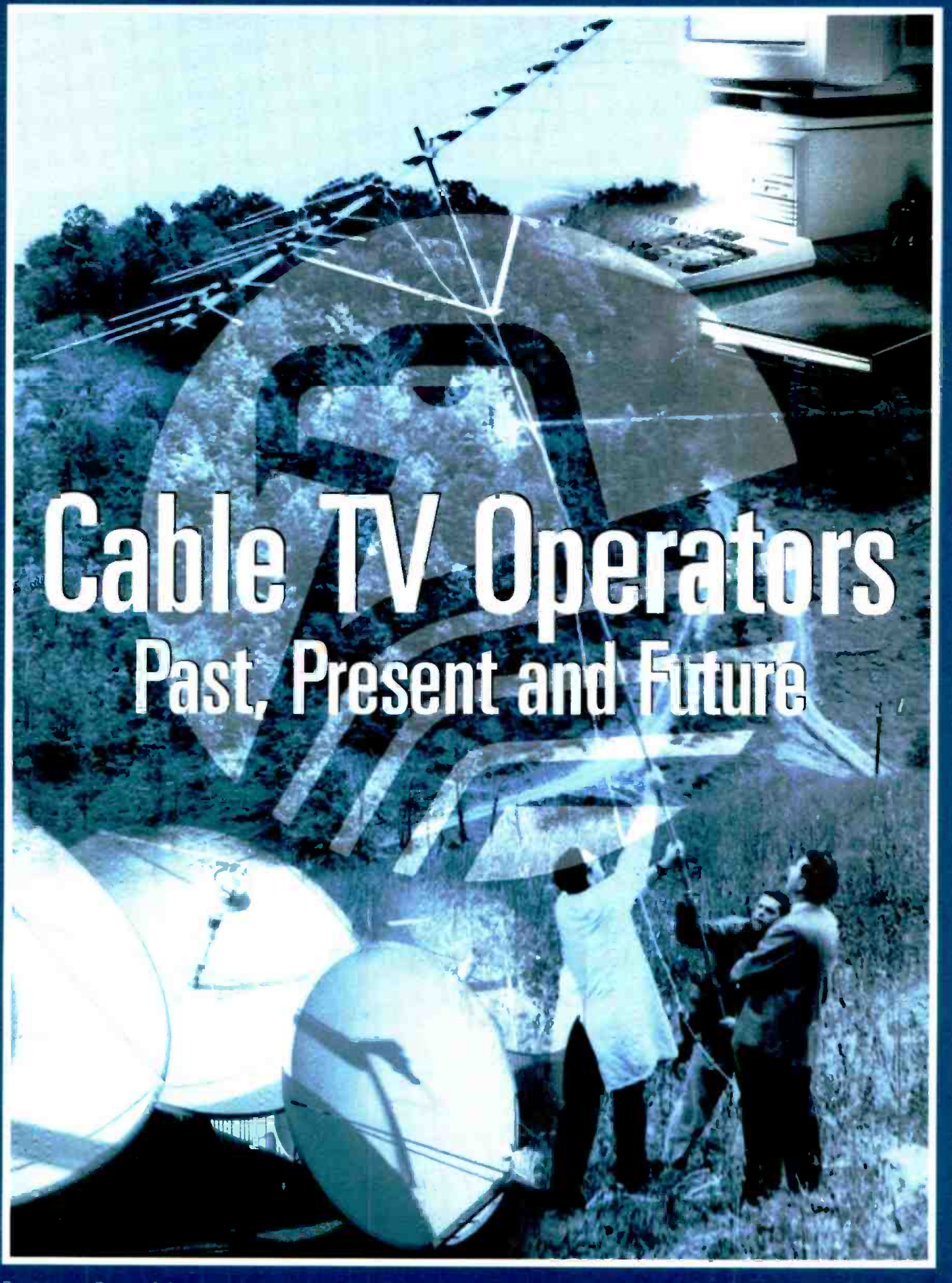
Next step: Proposed change.

6. Local cable/TV station crossownership:

Cable systems and television stations in the same market may not be commonly owned.

What's being considered: With digital TV possibly offering broadcasters a chance to offer multiple channels, the FCC is considering whether to relax or eliminate the ban on local cable-TV station crossownership.

Next step: Proposed change.



Cable TV Operators

Past, Present and Future

PRODUCED BY DANIELS & ASSOCIATES IN CONJUNCTION WITH BROADCASTING & CABLE IN CELEBRATION OF DANIELS & ASSOCIATES' 40TH ANNIVERSARY

Vision...

the ability to see what others can't.

Determination...

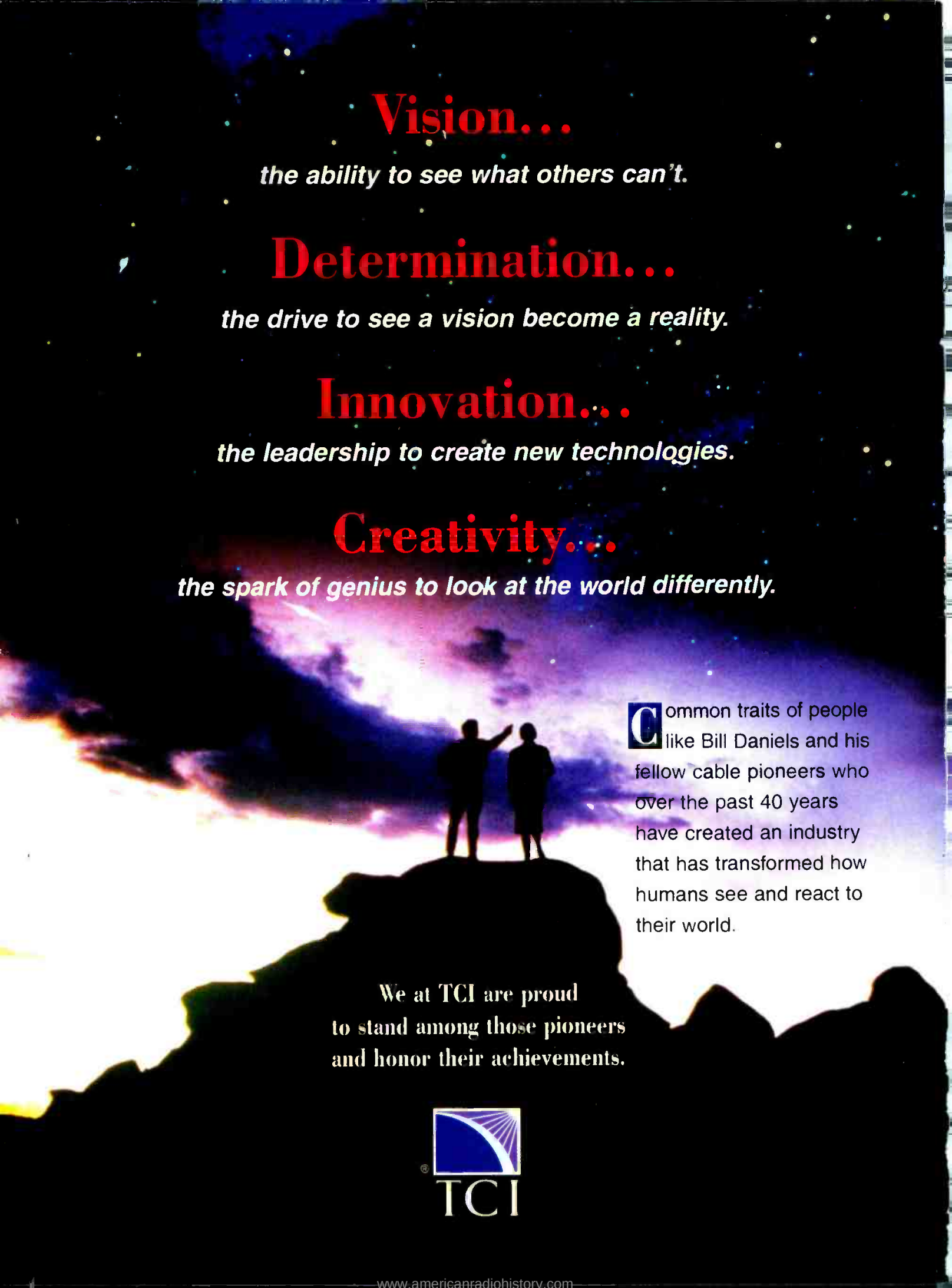
the drive to see a vision become a reality.

Innovation...

the leadership to create new technologies.

Creativity...

the spark of genius to look at the world differently.



Common traits of people like Bill Daniels and his fellow cable pioneers who over the past 40 years have created an industry that has transformed how humans see and react to their world.

We at TCI are proud
to stand among those pioneers
and honor their achievements.





A Defining Moment



Cable faces awesome responsibilities as it leads the way into an entertainment and information revolution

By Bill Daniels

Throughout history, the people who have shown the extraordinary vision, commitment and entrepreneurial spirit needed to build a successful business have defined the term greatness.

No other business embodies more of those essential qualities than the industry so many of us have devoted our lives to—cable television.

Today, we dominate the television scene by providing information and entertainment to 60 million TV households (that's 150 million people) who get hundreds of programming choices thanks to our great industry. Before cable, there were just three channels in the vast majority of U.S. markets. Can you imagine just three TV channels?

In our relatively brief 50-year history, cable has succeeded in its quest to bring an entirely new dimension of television to rural America, to suburbs, to major urban markets, and, tomorrow, to the entire world. Along the way, we have greatly influenced the communications revolution in our nation, creating entirely new businesses supporting hundreds of thousands of jobs, while injecting billions of dollars into our economy.

Cable's signature is a quality product at a fair price to its customers. We are continuously upgrading our technology, adding new programming choices and introducing new, sophisticated services.

Today, our industry stands as the major player in the midst of a defining moment in communications history. We are presented with yet another opportunity to prove our industry's greatness

and foster the incredible changes taking place not only in cable, but converging industries such as telecommunications and computers.

Our once-fledgling industry has grown up to become a world-wide communications medium that, even as you read this article, is literally being defined. The cable revolution is one of the

most breathtaking and important historical events in America.

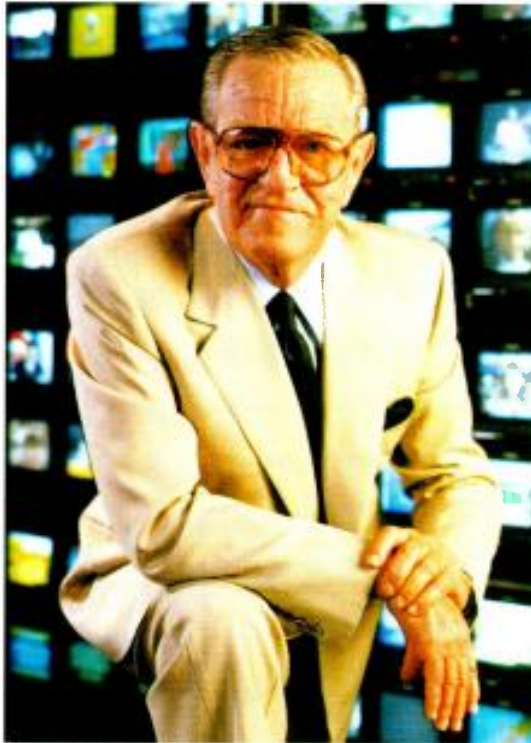
The connection being made among converging industries will forever change the way our customers view television and send and receive information. And our cable industry is poised to lead the way.

However, there's a lot we need to focus on in the days and years ahead.

With events such as the AT&T/TCI merger, our industry, working in concert with Cable-Labs, will have access to revolutionary new technologies being developed at Bell Labs. We need to capitalize on these resources to improve our engineering and technology. For example, one study predicts that by year-end 1999, 38 million homes will be two-way capable of high-speed Internet access via cable.

We need to continue to grow our companies. Cable operators must enter into partnerships with high-tech firms to drive our industry into spectacular new businesses such as high-speed data, Internet access and other fields we can't even define today. Microsoft's investment in our industry is one example of this.

A recent study predicts that by the year 2005, 60 percent of our industry's revenue growth is expected to come from three new services—digital video, modems and telephony—while 40 percent of the industry's total revenues will

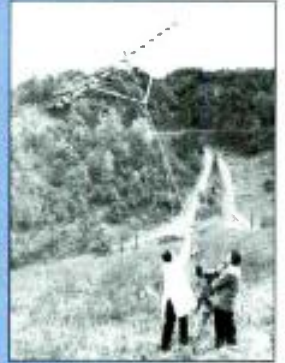


**"We must mobilize
our satisfied customers
into a cohesive group
to tell our story."**

Cable Operations Milestones

1948-50

The first community antenna systems, built by industry pioneers in Pennsylvania, Oregon and Arkansas, get up and running. Installation costs run several hundred dollars per



household and monthly fees average about \$3 per month. L.E. "Ed" Parsons, whose Astoria, Ore. system installs a mountain-top antenna in this photo, is among the earliest operators.

1951

Cable pioneers Martin Malarkey and Bill Daniels convene the first meeting of the National Community Television Council,



Martin Malarkey

forerunner of the National Cable Television Association, at the Necho-Allen Hotel in Pottsville, Pa.

1953

Bill Daniels builds the first U.S. cable system that uses microwave to import signals.

Cable Operations Milestones

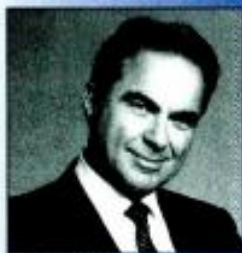


Microwave antenna tower

Many Western operators use towers like the one pictured above to retransmit TV signals.

1956

Alan Gerry founds Cablevision Industries Corp., using innovative capital structures that enable the company to grow without access-



Alan Gerry

ing public equity markets. His approach captures the attention of many other operators.

1958

Bill Daniels founds Daniels & Associates, the first brokerage and financial consulting service to specialize in cable. Daniels would convince many banks, insurance companies and other large financial institutions that cable is a worthy investment.



Bill Daniels

come from these new services. Every cable operator must begin thinking like a big-time telecommunications provider.

Not only must the cable industry find better ways to "out-communicate" adversaries including regulators and broadcasters, but it must work even harder to reinvent itself to meet the staggering demands of applying advanced technologies to an entirely new set of businesses.

Remember, the broadcast networks are no longer a dominating force in communications. Only one is making a profit and their market share continues to decline, confirming that our customers love cable.

That puts us in a great position to accomplish what we've worked on for the past 50 years. But, in turn, it creates an awesome responsibility for us to act as the national leaders we have become.

Our battles with adversaries will be never-ending. So, one of the things we have to accomplish is to mobilize our satisfied customers into a cohesive group to tell our story. To do that, we must continue to upgrade our customer-service programs, and listen to what our customers are telling us.

Another way to galvanize our customers is to expand our local news programming. Local news has given broadcasters a lot of clout in their markets, particularly with politicians. We should become a highly visible news source as well, especially by taking advantage of our unique technology.

Even though our industry has started more than 20 all-news channels with a local and regional focus and another 30 channels devoted to part-time news, we must do more.

This has tremendous implications for us politically. Next year, the Telecommunications Act is up for review. Local news gives us a much better identity in the community, and with local policymakers.

Every cable operator should be on a first-name basis with politicians, as well as other constituents. They must become an integral part of the communities they serve.

Furthermore, if cable operators would trade 20 percent of their advertising income for two months every two years to allow free political commercials on their systems, we would be free of the stranglehold of re-regulation, and become the authors of campaign finance reform that Congress will never settle.

Allowing free political advertising would be a politically prudent move on our parts, but most

importantly, it's the right thing to do.

This year, my Southern California systems have let almost a dozen federal candidates run free ads. This test has been praised by candidates, civic organizations and our trade associations. If all cable operators adopted this kind of voluntary free airtime program, it would greatly benefit our industry and our nation.

We have spent over \$300 million to create and fund C-SPAN and C-SPAN 2, and this effort should continue. However, it's time we used networks such as these more to our advantage to build a positive reputation for our industry.

Cross promotions, more coverage of our wired schools and hospitals for distance learning—whatever it takes, we must be more diligent and forceful with our message that cable is doing the right thing.

Hundreds of examples of the "right things" are included in a new study just released by Bortz Media in Denver. I urge everyone in the industry to obtain a copy and use it as a tool with Congress, state and local governments, our customers and the news media. It's available through the National Cable Television Center and Museum.

Since its humblest of beginnings in the hills of Pennsylvania and Oregon, our industry has cleared more hurdles, overcome more obstacles, been regulated and re-regulated more often and threatened more competing industries than any other business.

Nonetheless, our industry has produced hundreds of pioneering efforts in technology, engineering, programming and education, with countless individuals risking their private money in what I consider to be the true embodiment of entrepreneurial spirit.

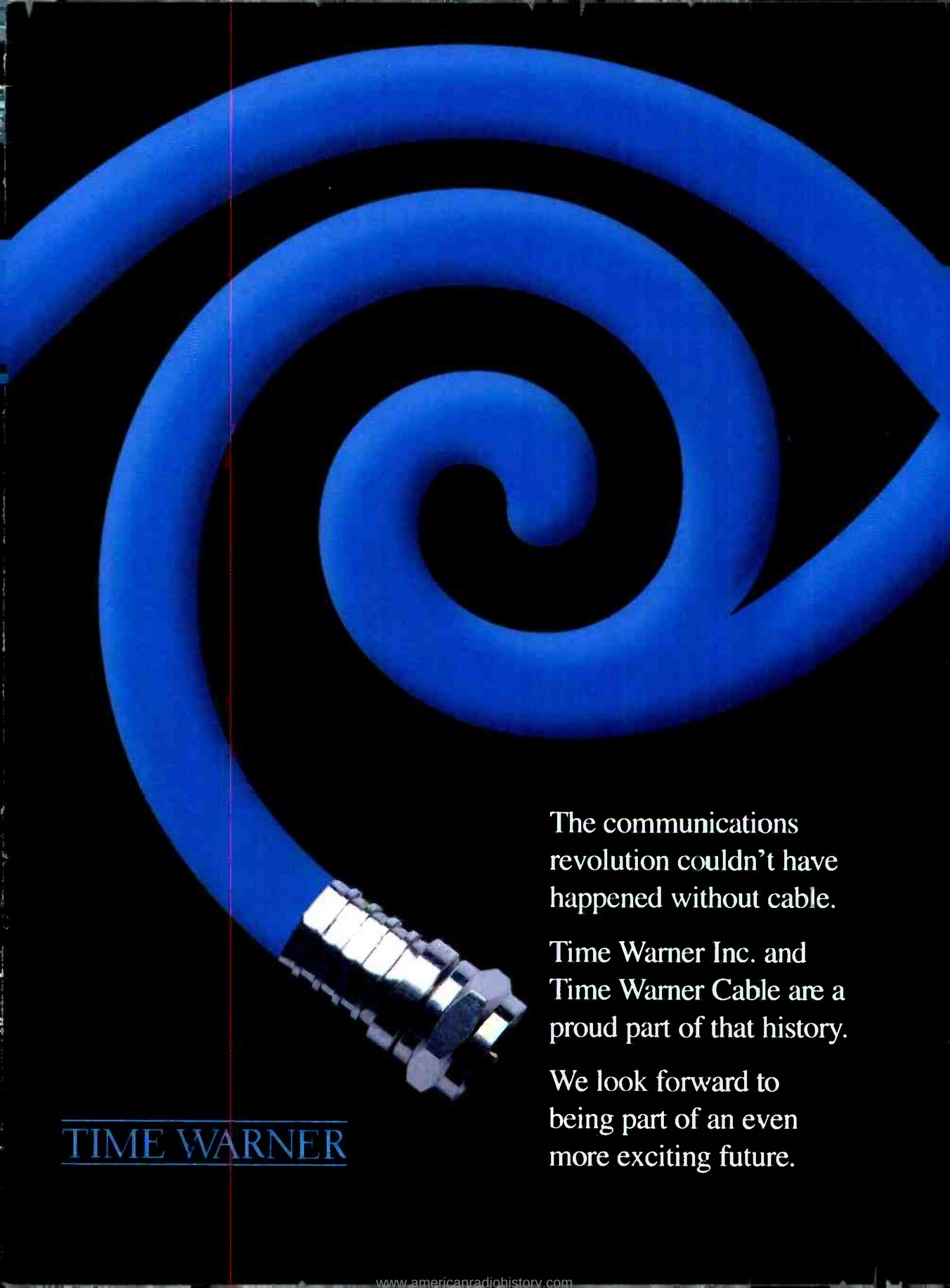
Most importantly, cable has given back to its communities many times over. We have rallied, for example, around educational programs such as Cable in the Classroom, High-Speed Education Connection, and webTeacher.

All of these achievements have led us to this point. We are now on the threshold of something monumental. I guess you could call it another great awakening. Major industries are now fusing together to bring the world closer, and cable is in a unique position to champion this new global communications revolution.

We have worked diligently for this opportunity and the challenges it will bring. If our industry will just concentrate on a few of the issues I've raised in this article, I can assure you, cable television will prevail.



"We should become a highly visible news source, especially by taking advantage of our unique technology."



The communications
revolution couldn't have
happened without cable.

Time Warner Inc. and
Time Warner Cable are a
proud part of that history.

We look forward to
being part of an even
more exciting future.

TIME WARNER

Cable Operations Milestones

The industry would soon enter a period of rapid expansion, as entrepreneurs as well as established media companies begin entering the business.

1963

1,200 cable systems serve more than 1 million homes. By 1969, cable subscribership would more than triple, with 2,260 systems serving more than 3.6 million households.



Cable coax

1975

Home Box Office transmits the first satellite-distributed program, *The Thrilla from Manila*, a heavyweight



John Walson, Jerry Levin and Bark Lee Yee

championship fight between Muhammad Ali and Joe Frazier, to a trio of cable systems in Vero Beach, Fla. and Jackson, Miss. HBO president Gerald Levin (above center) stands with John Walson (left), whose Wilkes Barre, Pa. system was the first to receive HBO by microwave, and Bark Lee Yee, who also owned a Wilkes Barre system. HBO's move gives multiple system operators the programming they need to begin attracting subscribers in big cities.

On the Threshold of a New World

Cable operators are taking on the challenges—and opportunities—of evolving into a new business

By Kathy Haley

The best of times, the most challenging of times. No pair of phrases better describes the fascinating juncture at which cable operators now stand.

After a difficult decade of slogging through a hostile regulatory environment and dealing with a skeptical investment community, operators have emerged at the top of the telecommunications heap, their broadband platform deemed the best suited to deliver a host of new consumer and business services. System values hover near record levels, capital has never been more plentiful and cable stocks have been far more buoyant than most in this year's tumultuous market.

Underscoring these trends have been displays of confidence from some titans of American industry: Microsoft Corp. has made major investments in several cable operators; long-time media investor Paul Allen has moved aggressively into system ownership; and AT&T, in a bid to compete in local telephony, is in the process of acquiring Tele-Communications Inc. and forging joint ventures with other operators.

AT&T's move into the industry "is the ultimate affirmation that cable technology can transform itself into a telephone business and a broadband connection to the personal computer and electronic commerce," says Brian Roberts, president of Comcast Corp. "The things we've been talking about for the past ten years are taking shape."

Such heady times haven't

come without challenges, however. As Jim Robbins, president of Cox Cable Communications, puts it: "We've gone from offering our customers one service in a relatively non-competitive environment to offering a multitude of services in a competitive environment."

Deciding which new service, if any, to emphasize over the others presents one of the biggest hurdles cable chief executives face, and a look at the top operators reveals a variety of different strategies. "Everyone has their own approach," confirms Brian Deevy, president and CEO of Denver-based media and telecommunications investment bank Daniels & Associates.

Comcast, which has been an early and active player in high speed data and also has telephony initiatives, has decided to put extra energy into rolling out digital set-tops, according to Roberts. "It's TV, so it's available to everybody, not just homes with PCs," he says, "and it's cash-flow positive right from the start."

Cox, on the other hand, is deciding on a market-by-market basis which new service to put the most energy behind. "If there's high PC penetration in a particular cluster, we'll do data first," Robbins says. "If DBS penetration is high or there's a telco moving into video in another cluster, we'll go flat out on digital there."

Cox is moving aggressively into telephony, while Time Warner has offered to lease its platform to local and long distance carriers and is pushing ahead with video-on-demand trials. VOD "will happen more quickly than many people think it will," comments TWC president Glenn Britt. Comcast, a significant player already in cellular telephone services, is formulating its strategy for wire-



"Meaningful penetration [of the telephone business] will have an incredible impact on our profitability."

—Comcast's Brian Roberts



"Opportunities [here in the U.S.] are much more interesting than some of the things underway overseas."

—Daniels & Associates' Brian Deevy

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Cable Operations Milestones

1976

Inspired by HBO's example, TV station owner Ted Turner puts his Atlanta independent



Ted Turner at launch of CNN

WTCG up on satellite, enabling cable operators to import an independent station to many cities and towns that lacked indies of their own.

1977

Warner Cable, under the leadership of Gustave Hauser, demonstrates QUBE, a two-



Gus Hauser

way interactive technology, at its Columbus, Ohio system. Annual cable revenues surpass \$1 billion and a number of media giants, major U.S. corporations and investment banks become important players in the industry's growth.

1978-82

MSOs compete fiercely for franchises to wire major U.S. cities and the first basic cable networks launch.

line voice. "It's my number-one priority," Roberts says.

While Britt believes the jury is still out on whether consumers want their video services bundled with high speed data and telephony, Robbins is certain they want the simplicity of having it all from one carrier. "As a company, we need to get ourselves thinking the way the airlines do about their frequent flyers. They coddle the hell out of them," he says. "We need to do the same thing."

Mounting Competitive Pressures

How quickly operators move into each of these new businesses is being determined largely by the competitive threats they face. Ameritech is overbuilding cable systems in several big markets and Bell Atlantic is moving into wireless cable in others. Direct broadcast satellite operators will soon have the capability to carry local TV stations and look to develop interactive and high speed data services. Broadcasters, undergoing an expensive transition to digital transmission, have threatened to band together locally and compete with cable in offering networks on a subscription basis. Bell operating companies are starting to market their own high speed data services using ADSL technology.

"We face an increasingly competitive environment," notes Jan Peters, president of MediaOne. Further complicating any decision making is the fact that technology is changing so fast. In such an environment, it's the big investment decisions that count, says Peters.

"You've got to be confident that the large investments you are making to upgrade the infrastructure represent the right set," she says. "There's less certainty about exactly what will go over all of that bandwidth. We know the capabilities of our platform and we're putting our bets on them, relative to the capabilities of other platforms like DBS or ADSL."

Even less certain than which services will win out on the broadband platform are the business structures that will be needed to roll them out across the U.S. "The businesses that we're entering have different natural

sizes and economies," comments TWC's Britt. "Plain old telephone service looks like a business that requires large scale, but it remains to be seen what industry structures will be built around that."

Most operators contacted for this story anticipate expanding their companies further during the next few years through acquisitions, mergers and joint ventures, but none would venture a guess about how big a broadband company needs to be to compete effectively. "We don't know how big we need to be yet," Britt says. "The important thing for us and investors is that there's value in the cable plant. What we need to do is figure out the best way to utilize it."

Initial Signs of Success

Despite all the questions looking for answers right now in the cable business, early indications are that broadband's new services are doing quite well with consumers. The *Wall Street Journal* ran a front-page story in August about how Cox's Orange County, Calif., system has been snatching customers away from Pacific Bell with a competitively priced, aggressively marketed cable telephone service. A month later, it ran a feature about how cable's broadband platform may win out over the phone companies in delivering a package of advanced telecommunications and entertainment services.

Other signs of how well things are going abound: Comcast has been installing 5,000 digital set-tops per week this fall and Time Warner's high speed data service has achieved penetration as high as 9-10 percent of homes passed in some of its markets. This, Britt points out, means that cable modems may be picking up as many as half of all on-line homes, if current estimates that 20-30 percent of PC users are on-line are accurate. MediaOne's business plan for telephony, based on a penetration of 10-15 percent over five years, is turning out to be conservative, according to Peters.

Broadband's new businesses "are all chugging on eight cylinders," Robbins says. "Our only limitation is our ability to fulfill. Customer demand is there."

Nor are cable's new business rollouts restricted to major opera-



"We don't know how big we need to be yet."

—Time Warner Cable's
Glenn Britt



"You've got to be confident that the large investments you are making to upgrade the infrastructure are the right set."

—MediaOne's Jan Peters

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communication
services of
tomorrow
to our
customers
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**Cable for the
21st Century.**



Rifkin & Associates, Inc.

Cable Operations Milestones



Technicians stringing cable in Milwaukee

Among the new networks are ESPN, USA, CNN, MTV, Nickelodeon and BET.

Early 1980s

A wave of consolidation creates bigger, more powerful cable companies. TelePrompTer merges with Westinghouse, headed by Dan Ritchie; American Television



Dan Ritchie (above)
Monty Rifkin (below)



and Communications, headed by Monroe M. "Monty" Rifkin, combines with Time Inc.; and Warner marries American Express to form Warner Amex.

1984

Congress passes the Cable Communications Policy Act, which deregulates rates and simplifies the franchise renewal process.

tors. Smaller and medium-sized companies are offering high speed access and digital set-tops and some are looking for joint ventures to help them into telephony. The key, says Ron Voss, vice president of mergers and acquisitions at Galaxy Cablevision, is finding additional revenue streams to help support expensive upgrades and new service rollouts. Galaxy has wired 80 Nebraska schools with two-way fiber optic connections to its network, enabling them to offer distance learning, Voss says. The schools pay Galaxy a monthly fee for the service, using government technology grants to cover the cost.

A Focus on Execution

With so much action on the domestic front, some major cable operators have put international expansion on the back burner. Comcast is selling its UK operations and Cox will probably follow suit if it finds the right transaction for its international holdings. "We'd like to re-deploy

those resources here in the U.S.," Robbins says.

Opportunities in the U.S. "are taking all of cable operators' management time and focus," adds Daniels' Deevy, "and certainly, the opportunities here right now are much more interesting than some of the things underway overseas."

Those U.S. opportunities are significant. "In ten years, we will be the majority of the home entertainment business," Robbins predicts. "We'll have a small piece of the telephone business—and I define small as 25-35 percent—and we will have a significant piece of the data business." Comcast's Roberts adds that cable, a \$25 billion industry today, will reap big gains from carving out even a small slice of the \$235 billion telephone marketplace. "Meaningful penetration will have an incredible impact on our profitability," he says.

Cable's challenge now is to deliver on all its promise. "We couldn't be better positioned for what we're trying to do," Robbins says. "What's next is to be sure we execute our plans flawlessly." ♦

A Profound Impact on Society

The dramatic change cable has brought to the way people use televised entertainment and information is just the beginning of its contributions to American life

By Kathy Haley

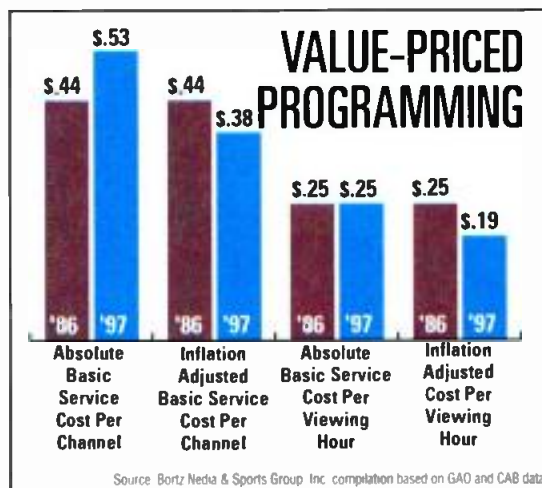
Few Americans would dispute the success of today's cable television industry, but many are only dimly aware of the impact cable has had on society. A new study from Denver-based Bortz Media & Sports Group, commissioned by cable pioneer Bill Daniels, reviews the substantial role cable has played in three areas: expanding people's access to televised entertainment and information; delivering new telecommunications services; and serving communities by creating jobs and providing learning resources to schools.

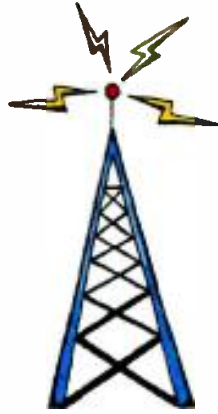
The number of basic cable channels available to the average subscriber has grown from 27 in 1986 to 49 in 1997, according to the study, entitled Cable Television Today. During the same period, the price consumers pay for a cable channel has risen from 44 to 53 cents, less than two percent a year.

Interestingly, because viewers have increased the amounts of time they spend watching cable, the price they pay per channel has actually dropped in recent years. On average, cable customers paid 25 cents per hour of cable programming viewed during 1997, the same rate they were paying in 1988. When adjusted for inflation, the rate drops to 19 cents per hour, or 24 percent less than that paid in 1988.

Cable has vastly changed the way viewers use TV by greatly increasing the diversity of programming available. It has also caused a big shift in the way Americans use television news by nurturing the development of a variety of 24-hour-a-day news channels. Overall viewing of national news increased by 38 percent during the past 12 years, with nearly 60 percent of the increase going to cable news channels, according to Cable Television Today.

In addition to delivering national news networks,





465 Radio Stations



36,000 Outdoor Displays



13 Television Stations



America's Multimedia Advertising Platform

Nasdaq: AMFM

Cable Operations Milestones



CATA's Steve Effros

Key figures lobbying for the legislation include Stephen R. Effros who heads what was then the Community Antenna Television Association. CATA is now known as The Cable and Telecommunications Association.

1985

Many established and recently launched cable networks gain the expansion capital they need from cable



Bob Magness (above)
John Malone (below)



operators. Leading the investment charge is Tele-Communications Inc., now the largest MSO, headed by founder Bob Magness and COO John Malone.

1987

Cable penetration reaches 50.5 percent of the U.S. Industry consolidation accelerates with system sales reaching \$15 billion in 1988.

cable has spawned more than 20 all-news cable channels with a local or regional focus and another 30 local channels that devote some of their time to news. More than 18 million subscribers now get news about their communities from such channels.

A History of Reinvestment

Along with dramatically changing the way people use television, cable has invested heavily in creating the technological platform that makes possible the much-anticipated information super-highway. During 1996, cable deployed one third of all U.S. fiber optic cable route miles, according to the study. Between 1990 and 1997, cable operators spent more than \$30 billion rebuilding and upgrading their plant, investing roughly \$500 per for every cable customer in the U.S.

In 1990, 20 percent of homes passed by cable were served by technologically advanced hybrid fiber coax (HFC) networks. By the end of this year, about two-thirds of homes passed will be able to receive those networks' benefits, including greater service reliability, improved signal quality and more video channels. Cable's investment in upgrading its plant also provides the infrastructure needed for such new services as high-speed Internet access and telephony. By the end of this year, an estimated 38 million homes passed by cable will be "two-way capable," a change that facilitates the delivery of high-speed Internet access.

Operators are already using their upgraded networks to deliver new services to their customers. Digital program services deliver between 36 and 100 channels in addition to those already piped in on analog channels, according to the study, while cable modems now deliver high speed Internet access in more than 67 markets in 29 states. Most major cable operators have also begun to offer local telephone service.

Cable's tendency to invest and re-invest in its facilities, as well as its programming, is evident in its financial results, according to Cable Television Today. Across the 12 large cable operating companies, free cash flow has been negative during each of the past three years. In addition, the industry's operating income margins averaged 12 percent during 1996. This compares with 37.1 percent for affiliates of ABC, CBS and NBC; 35.3 percent for Fox Affiliates and 23.8 percent for local telephone companies.

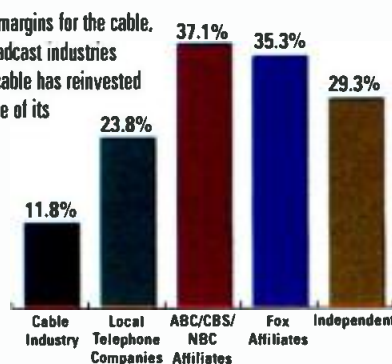
Cable operators also play an important financial role in the proliferation of quality cable programming. Total cable operator programming license fee payments will exceed \$7 billion this year, equating to more than \$110 million per cable customer. These fees account for more than half of the total revenues generated by cable's programming providers.

For years, cable has been providing a cost-effective alternative to advertisers who can't afford broadcast TV. In 1996, more than 900

A HISTORY OF RE-INVESTMENT

Operating income margins for the cable, telephone and broadcast industries demonstrate that cable has reinvested a higher percentage of its operating income

Earnings Before Interest and Taxes as a Percent of Revenues



Sources: Data: Media & Sports Group Inc.; Cable TV Financial Database; National Association of Broadcasters; Television Financial Report, 1997.

businesses spent more than 90 percent of their national television advertising dollars on cable.

The cable industry has also created jobs, employing more than 120,000 workers in all 50 states. Its major public affairs initiative, Cable in the Classroom, is at the center of an industry-wide effort to combine financial support, technology and quality programming to provide learning resources to U.S. schools. More than 8,500 local cable systems have provided free cable hookups and free monthly service to almost 78,000 schools in all 50 states, or 75 percent of all elementary and secondary schools in the U.S., according to Cable Television Today.

Access For Education

Another initiative, the High-Speed Education Connection, offers free cable modems and Internet access services to schools across the U.S. A number of cable operators are also involved in funding and facilitating distance learning projects.

Cable has also been the driving force behind C-SPAN and other socially significant networks such as Black Entertainment Television, Galavision and C-SPAN 2. Through direct ownership and/or financial support, as well as distribution commitments, cable operators have helped these networks grow and succeed. They provided the initial seed money for C-SPAN and have contributed more than \$300 million to fund the operations of C-SPAN and C-SPAN 2. This year, cable will contribute more than \$40 million to fund the non-profit networks.

At the same time, cable provides a growing number of channels targeted to ethnic minorities. Cable networks deliver programming in more than two dozen languages, according to Cable Television Today, which notes that cable's ability to target neighborhoods uniquely suits it to serve specific groups of people. The study also points out that new technology allows cable to zero in even more specifically on these kinds of audiences: "Digital tiers of programming will give cable operators and programmers the ability to serve smaller and smaller—but no less important—special interest communities with more programming."



The Hurdles Ahead

The questions cable will have to answer over the next five years are already taking shape

By David Greenberg

Hearken back to 1992, when Tele-Communications Inc. CEO John Malone proclaimed the 500 channel digital future for cable. Analysts immediately predicted a stampede to build the interactive television platform of the future, mergers between cable MSOs and the RBOCs, and permanent boom times to come for cable investors.

Directionally, Malone's prediction was correct. But everyone, including technology icons like Malone and Microsoft chairman Bill Gates, guessed wrong on the details. Most notably, they failed to anticipate the transformational impact of the creation of the World Wide Web.

Along the way, the original models for interactive television ended up being scrapped (remember Time Warner's Full Service Network?) and a number of prominent careers went down in flames.

This should be a cautionary tale for anyone

attempting to gauge where things are headed in the future. If anything, the introduction of digital technology makes forecasting even more perilous.

Digital technology puts cable on the fast track of the consumer electronics industry, and subject to the effects of Moore's Law, which postulates that computing power doubles every 18 months. As futurist George Gilder points out, improvements in other aspects of digital technology, specifically bandwidth capacity, are increasing at an even faster rate.

What's more, with every new generation of computer chip, and every quantum leap in available bandwidth, radical changes affect the costs and capabilities of communications devices. All the cable industry has to do is figure out its future in an environment where the basic technological ground rules shift every few months or so.

With that in mind, will there even be such a thing as "cable" in five years?

TCI's current president, Leo Hindery, thinks

Cable Operations Milestones

1989

Cable revenues top \$15 billion, with the industry serving more than 52 million homes through 9,050 cable systems. Cable ad revenues reach \$2 billion.

1990

Stung by criticism of its poor customer service, the industry, through the NCTA, institutes a set of voluntary standards.



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P.S. Thanks Bill Daniels for all your help through the years. Jim DeSorrento, Jay Busch

Cable Operations Milestones



Amos Hostetter (left) chats with other industry players.

The standards govern how quickly systems must answer customer phone calls and respond to requests for installations. Continental Cablevision, founded by Amos Hostetter (above), was known for both its high customer service standards and community service.

1991

CNN's coverage of the Persian Gulf War rivets



CNN Gulf War

the American public and heightens recognition of cable's influence in TV newscasting.

1992

Congress passes the Telecommunications Act, which re-regulates rates and requires pro-



Ed Markey

grammers to sell their services to competing multichannel providers, opening the door for development of direct broadcast satellite TV companies. Massachusetts Congressman Ed Markey was a principal player in the battle to re-regulate.

not. Instead, "current largely coaxial-plant cable companies will be broadband distributors of seamless entertainment, data and telephony services, with some also being entertainment and data content owners and some being just distributors. 'Cable' will be replaced by 'broadband' in describing the industry, and entertainment-only offerings will be replaced by seamless telecommunications offerings, very broadly defined and mostly digital or IP in nature."

While "cable" may disappear as a way of describing a delivery vehicle into the home, what are people going to call programming? Last September, the *New York Times Magazine* devoted an entire issue to television, essentially proclaiming that the era of off-air broadcast TV dominance had come to an end, and that the balance of power had shifted to the cable programmers.

"Cable will become the medium of choice because of its ability to customize to fit the consumer's needs," comments John Sie, chairman



"Entertainment-only offerings will be replaced by seamless telecommunications offerings, very broadly defined and mostly digital or IP in nature."

—TCI's Leo Hindery

electronics manufacturers to market through retail outlets ever-more sophisticated set-top boxes and Internet appliances with the knowledge that they will be compatible with most of the

and CEO of Denver-based Encore Media Group. "It simply has greater bandwidth than direct broadcast satellite, which likely will fill another niche rather than dominating programming like cable will."

Being Digital

By the end of this year, an estimated one million relatively low-tech digital cable boxes will be in consumers' homes, but the pace of distribution and the level of technical sophistication is about to pick up dramatically.

Starting this month, Cable-Labs, the industry technology development consortium, will begin releasing a series of interoperability specifications that will essentially create universal standards for cable modems, advanced digital set-top boxes and Internet telephony. The specs will enable consumer



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U.S. Cable TV Industry New Product Subscriber Forecast

(Subscribers & Homes in Thousands)

	1998E	1999E	2000E	2001E	2002E	2003E	2004E	2005E
Cable Subscribers	65,772	66,594	67,260	67,765	67,171	68,444	68,581	68,581
Digital Subscribers	1,100	4,100	9,100	15,100	22,100	29,600	37,350	45,350
Penetration of Cable Indus. Subs.	1.7%	6.2%	13.5%	22.3%	32.4%	43.2%	54.5%	66.1%
Cable Modem Subscribers	400	1,400	3,400	6,400	10,400	14,400	18,400	22,400
Penetration of Online HHs	1.3%	3.8%	8.2%	13.6%	20.1%	25.7%	30.8%	35.5%
Cable Telephony Subs.	92	447	1,283	2,595	4,781	7,921	11,760	16,332
% of Telephony Ready Cable Homes	4%	8%	10%	12%	14%	16%	18%	20%

Source: Donaldson, Lufkin & Jenrette

major cable systems in the country.

With reliable networks and economies of scale, a wide variety of highly sophisticated digital services, such as video-telephony and video on demand, become both feasible and marketable. Starting next month, CableLabs will be releasing a series of interoperability specifications that will essentially create universal standards for a family of advanced digital set-top boxes. CableLabs spokesman Mike Schwartz projects that by 2005, cable-based devices will be "the most powerful computers in many people's homes."

How Big Is the Pie?

The question is whether consumers will want all this stuff. Most analysts believe they will, and are projecting that the new capabilities afforded by digital technology will be the economic drivers for the industry over the foreseeable future. Dennis Liebowitz, senior vice president at Donaldson, Lufkin and Jenrette, believes cable will emerge as "the lead horse in the digital era."

Today, basic cable accounts for about two-thirds of the industry's \$33 billion in revenues. Five years from now, according to Liebowitz's most recent projections, basic will account for only about half of a much bigger pie, as the industry grows at a 10.5 percent compound annual growth rate and total revenues exceed \$55 billion.

Looking further, Liebowitz projects that by 2005 "three new categories of services—digital video, modems and telephony—would account for 60 percent of the industry's revenue growth and almost 40 percent of total revenues."

Winners and Losers

The other much-banded prediction from the mid-1990's was cable and telecommunications in general would enter an era of real competition. The entire premise of the 1996 Telecommunications Act was to create the framework for this new open marketplace, opening the gates to competition for the true last mile to the home. Suffice to say, with a few notable exceptions such as direct broadcast television going head-to-head with cable, it hasn't worked out that way.

But the battle lines have been drawn. Paul Bortz, founder and CEO of Denver-based Bortz Media & Sports Group, sees a variety of what he calls "telecommunications/software/computer companies" vying in each market to enter the home, competing to provide a wide variety of services ranging from telephone and video to high speed data, transactional services and digital and/or HDTV.

"The competition will be to get into the home, with cable still being dominant, the telephone companies being very strong with fully-switched fiber to the curb and digital subscriber line for the rest of it. Direct satellite is a third way in."

Bortz sees an ever-changing series of relationships as companies compete head to head or form alliances, depending on the business segment and the specific geographic market.

In a competitive environment, how will the winners and losers be determined? Each company has a very plausible scenario of how it will not only survive but thrive. The joker is that the government will have a very significant impact on a lot of critical issues. Next year the Telecommunications Act is up for review, and the competition issue will be addressed once again. A wide variety of other issues could move forward in the near future, ranging from who picks up the network costs for IP telephony to determining the role the government wants to play in the fate of HDTV.

It is fair to say, looking back to 1992, that the futures of companies like TCI and Microsoft would have been different given a different set of players in the White House and the Justice Department.

It may be that the real stakes for all the players will rest on the 2000 general elections, and the outcomes today are completely impossible to fathom.

Cable's evolution from video provider to what TCI's Hindery calls a broadband distributor of seamless entertainment, data and telephony services will, from a viewer's perspective, change the face of the industry. If cable operators succeed in winning a foothold in these new businesses against the intense competition they're bound to face, it will dramatically change the nature of the industry, from the inside as well. ♦

Cable Operations Milestones

1993

Convergence becomes the buzzword as cable, telephone and computer industry players contemplate how the



The Full Service Network's set top

arrival of digital TV will change the media, eventually making computers and TV sets able to perform many of the same functions.

1995

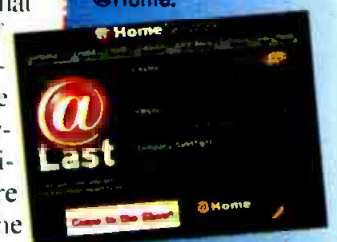
Cable modems emerge as a priority for cable operators, as engineers realize coaxial cable can deliver data transfer speeds 1,000 times faster than the wires used by telcos. Some



Computer with cable modem operators also begin testing cable telephony.

1997-98

Cable emerges as the best platform for delivering a host of new services, from high speed Internet access to interactive television and telephony. Internet services include TCI's @Home.



@Home screen

Source: The National Cable Television Center and Museum

From Howdy Doody[®] to the Digital Generation

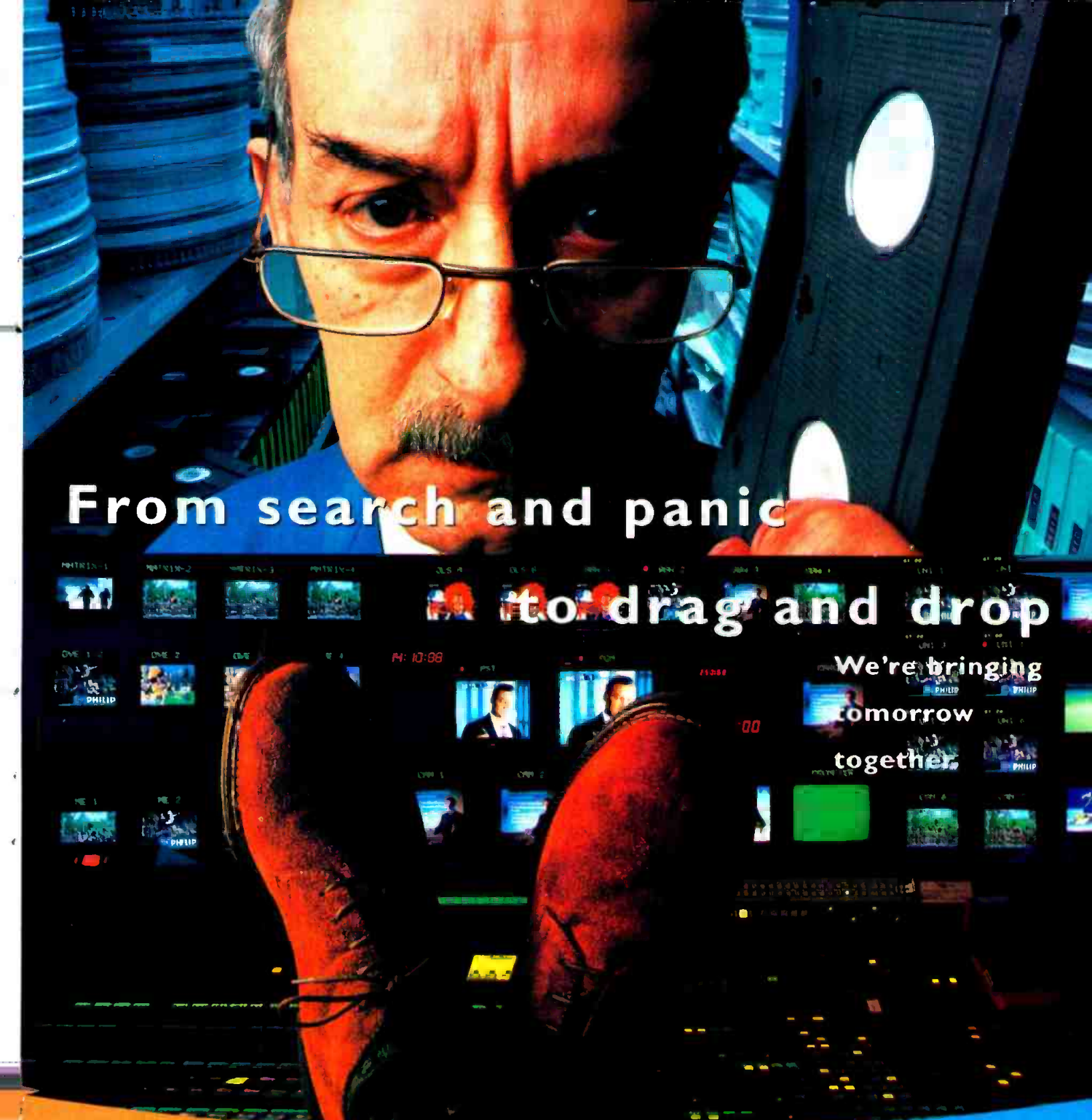


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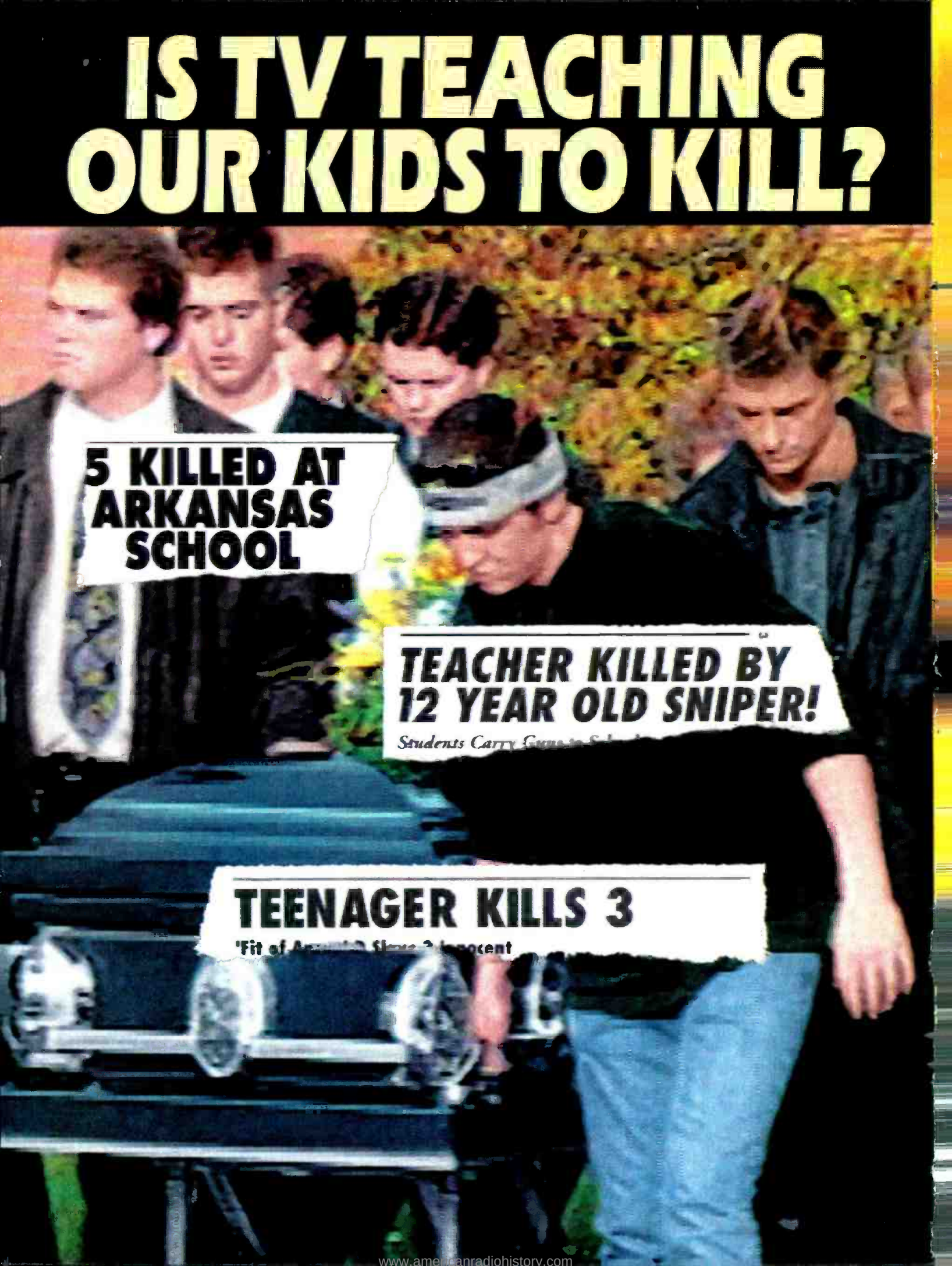
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ARKANSAS
SCHOOL**

**TEACHER KILLED BY
12 YEAR OLD SNIPER!**

Students Carry Guns to School

TEENAGER KILLS 3

'Fit of Anger' Slays 3 Innocent

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Our *Choices and Consequences* initiative includes anti-violence curriculum that teaches kids, using real courtroom footage, that there can be serious consequences to seemingly innocent actions.

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"The Council congratulates COURT TV for its efforts to provide leadership to the television industry in responding to these findings."

----- National Television Violence Study

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FCC mulls cable ownership rules

Cable ownership rules also are under review by the FCC.

The agency is mulling two proposed changes for the industry. One, which industry sources predict will be approved this year, would lift a rule that restricts cable investors more than TV broadcasting investors by counting nonvoting or limited partnership interests toward the 30% national audience reach cap.

Another proposal, given a slim chance to succeed, is an industry request to increase the audience-reach cap.

Compared with the effect in the broadcast industry, the ownership review has generated less passion in the cable industry. Cable is preoccupied with disputes over must-carry requirements for local broadcasters' signals and new rules requiring cable systems to separate the channel surfing and decoding functions in their set-top boxes, industry sources say.

Still, the National Cable Television Association has lobbied for the FCC to stop counting passive investments toward national audience limits. "The current rules prevent small operators from getting knowledgeable investors," says Daniel Brenner, NCTA general counsel.

The agency also may propose to lift the ban on crossowning cable systems and TV stations in the same market.

"We believe any crossownership rule has outlived its usefulness and has a very anticompetitive effect," Brenner says. —Bill McConnell

are blocked in two Florida markets and California because the company owns the Fort Lauderdale *Sun-Sentinel* and the *Orlando Sentinel*.

If the FCC doesn't relax the ban, Sheehan predicts that the newspaper industry will take the FCC to court.



Howard Anderson says small operators can survive quite nicely despite the economic pressure created by the big station groups.

Other newspaper owners say the crossownership ban should be ditched altogether. "Allowing large-market waivers is a very poor substitute for removing this anachronistic rule," says Alex Netchvolodoff, lobbyist for Cox Enterprises. Cox, which owns the *Atlanta Journal and Constitution* and dozens of other newspaper and broadcast properties in a variety of markets, will continue to be prohibited from buying many lucrative properties in small and medium-sized communities, he complains.

But industry watchdogs warn that giving the OK to newspaper/radio combinations will worsen the consolidation binge.

"Newspaper/broadcast combinations are particularly potent combinations

that can have dramatic impact in shaping opinion in local communities," says Andrew Schwartzman, president of the Media Access Project. He warns that it's not just big cities that are susceptible if the FCC lets newspapers buy local stations. He predicts that dropping the big-market prohibition for radio would be the first step toward letting newspapers own local radio and TV stations in any market.

"In medium and small markets a single family or interlocked group of businesspeople can exercise immense power over the economic and political life of the area," he says.

Although the FCC is not planning to extend the waivers to small markets this year, Schwartzman has reason to worry that such a move will happen in the next couple of years. The FCC is reviewing all of its newspaper/broadcast crossownership restrictions, and agency staffers could propose more changes down the road.

And though the FCC has approved only one permanent waiver to the newspaper/radio crossownership ban, the agency now is expected to grant waivers using the standard it applies to waivers for radio/TV combinations in the same market. Currently, radio/TV combinations are allowed in top-25 markets as long as there are 30 independent broadcast stations, but the FCC may raise the bar to include the top 50 markets.

The FCC has asked for public input

on allowing UHF/UHF or UHF/VHF combinations in the same market, but most industry sources are betting against that change, given that the panel's three Democrats have sounded alarm bells about the industry's rapid consolidation.

Frustrated by the FCC's intransigence, David Donovan, lobbyist for the Association of Local Television Stations, complains that TV owners are being penalized. "We live in a multi-channel world, and the commission says owning multichannel cable systems is good and that clustering radio stations is good, but owning two UHF stations is somehow bad."

To clamp down on local marketing agreements, the FCC is expected to count TV LMAs toward national ownership limits. Still under debate: whether a directly owned station and a local marketing agreement in the same market both would count toward the national audience cap.

The commission also is expected to ascribe ownership status to media companies that own stock in and supply programs to a TV station located in the same market.

Commissioner Susan Ness argues that the panel should consider ways to prevent one owner from blanketing an entire market. "Congress intended to permit greater concentration, but we should be looking at egregious cases,"

she says. "Would Congress have wanted us to permit a merger of stations with 90% of advertising revenue or audience share in a market?"

Broadcasters may get one break in the attribution rules, however, if—as expected—the FCC increases the thresholds for counting active and passive investors from 5% and 10% of voting stock, respectively,

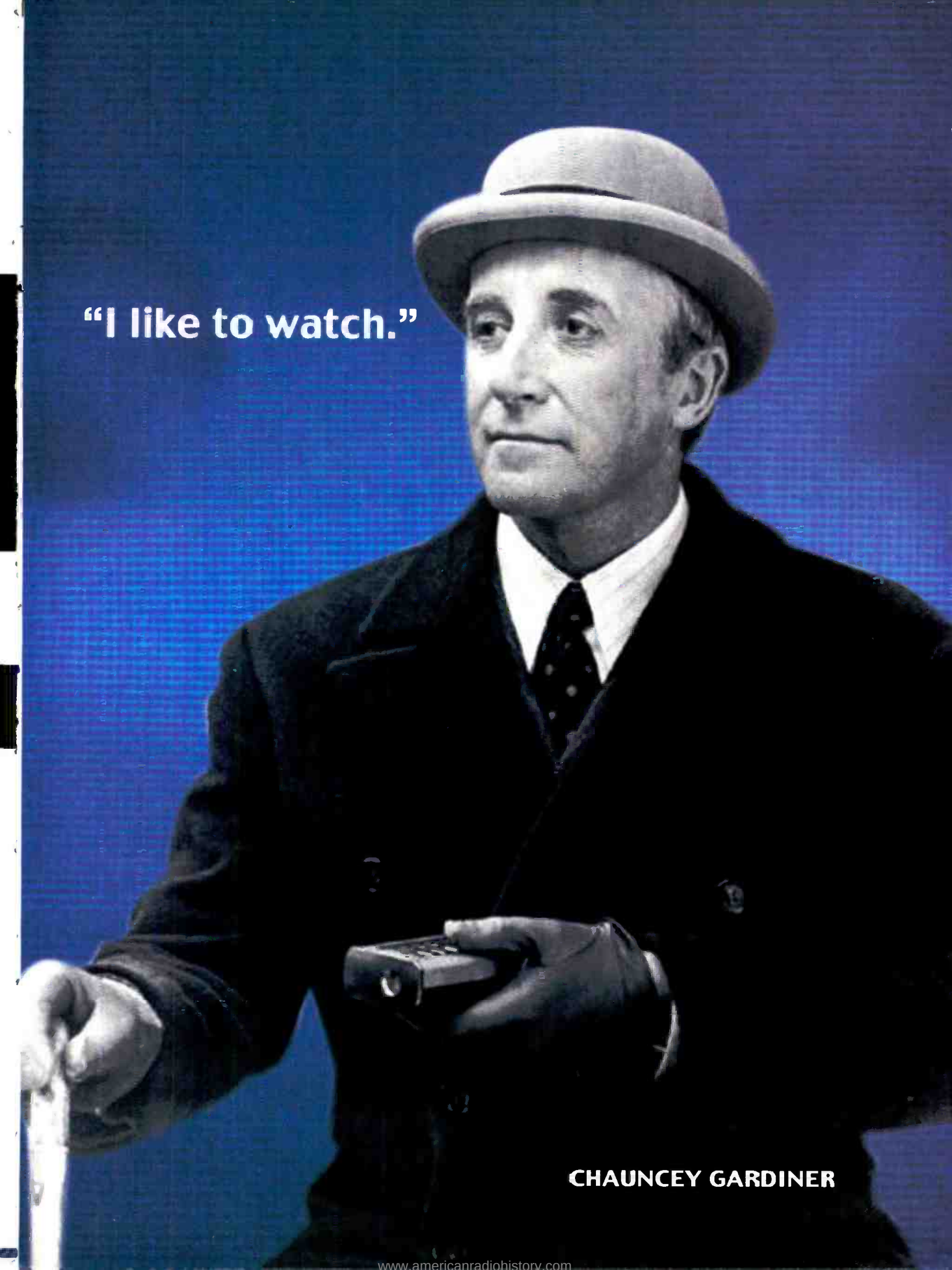


David Donovan wonders why it's OK to own multichannel cable systems and clusters of radio stations, "but owning two UHF stations is somehow bad."

ly, to 10% and 20%.

Kennard says he will follow through with a congressionally mandated review of the agency's ownership rules and will consider further deregulation.

Big broadcasters have been demanding relaxation of the 35% cap on national audience reach, removal of restrictions on dual network ownership, elim-



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ination of all newspaper/broadcast crossownership restrictions and raising of local radio ownership caps.

Although the FCC appears ready to relax crossownership restrictions, the panel also appears determined to make it tougher to win exemptions on a case-by-case basis when companies do not meet standard criteria for waivers.

"There has been too much history here of rulemaking by waiver," Kennard says. "It's time to lay down some bright-line standards we can enforce and give the market some consistency and predictability."

Kennard and the other Democratic commissioners called for an overhaul of the waiver policies last month when the commission allowed Emmis Broadcasting to acquire three radio stations and a TV outlet in Terre Haute, Ind.

"Our willingness to churn out waiver after waiver ... simply invites cynicism and disrespect for the commission," wrote Commissioner Gloria Tristani, the only member to vote against the waiver. She complained that only two one-to-a-market waiver requests have been denied out of more than 100 filed in recent years.

Kennard and Ness, who reluctantly voted for the waiver, agreed with her argument against the waiver process. "The history of application of the one-to-a-market waiver process has made it clear that the standards are so discretionary that grant of waivers has become a foregone conclusion," Kennard wrote in describing his reservations.

Media Access Project has long argued that the commission should make stronger local and public interest programming requirements a condition of waivers. "The FCC's waiver policy should be 'no' unless a broadcaster earns it by substantially sharing the efficiency gains they obtain," says the Media Access Project's Andrew Schwartzman.

He also urges the commission to make all local marketing agreements count toward national audience-reach limits. "Unless the commission defines ownership in a way that accounts for who is actually controlling a station, it doesn't matter what the nominal ownership limits are," he says.



John Sturm says that "letting newspapers operate radio stations would [offer] a strong new source of information about community affairs."

LMA's since the 1996 act should not be grandfathered, he adds. "There was no reason for these companies to expect their deals to be blessed, because they knew all along that the outcome of the FCC's review was left open." But broadcasters argue that the backlash against consolidation is misguided. Howard Anderson, owner of radio group KHWY Inc., whose six stations are in California and Hawaii, says small operators can survive quite nicely despite the economic pressure created by the big station groups. "I'm up against two of the biggest chains, and that doesn't bother me one jot or tittle," he says. "They are turning into monoliths, and in this business you need flexibility and the ability to move fast. Plus, so many of these companies are so loaded with debt that station managers must be miracle workers to meet their target operating margins."

Regardless of the industry protests, Kennard insists that tightening some limits is an option: "Congress had the opportunity to completely wipe the slate clean of all ownership rules. They didn't do that. They retained the

national ownership rules for television, retained the local cap for radio, with some modification, and charged us with taking a fresh look at the other rules. That's what we're going to do."

House Telecommunications Subcommittee Chairman Billy Tauzin (R-La.) predicts that Congress will be livid if the FCC adds restrictions. "We made a mistake when we left so much ambiguity for the FCC to interpret," he says. "The FCC should be looking to relax those rules that don't make sense in a modern world."

"When Congress required us to review the ownership rules, I don't think the intention was to expand them," adds Republican Commissioner Harold Furchtgott-Roth.

Kennard must race to meet his self-imposed New Year deadline. Within the next month and a half, the commission will have to decide on two proposals—TV duopoly and radio/TV crossownership—that have stymied three previous commission chairmen and must reach a conclusion on five other rules.

A lot of work is left. Not only are staffers in the FCC's Mass Media Bureau still putting the final touches on their recommendations to the commission, but Kennard has not yet sounded out the four other commissioners as to where the panel should go.

Some industry sources are betting against Kennard. "He hasn't been able to finish up modest proposals like the public interest obligations of satellite broadcasters; there's no way he can complete this—ownership is one of the most controversial issues," says one industry lobbyist.

Kennard concedes that time is running out but predicts that the commissioners will get focused in time to meet the New Year deadline. "It's a monumental task to look at all of the broadcast ownership rules at the same time, and all the commissioners will have to work together to get this done." ■

50 years of ownership regulation

After four decades of tightening ownership rules, the FCC reversed course in 1985.

1946—Dual TV network rule imposed to limit networks' influence over local television stations.

1970—Radio/TV "one-to-a-market" and broadcast/cable system crossownership prohibition in local markets established.

1975—Newspaper/broadcast crossownership ban approved.

1985—As radio stations struggle financially, the national ownership cap allowing one company to control seven AM, seven FM, and seven TV stations is increased by FCC to permit 12 stations in each service.

1989—"One-to-a-market" rule

modified to permit ownership of a radio/TV combination in top-25 markets or where an economically troubled station is acquired.

1992—FCC eliminates radio duopoly rule to allow ownership of two AM and two FM stations in a market with more than 15 radio stations. In markets with fewer stations, three outlets are permitted with two in the same service. —National radio ownership cap increased to 18 in each service. —Congress requires FCC to estab-

lish cable ownership rules.

1993—FCC sets cable audience reach at 30% of U.S. TV households.

1994—National radio ownership cap increased to 20 in each service. National television cap increased to 12 stations.

1996—Congress lifts limits on number of stations one company can own and directs FCC to review other existing ownership rules.

—By Bill McConnell

The Dawn of Digital Television

NOVEMBER 16, 1998

A Supplement To: **Broadcasting & Cable** **TWICE** **Digital Television**

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The Dawn of Digital Television

A Supplement to Broadcasting & Cable, TWICE and Digital Television

CONTENTS



The Medium They Couldn't Kill 2

Definitive account of digital and high-definition television as they approach the new millennium, from the standpoint of technology, broadcasting, cable, satellite, programming, consumer electronics and government. The bottom line: It's a go.

The High Cost of Pioneering in HDTV 36

It can cost \$6 million just to pass a network signal. Vital statistics on the DTV pioneers.

The Early Adopters Are Getting a Jump on HDTV 40

What they lack in numbers they make up for in enthusiasm about the new digital sets.

Consumer Electronics Manufacturers Take Different Routes to DTV 45

Including five pages of charts on receivers, set-top boxes and converters.

Film: The Winner and Still Champion 51

The more things change the more they stay the same in television production, too.

The Fast Forward Progress of Broadcast Equipment Suppliers 52

They've come a long way in the past two years, blazing trails for the pioneers to follow.

The PC's Still Missing in PC/TV 55

Convergence may still be a gleam in somebody's eye, but the going's slow.

Broadcasting & Cable Publishing Group

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The Dawn of Digital Television

The Medium They Couldn't Kill

By Don West

Editor at Large

"This is our man on the moon." The speaker is Gary Shapiro, president of the Consumer Electronics Manufacturers Association (CEMA), describing the almost-three-decades-long effort to bring television into the orbits of digital and high definition. Begun in Japan in the 1970s, picked up in the United States during the 1980s and coming to flower at the beginning of a new millennium. DTV has been largely a private sector initiative, brought off by a few dedicated and determined engineers, joined by others of vision who helped forge the new medium, finally abetted and encouraged by a government that advanced the spectrum and provided a flexible policy for the transition. DTV is now ready to be deployed by the world's communicators as an instrument of programming and commerce. How they make the best of it will be the stuff of history.



BILL BROOKS / MASTERFILE

Ready or not, the race to digital has begun.

They're off to a ragged start, but a valiant one. **Broadcasting** is the first of the electronic communications media to wear the colors of the Grand Alliance digital and HDTV system that was anointed in part, but whose formats were not mandated, by the Federal Communications Commission. It's certain there will be 44 over-the-air stations in 23 markets from New York to Jackson, Miss., operational by Nov. 16, 1998. In coverage terms, they will represent 37.4%, or 37 million, of the nation's TV homes. That total will be over 40% by May 1, 1999, when affiliates of the top four networks in the top 10 markets are to go digital, and again to over 50% a year from now, when the top 30 markets are due (by Nov. 1, 1999). All TV stations must be digital 30 months after that—by May 1, 2002—if the FCC persists in its present deployment schedule.

The cable industry has by now equipped 1.1 million of its 66 million customers (1.6%) with current generation digital boxes designed to drive existing analog sets. None of those boxes will pass a digital broadcast signal. It's expected that cable's next generation of digital boxes will be HDTV-capable and soon will incorporate so-called "firewire" interconnection devices capable of supporting copy protection technology to defend copyright owners against the threat of piracy. The best estimate is that cable's plant could be digital-ready when the last digital station signs on. Some cable networks—notably HBO and Discovery—will begin HDTV programming in 1999.

The satellite industry, digital from the start in its

transmission scheme, was poised to begin pumping its version of HDTV nationwide on Nov. 1. It's estimated that over 50% of the new digital sets will be equipped to receive and display those transmissions. The prospect of a strategic alliance between satellite and terrestrial broadcasters is among the most exciting developments of the digital era, with the wired nation the potential loser if the wireless industries close ranks.

The consumer electronics industry, which once thought it might sell 200,000 digital receivers in the first selling year (to fall 1999), has reduced its expectations by half, to a point something north of 100,000. One measure is that the industry is currently selling 500,000 to 600,000 large-screen, rear-projection models each year, and it believes that new digital sets might attract 50,000 to 60,000 of that buying category—something over 10%—in the next 12 months. The going price: upwards of \$6,000. But projections begin to get bullish after that, with CEMA projecting 30 million digital sets sold by 2005. By that time, the price might be below \$1,000. In the long run, the consumer electronics industry is an almost sure winner: it hopes to end up selling at first one and then a flood of new digital receivers into the home, duplicating over time the mass-market turnover it enjoyed when TV went from black and white to color.

At the beginning, perhaps the most ambitious schedule of digital programming will come from satellite. Together, DirecTV and USSB plan to provide two channels of 24-hours-daily HDTV programming. HBO will join that enterprise,

LEADERS RISE BEFORE DAWN.



Just four years ago, DIRECTV helped usher in a new age of television with our broadcast of the first high-powered digital signal. Despite early successes, we've refused to rest on our laurels. From forging new ground as the fastest-growing consumer electronics product in history, to our groundbreaking broadcast of HDTV earlier this year, DIRECTV has remained on the forefront of the digital revolution. Now, more than four million subscribers later, DIRECTV is offering high-definition programming instantaneously to the 48 contiguous states. And since DIRECTV is the first satellite TV service whose system receiver is built into HDTV sets, we're committed to making the dawn of digital a whole lot brighter.



What Are You Looking At?™

offering up to 17 hours daily, on the second DirecTV-USSB channel in the spring of 1999. ABC, on Nov. 1, began an HDTV run (720p) of *The Wonderful World of Disney* on Sunday nights and planned to show two prime-time movies, "Mission Impossible" and "Forrest Gump," on Nov. 5 and Dec. 3, respectively. CBS broadcast the first of four football games in high definition on Nov. 8 and will air *Chicago Hope* in HD on Nov. 18. PBS signed on its ambitious inaugural DTV schedule on Nov. 9, featuring such HD originals as *Chihuly Over Venice*, *Digital TV: A Cringely Crash Course* and Ken Burns's *Frank Lloyd Wright* (the last in an enhanced format).

NBC has no plans for HD broadcasts in 1998 but will begin showing *The Tonight Show with Jay Leno* in 1080i HDTV next spring. It has two HD movies on the books: "Men in Black" in 1999 and "Titanic" in 2000. Fox has begun an SDTV feed to its DTV affiliates, utilizing a 4:3 aspect ratio.

Discovery Networks began digital programming far ahead of the crowd. It has launched seven networks in cable digital, now carried in about 700,000 homes where digital boxes are available: Science, Home & Leisure, Civilization, Kids, Wings, Health and Discovery en Espanol—the first four in 1996, the last three in 1998. In HDTV, according to Charles Humbar, vice president and general manager of Discovery Showcase Networks and Advanced Television, the plans are to keep Discovery HD in front of consumers through cooperative arrangements with consumer electronics retailers to help drive set sales. "It's important that some of the first images consumers see of this new medium are provided by Discovery," Humbar says, adding that "It will be a must-have medium once you see it." He said Discovery's one caution is in transferring too much film product to a video format until all the standards issues are settled. It has 22 hours of HDTV programming on hand and 80 hours that could be available in 1999 through syndication on other networks but not through 24-hour channels of its own. Humbar thinks it will be 2000 before Discovery hits its digital stride but that the positive reaction to high definition will be far greater than the industry anticipates.

Cablevision has added its HDTV worth to the mix by unveiling an ambitious end-to-end strategy leveraging its holdings in sports, cable systems and consumer electronics stores (The Wiz), beginning with 1998-99 season New York Rangers and Knicks home games on its MSG network, followed by New York Yankees and Mets home games on Fox Sports New York in 1999.

The fact is, SDTV (standard definition digital television) will be a programming mainstay of some

new digital sets in the medium's first year. Panasonic, for example, is marketing a 56-inch digital-ready, rear-screen projection unit, initially equipped only to receive NTSC, for \$5,499. The analog signal will be line-doubled to 480 progressive (a distinction discussed at length in "Technical Considerations," beginning on S17), giving the consumer a picture upgraded from the normal NTSC experience. Then, for an extra \$1,499, Panasonic will offer a digital set-top box that will activate the display for DTV scanning (480 interlace and progressive and 1080 interlace), should the consumer feel there is enough pure digital programming to expand his reach.

(Bill Mannion, Panasonic's general manager for TV and network systems, emphasizes, however, that HDTV will be the backbone of its marketing efforts, not SDTV. "Digital is a breadth of opportunity," he says, "built around price points, screen sizes and resolution. The consumer can participate at any level." Panasonic will offer one 32-inch SD model with a 4:3 screen at \$1,799. It requires the same \$1,499 set-top box to go 480p.)

SDTV, of course, is one of the two technological possibilities for broadcasters in digital television, the other being HDTV, or high definition. One well-versed observer has this view of how it could go in digital's early years:

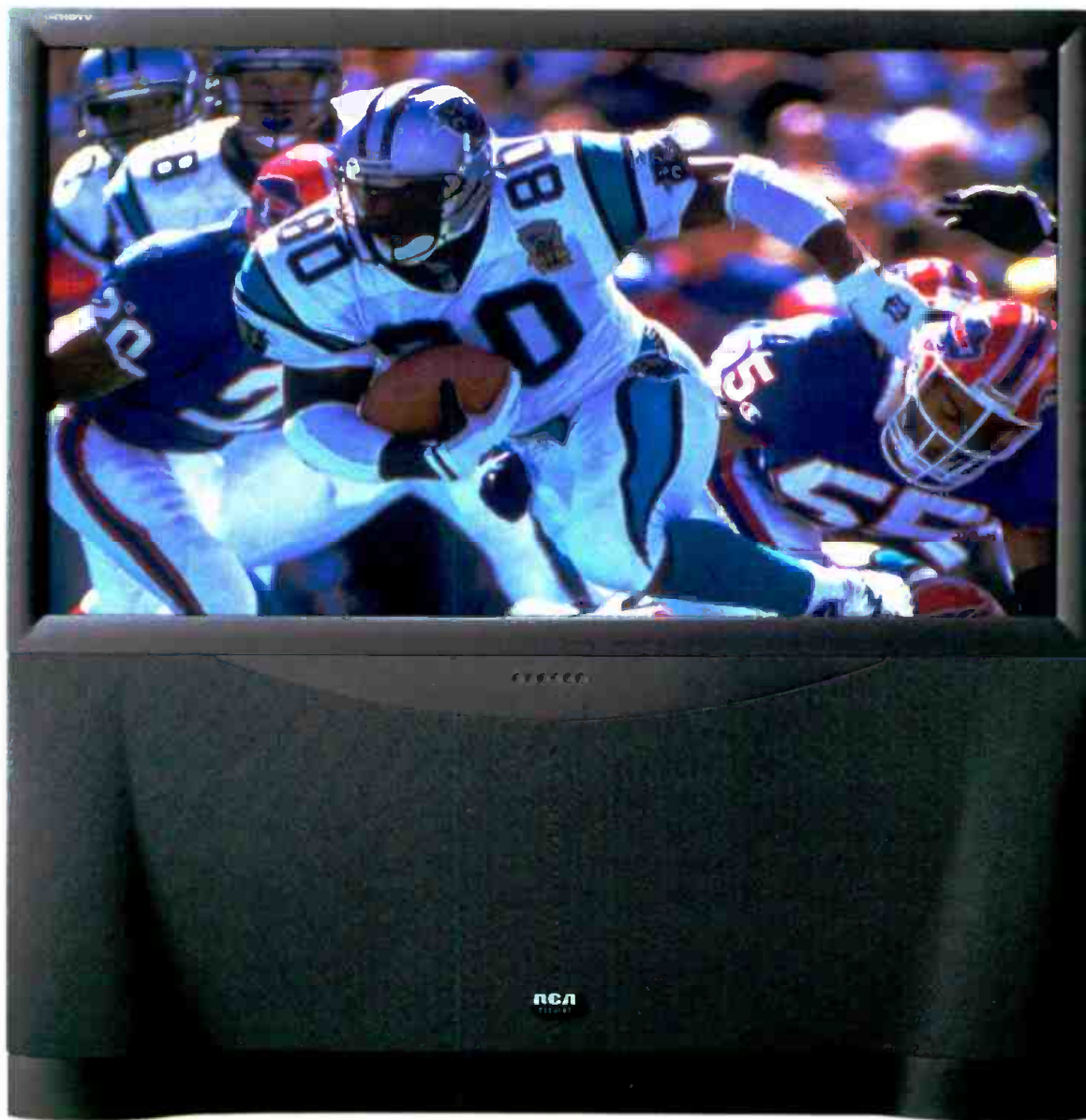
"Once a broadcaster goes on the air, he will want to attract as many eyeballs as possible to begin to recoup his investment. If he has to wait for a high penetration of expensive high-resolution sets, he could be waiting a very long time. Even if digital is the most rapidly adopted new technology of all time, it's going to be some time before it climbs up that hockey-stick curve. On the other hand, with inexpensive digital-to-analog converter boxes—down to around \$100 in three or four years—you'll be able to receive every digital signal in the market and display them on your existing analog set and realize 60%-70% of the benefits of the digital transmission—if the broadcaster is transmitting in SDTV. If he's broadcasting HDTV, however, you'll only realize



**"It's very important that
broadcasters, cable
operators and set manu-
facturers have a common
vision on this thing."**

—Richard E. Wiley

Introducing RCA HDTV.



With its on-board DIRECTV receiver, the new RCA HDTV can receive virtually any available television signal, including all 18 ATSC digital formats, standard and HD satellite programming, and all current off-air and cable signals. Add to that razor-sharp digital pictures and six-channel digital audio, and the result is a future worth keeping your eye on. RCA was there when television was introduced nearly 60 years ago. Today, as television takes its greatest step forward, the leader is clearer than ever. **Changing Entertainment. Again.™** **RCA**



digital **HDTV**

©1998 Thomson Consumer Electronics, Inc. TV picture simulated. The presence of the DTV certification mark indicates that this product will successfully receive digital television transmissions that conform to any and all of the video formats described in the ATSC Digital Television Standard.

maybe 5% of that improvement, because the analog picture tube isn't designed to display high-resolution pictures."

This observer says that the improvement between NTSC and digital 480p is "enormous," with lesser percentage gains as you go up the formats to the 1080 range. Moreover, he feels the cost of the two-million-pixel-plus displays required for highest definition will be a brake on that end of the medium for some time, and points out that there's a "fundamental disconnect" between the interests of the broadcast industry and the consumer electronics industry. "Broadcasters want as many digital receivers in the market as possible once they make that investment. Price and content are the most important variables. The consumer electronics people, because of their high development costs, initially want to sell high-end home theaters, in the \$10,000 range. Anyone would rather sell high-margin Cadillacs than low-margin Geos. You can sell a lot fewer but make more money."

The danger, of course, is that if consumers are willing to settle for the low end of digital, the high end might never get a chance at bat.

Whatever course digital takes in its inaugural years, it is up against tough historical precedents on the introduction of new products. The standard for success imposed by the Telecommunications Act is 85% digital penetration—that's the requirement before turning back the analog spectrum. Color TV took 22 years to reach 85%. VCRs took 16 years. CDs, after 13 years, are only at 68%.

Richard E. Wiley, the Washington paragon whose political savvy and negotiating skill as chairman of the FCC's Advisory Committee on Advanced Television Service brokered digital and HDTV through a nine-year gestation, is almost satisfied with the way things are turning out, but not quite. "You have to have a solution that works for broadcasting and for cable, or the American people are going to be shortchanged," he said. "When I turned in that report in late 1995 I thought we had accomplished that goal, with the single exception of the modulation technique, QAM [quadrature amplitude modulation] versus VSB [vestigial sideband]." VSB, developed by Zenith, won out in the committee's tests, but most observers think it could have gone either way. Said one: "If General Instrument had just been able to deliver a slightly better-working system, then broadcast might have gone QAM. And if TCI and Time Warner hadn't begun experimenting with QAM, then maybe cable would have gone VSB."

"I thought to myself it might have been better if

QAM had won," Wiley says now, "because the cable industry was so committed to it." The incompatibility of the two systems can be overcome at the TV set, but hasn't been in the first generation because cable has not yet settled on a QAM standard.

At the end of the day, Dick Wiley thinks "we ought to let the marketplace rule. We shouldn't let any industry—be it broadcasting, cable, consumer electronics or computers—game this system too much. We shouldn't let one industry foreclose another industry's vision. Hopefully, because of the interposing of all these industries' self-interests, a good result will come out. I'm just hoping the FCC will continue to look over the shoulders of these industries and make sure the public is protected."

Looking back on the progress toward digital, Wiley says: "If I have any disappointment, it's that a lot of people knew what was coming for nine years, certainly for the last three or four years, and haven't taken the steps necessary to get there, to get ready. Somebody has to try to bring these people back together again. They're not coming out of the starting gate at the same point, working together. It's very important that broadcasters, cable operators and set manufacturers have a common vision on this thing."

The somebody bringing them together isn't likely to be the Federal Communications Commission, at least overtly. Chairman William E. Kennard told a New York audience—singling out a BROADCASTING & CABLE editorial that urged deputizing the Wiley committee "to get everyone back on the same page"—that he wasn't about to. Later, in an interview, the chairman said: "Nobody—nobody—can predict, with any degree of certainty, how it is all going to work out. And it is not the sort of transition that lends itself to central industrial planning. There are too many industries involved. There are too many market variables involved. And there's a real danger that if we were to mandate a particular standard now, it would become obsolete very quickly."

At still another point in that interview Kennard said: "Well, I guess the message that I'm trying to convey is that a little bit of chaos is not a bad thing when you're



**"Right now we're going
through pre-opening-
night jitters."**

—FCC Commissioner
Susan Ness



rolling out a new technology, and multiple industries are developing business plans to market it."

(The full interview with Chairman Kennard appears below.)

The senior FCC commissioner, Susan Ness, has a similar approach. She likens the transition to "a community theatre production that you think will never come off. But it does. Right now, we're going through pre-opening-night jitters." By the time the second generation of sets comes out most of the problems will have been solved, she says, noting that the FCC is charged with reviewing progress every two years—beginning in 2000—and that, "if the public is not enamored, we can adjust."

"I'm cautiously optimistic that this will turn out to be a medium of value to the public. The uses of this medium will be awesome, but it will take time to discover them. We've already made tremendous progress in a new technology in which no one has any experience."

There are some interindustry efforts to resolve the digital conflicts to which Ness refers, the most conspicuous a CEMA subcommittee to complete the standardization of engineering specifications for the IEEE 1394 DTV baseband interface, which eventually could afford some kind of interoperability among all components of the digital universe. This is the so-called firewire. Chairman Kennard had asked the industry elements participating in that

FCC CHAIRMAN BILL KENNARD AND THE COOL APPROACH TO DTV

Steady As She Goes

How far are you willing to go to speed up the digital TV process?

Here's what I believe the fundamental obligation of the government should be. The American people made a huge investment in the broadcast industry by loaning the spectrum, and we've got to make sure that spectrum is used. That's why we came up with an aggressive build-out schedule, which we will enforce. That's why we are working with the industry to make sure that we can help facilitate tower sitings, so these facilities get built.

But beyond that, I become uncomfortable when we are being asked to basically define what the business plan should be for digital broadcast television. I talk to broadcast industry executives all the time, and they don't yet have the definitive business plan for digital television.

So I think that those of us in government, here at the agency and in Congress, should have a certain amount of humility. We don't know exactly how this technology is going to be best used in the marketplace. The people who spend all of their time worrying about how to amortize this investment don't have it all figured out yet.

And that's OK. Because, in the final analysis, there will be lots of digital business plans. Some broadcasters are talking about HDTV. Some are talking about multicasting. And all of them are making bets in the marketplace on what is the best way to amortize this investment.

It may be different for different companies, depending on whether they have content or not. It may be different depending on the markets they're serving. And far be it from me to

try to dictate what is the most acceptable way for that technology to be used.

I wasn't thinking so much of the business plan as the technological plant, and the infrastructure among the media. The compatibility issues. And the fact that the American public is going to walk into all those showrooms in November and December and find a set for \$7,000 that won't receive cable. And that the broadcast signal can't be received in cable homes. That's clearly a serious issue, and we are working on that.

I sent letters to the cable industry and the manufacturing community in late summer, giving them a deadline of Nov. 1 to resolve the so-called firewire issue, the IEEE 1394 device issue. They missed by only one day. I think that is an appropriate role of government: to bring the parties into the room and try to facilitate compatibility issues.

What about the modulation issue?

I don't think it's appropriate for government to set the precise industry standards here, the technical standards.

Do you concur with the FCC's decision not to have any standards at all?

Well, we didn't have no standards at all. We set parameters on the standards. Like the transport scheme.

Yes. But the formats are all up in the air. Anybody can broadcast in anything they want.

effort to deliver by Nov. 1; they came in on Nov. 2. In a statement, NCTA and CEMA said: "Having now completed the baseline specifications for this digital interface, we believe some [set manufacturers] may produce 1394-enabled receivers with content protection technology for retail distribution by November 1999." Hollywood, has been terrified that the perfect pictures of a digital regime—and more particularly of HDTV—would lead to widescale piracy of its product. Although the actual copy protection mechanism is explicitly not part of the firewire agreement, it is moving forward in a parallel CEMA/EIA group.

Still another cooperative effort is the Cable Con-

sumer Electronics Advisory Group formed by CEMA and the National Cable Television Association to develop a cable-ready DTV set (one that would not require a set-top box). Negotiations are now underway between cable and CEMA on the specifications. There also is an OpenCable project by that industry addressing short-term interoperability issues based on a component video interface that some set manufacturers have adopted.

Thus, there still remain technical problems standing between carriage of a digital broadcast signal by cable, as well as reception of a digital cable signal at the receiver. Just as broadcasters note that cable has



There was no mandated standard for VCRs; the marketplace worked that out. There was no mandated standard for PCs; the marketplace worked that out.

There was no mandated standard for AM stereo. And look what happened.

The marketplace decided that there was not enough of a need for AM stereo for the marketplace to develop a standard for stereo, because people were getting what they needed, stereophonically, from the FM band. I think there's a lesson in that. I think it's important to recognize a couple of fundamental truths about digital television, from my perspective. First of all, it's going to happen. We are involved in a worldwide transition from analog to digital in every communications technology, and it's not as though

broadcasting is going to be singled out and remain in the analog world. It's just not going to happen. It's too revolutionary a technology for that to happen.

Second. Nobody—nobody—can predict, with any degree of certainty, how it is all going to work out. And it is not the sort of transition that lends itself to central industrial planning. There are too many industries involved. There are too many market variables involved. And there's a real danger that if we were to mandate a particular standard now, it would become obsolete very quickly. Digital television is a good example. Ten years ago, when people talked about digital television, all they talked about was HD. Because HD was the vision for digital broadcasting. Well, we all know now that there can be multiple visions for digital broadcasting, all of which have merit in the marketplace. If we had



known for years that they would be using VSB, so cable notes that set manufacturers have known for years that it would be using QAM. It is anticipated that all will be overcome. What will remain is the political issue of whether cable will be required to carry broadcast signals, in whole or in part. That is the thorny problem of must carry, about which more later.

Taking a philosophical perspective, some believe that just achieving this initial progress is a historic achievement that should not be minimized. One of those is FCC Commissioner Michael Powell, who said in an interview that "This is the most dramatic change in television

ever. It's more important that it be done right, rather than just quickly for its own sake. The tail shouldn't wag the dog."

Powell, who at one point told a Washington forum that the introduction of digital was a potential "train wreck," goes on to say that, "In our haste, we could do it in a way that leads to an inferior product or a premature debut." Powell later said the train wreck analogy was a bad metaphor, but whereas many believe digital is in danger of moving too slowly, he believes it may be going too fast. "How is it that sets are going out this fall that can't work on cable?" he asks. "Nobody had to be a rocket scientist to know that 70% of TV homes were on cable."

"The early adopters can make a medium but they can also sink it," Powell says. "They better be

mandated that the only valid use for this digital spectrum is HD—well, some people would have been happy. But I'm not sure if, in the long run, consumers would be best served, because what's happening today? Consumers will get HD, plus some consumers will get standard definition in multicasting. This is a good thing in the marketplace. For 20 years, policymakers have been moving towards more of a market-based approach to regulation. And it's worked. Why, suddenly, should we reverse course because we have this digital broadcast technology? It's just sort of curious to me.

Do you think that, down the line, there will be a regulation requiring cable to must carry digital signals? Here's my view on must carry. First of all, must carry is part of the Communications Act, so it's part of the law. The real question is how must carry should be implemented in the digital world. The broadcasters have come to the agency and they've said: "We want full must carry. We want carriage of the analog and the digital signal."

My response to that has been, you need to think through that request as a legal matter. Because I was general counsel here when we fought two cases in the Supreme Court, to defend the statutory must-carry requirement for the analog world, and it was not an easy fight. You know the case. We had to remand. We had to build a record. We had to go back up. And the Supreme Court recognized that the cable industry does have some modicum of First Amendment rights. Now, if the broadcast industry comes to the agency and says: "We want not one, but two, channels on the cable basic tier," my sensi-



"I become uncomfortable when we are being asked to basically define what the business plan should be for DTV"

bilities as a lawyer tell me. "Well, you've got to make the case for that." And that is going to be a fairly difficult burden. If you're telling cable systems, including those that are capacity constrained, to give two six megahertz channels to every local broadcast signal, I have difficulty understanding how we can make that case in the Supreme Court, and we know the cable industry is going to take this all the way, as they always have with must carry.

That speaks to the law. What is good public policy?

As a matter of public policy, I think we are entering an era where it's going to be incumbent on anyone who wants carriage on a cable system to be able to make a market case for it. Must carry is not really an issue for the major networks right now. Because they get carriage. They negotiate retransmission consent agreements. They don't necessarily receive cash, but there's consideration exchanged, and there's a symbiotic relationship there. The cable industry needs the network affiliates in order to pull together a package that's marketable to their subscribers. So must carry, as it traditionally has been, is really more of an issue for the independents and the upstart networks. They need to make a compelling case to

impressed. You can set acceptance back by taking one step forward and three back. Time is not infinitely malleable. Mistakes can have backsetting consequences." In the final analysis, Powell sees nothing wrong with considering relaxation of the digital deployment deadlines for broadcasters while other players in the digital equation are catching up. (The complete Powell interview appears in the November issue of Digital Television magazine.)

The Powell point of view is paralleled by that of Decker Anstrom, president of the National Cable Television Association (NCTA). "I really hope, in terms of a spotlight here in Washington, we don't get people to think that, come Christmas, the stores are going to be crammed with all these sets and there

will be hours and hours of programming, because there won't be. Or that their cable systems are ready to go digital. Those of us in the cable industry continue to believe that the transition from analog to digital is an important and even historic one, but that it's going to take time. The thing we have to avoid more than anything else is unnecessarily raising expectations or rushing to bad judgments. We're in this field of dreams period right now. If we build it, will they come? It's the first stage of a very long process."

Anstrom said cable is spending at the rate of \$6 billion annually to upgrade its plant infrastructure for digital and a whole generation of new services, including high definition. That process will begin

policymakers that they have a broadcast signal that uniquely serves the public interest, and if they're asking the government to go to cable—which has First Amendment rights—and ask it to basically prefer the broadcast speaker over their own editorial selections—well, that, in my view, is a fairly dramatic request to bring to government.

What was so bad about the idea of reconstituting the Wiley commission, and that you rejected so summarily?

I think that Dick Wiley did a masterful job with the advisory committee, but I also think that we've moved into a new phase with digital, and it seems to me that the DTV roll out doesn't really lend itself to central planning.

Do you think the marketplace will work fast enough to avoid a situation in which digital is introduced, nobody can work with it and everybody's unhappy, so the idea is rejected? That's my concern. Not that the problems won't be solved some day, but that they won't be solved quickly enough.

Well, I guess the message that I'm trying to convey is that a little bit of chaos is not a bad thing when you're rolling out a new technology, and multiple industries are developing business plans to market it.

One of the reasons why I didn't think an advisory committee, at this point, makes sense, is because I think the broadcast industry has already made some fundamental choices about the digital standard. And they're going to have to live with those decisions. You know, the VSB standard is one that the broadcast industry embraced. It is not that flexible a standard. For example, it doesn't lend itself to mobile applications. So if one application for digital is to have a mobile technology—which I could see could be really quite valuable in the marketplace—broadcasters and their engineers have decided this is not what they want. And so to convene another advisory committee and start reversing some of those basic decisions seems to me to be

an invitation for another 10 years of handwriting. I believe there is enough market pressure driving toward solution of the modulation conflicts that either the engineering community or the technical community will develop that solution. Or not. But it's not going to be mandated by lawyers and engineers sitting in a room in Washington.

What will be your thumbprint on digital TV?

Well, we are going to make sure that this spectrum is used, and we're going to aggressively enforce the build-out schedule.

On broadcasters?

Yes.

How about the rest of the world? The gatekeepers that are going to slow this down. Broadcasters can build like crazy, but cable's got 70% of the penetration.

But broadcasters do have an alternative delivery system to digital. It's an over-the-air technology. Cable is not their only gateway into America's homes. And some innovative people are thinking more about the over-the-air delivery aspects of digital than cable, and that's a good thing.

Yes, but it's a hard row to hoe. But while we're on that subject, what about the idea of a strategic alliance between broadcasters and satellite?

That makes a lot of sense for a number of reasons, not only to spur the roll out of digital, but also to bring more competition to cable. And I'm a staunch supporter of local into local. It's my hope that this controversy we're having about the Satellite Home Viewer Act will put more momentum behind efforts to get local into local, because I think that would be a good thing for consumers. My general response to all these issues is not to say: "Well, we've got to have a solution faster." Some of these decisions can't be rushed. The marketplace is going to work them out as quickly as it can. ■



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[wide screen view]

think
sharper
[crystal clear picture]

think
better
[unbelievable sound]

think
zenith
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When HDTV was just a concept back in the 1980s, Zenith was there. We were the first TV manufacturer named to the FCC's blue ribbon panel of HDTV standard-setting experts. We developed one of the first prototype HDTV systems, and we were the first to use digital technology and propose computer-friendly progressive scanning. We were the first to develop a broadcast system that won't interfere with today's TV signals and the first to introduce an HDTV-ready projector. We were a founding member of the Digital HDTV Grand Alliance and earned an Emmy for our pioneering work.

Most significant, Zenith developed the digital transmission system adopted by the FCC as part of the ATSC DTV standard.

So, as America ushers in the digital HDTV era, you can count on Zenith to be there with leading-edge, easy-to-use technology, just as we have for 80 years. When you think HDTV, think Zenith. Bigger. Sharper. Better.

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to kick in in late 1999/early 2000 when most urban and suburban cable systems—serving roughly 75% of cable's customers—will have been largely rebuilt to 750 Mhz, with rural and small-town systems taking some seven years to reach 550 or 750 Mhz capacity. "When we finish our rebuilds we'll have much more capacity to offer more high definition than anyone else," Anstrom says. On top of that is deployment of digital set-top boxes, with hope of having an interoperable model (that could move with a subscriber anywhere in the United States) by July 2000. They would be available either from a cable operator or a retail outlet.

Moreover, in collaboration with Hollywood and the set manufacturers, cable is coming to grips with the firewire problem that exposes programmers in terms of copyright protection. He expects cable networks to begin transmitting high definition in the first or second quarter of 1999.

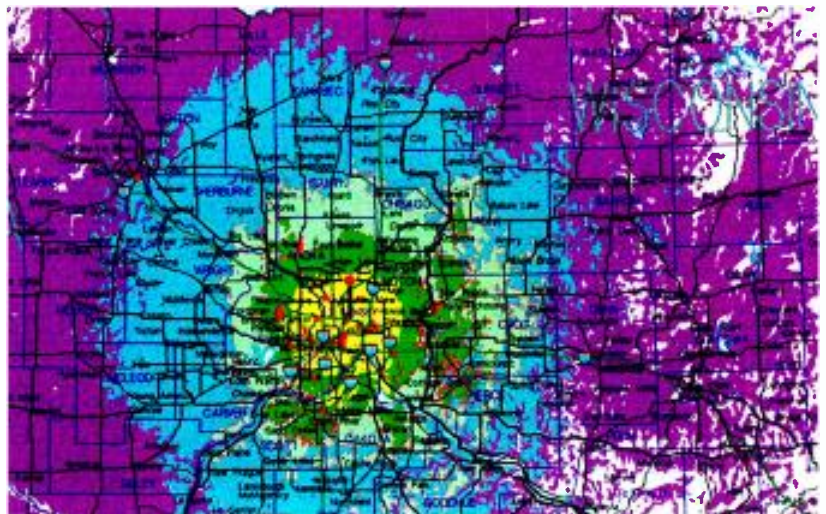
Anstrom emphasized cable's early-on digital enthusiasm and said it wouldn't be the last to fulfill the medium's promise. "From our perspective digital allows us to be more efficient in terms of delivering more signals, and we know that people always want more. More choices, more options, more opportunities. It's also at the core of our ability to offer high-speed data and Internet access services, which we believe is going to be a huge new business for the cable industry. And then there's high definition as well."

Anstrom also pointed out that broadcast networks and major MSO's were negotiating retransmission consent agreements for digital programming even now, hoping to avoid governmental intervention and to create a new revenue stream even in the early days of DTV product. "We serve nearly 70% of the homes in this country," he said. "Our customers are going to want digital and high-definition television, and we'll deliver it. But," he cautioned again, "these things don't happen overnight."

Even while professing his commitment to the medium, the NCTA president continued to sound a "realistic" and "methodical" alarm, and to keep broadcasting digital at arm's length. "We weren't the ones who went out and asked for free spectrum. We weren't the ones who agreed with Chairman [Reed] Hundt on a schedule for deployment of digital television. We weren't the ones who created a lot of expectations about Christmas 1998, and hundreds of thousands of television sets being out there. And I think people now have to take a deep breath and come back to the fundamentals. All of this is really complicated. It doesn't lend itself to rigid timetables."

A funny thing happened on the way to digital TV: the whole world of electronic communications turned upside down. Hear Paul Misener, now the chief of staff to FCC Commissioner Furchtgott-Roth, who was in the early 1990's the right hand to Richard E. Wiley in inventing the new medium:

"It would have been so much more simple had other things not happened in the decade since the FCC began to investigate advanced television—so many other changes in the communications world that dramatically affect the role of television, analog or digital, in people's lives. You can't have a



**Minneapolis-St. Paul, MN
TV Antenna
Selector
Map: Now
you see it,
now you
don't.**

conversation in Washington without mentioning the Internet. And it's not just that. It's computing technology, it's digital technology, not just digital transmission of TV pictures but digital everything, that has increased the flexibility of all media. One way to look at the Telecommunications Act is as a recognition, albeit incomplete, that technology has become so flexible that virtually any kind of service provider can provide any kind of service. Telephone can now do lots of things that go well beyond the voice conversation. The obvious is data. There are, of course, faxes and now video and all sorts of stuff over a twisted pair of copper.

"Cable, instead of just being this one-way, multi-channel video delivery service, now has all these other capabilities tossed on. The cable plant is being rebuilt for bi-directional use, largely for Internet connections. All this is going on while there's this debate over exactly how we transition broadcasters to the next level of technology. And the beauty of it—the positive, easily understood aspect of all that's going on—is the invention of digital transmission by General Instrument in 1990, when it decided to take some of its black box defense technology and apply it to video transmission. That's when they whispered to Lex Felker and Joe Flaher-



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Communications

ty and Dick Wiley and the advisory committee that this might be possible for over-the-air.

"But in the background, all this other stuff is changing. Some people are spending more time in front of PCs than in front of TVs. They're beginning to enjoy the interactive aspects of Internet communications, of e-mail, of web surfing. The development of this wonderful and glorious digital standard has not been in a vacuum. Television broadcasting used to be in a class by itself and was treated separately. Now it's one of many digital devices and technologies and delivery systems out there, and that is going to change the policymakers' analysis of it slightly. But probably the best news of all is that we're becoming less and less important in this whole thing, we policymakers."

There are two views of the political process that led up to digital's adoption: Reed Hundt's and that of everyone else. The penultimate FCC chairman was viewed as a foe of HDTV, despite public pronouncements to the contrary, and was considered by insiders to be carrying water for Microsoft's Bill Gates. That meant progressive at all costs, 1080 at no costs and, in the end, no governmentally mandated standard.

"We wasted two years, thanks solely and personally to Reed Hundt," says one who was close to the process. "He dissembled and screwed everything up. The Grand Alliance (AT&T [Lucent], General Instrument, MIT, Philips North America, Sarnoff Corp., Thomson Consumer Electronics and Zenith) almost fell apart over his insistence on incorporating standard definition TV, which wasn't in itself a bad idea, but one the world already knew how to do. And then, after it was incorporated, he said he didn't want a standard anyway. First he would encourage the process, then he would ignore it. All in all, he cost us an extra two years and it made broadcasters and the manufacturers that much more jittery about going forward. When you think about it, that means the cable interface problem we're still dealing with today could have been solved two years earlier."

Hundt's basic problem, in the minds of many, was

**Footnote: Under the ATSC standard the continuous MPEG-2 transport stream rate of a 6 Mhz digital channel is 19.392658 megabits per second (Mbps), rounded generally to 19.4. Some in the industry, however, use the lower number of 19.3 Mbps, referring to the approximate digital payload after the MPEG packet sync signal has been taken away. For the purposes of this article, and consistency, "The Dawn of Digital Television" has chosen to use 19.4 Mbps throughout.*

that he didn't believe in broadcasting, much less in HDTV. He was said to feel the spectrum could best be used for other purposes, and that television should just be carried by cable. Indeed, the FCC order setting aside the digital frequencies requires only the broadcast of one signal equal in quality to existing television (NTSC)—requiring as few as 4 to 6 megabits in each 19.4 Mbps* (6 channel)—leaving some 13+ to 15+ megabits to be used for any other digital purpose. Some see significance in Gates' having asked, on a visit to the FCC, how much it would cost for him to purchase 6 Mhz nationwide, presumably for a Microsoft-owned network that could broadcast minimal conventional television while concentrating on data and other digital purposes. Coincidentally, producer Steven Spielberg arrived at the FCC to complain about the 16:9 aspect ratio, saying it should be 2:1 to more nearly match theatrical screens. Both incursions were short-lived but effective in their impact on the process.

On top of that, according to this source, "Gates just didn't want to put what he thought was costly computing and de-interlacing circuitry into a computer, and he was willing to scuttle all the broadcasting industry's plans to get his way, not even knowing what he would do if he won." In the end, he did win. The FCC's final action was to adopt the DTV transmission standard put forward jointly by the Wiley advisory committee and the Advanced Television Systems Committee (ATSC) in a 60-page plan, minus one-half page—Table Three, which defined all the 18 video scanning formats. That means a licensee can transmit any video program format he can devise. The miracle is that all the manufacturers and broadcasters, in an effort orchestrated by ATSC, have so far stuck together voluntarily to offer the 18 formats, creating a de facto standard. But that could change. The standards could be narrowed by attrition, or expanded—in a closed system, such as the direct satellite platform—by some new approach, leaving the consumer in the position of trying to catch a moving target.

Reed Hundt, not surprisingly, has a dramatically



"If I were to put my finger at a time to really begin to watch this move, it would be Christmas 1999."

—NCTA's DeckerAnstrom

DTV:
We're ready.





different view of the process. He believes broadcasters had no business plan in mind for the high-definition TV they were pursuing when he came into office, and no conception at all of the digital universe they were entering. Hundt believes DTV can be the salvation of over-the-air television if it will but end its reliance on government and embrace the marketplace—an opinion echoed by Blair Levin, the FCC's chief of staff during the Hundt administration, who says: "The best things we did [concerning digital and HDTV] are the things we didn't do." Nor does Hundt shy away from many of the accusations made about him. Yes, he insisted on SDTV, and he was close to Gates. "I begged Gates to get involved," the former chairman says.

(Excerpts of the Hundt interview appear on pages 20 through 23.)

Wiley thinks the computer problem will work itself out. "The computer people have always had the right vision for themselves and for the public—a vision of smaller screen, up close, progressive scanning and a lot of information for their audience. Where they went wrong was in trying to impose their vision on other industries. Broadcasters have a vision too, which is wide screen and vivid pictures. The two may converge in the future with PC/TVs. But, again, I don't think we should let one industry foreclose another industry's vision."

Technical Considerations

Trying to understand the digital dilemma is like trying to hold mercury under your finger; it keeps squirting off in another direction. Nevertheless, a review of the technology is essential to keeping up.

The Grand Alliance system of digital television partially adopted by the FCC enables transmission of a single high-definition program or several so-called "standard definition" (SDTV) programs with clarity similar to today's TV. In broadcasting, as many as four or five SDTV signals can be transmitted simultaneously within a broadcaster's 6 Mhz channel. Cable television, using its own digital transmissions, might carry upwards of 12 signals within each of its 6 Mhz channels. The capacity for simultaneous data transmissions on either broadcast or cable boggles the mind.

There are two big differences between today's analog broadcast and cable television systems and their new digital counterparts. The first is the relative freedom from interference that digital provides. No longer will "ghosts" appear around characters on the screen every time an airplane flies over. No longer will "snow" obscure the football game when your neighbor decides to vacuum his carpet. And no

longer will people on the outskirts of town be relegated to cloudy, fuzzy broadcast pictures.

Of course, they may get no picture at all. With digital, either you get it or you don't. Those who do will get a crisp, interference-free picture. Those who don't—as they do now—may have to rely on cable or satellite for their video input.

The second big difference between digital and the existing analog television system is that one is malleable (digital) while the other is not (analog). In digital, all transmissions are reduced electronically to a code of 0's and 1's, the same kind of magic that makes computers possible. In that form, they can be manipulated in a number of ways to rearrange the picture elements as operators and the mix of services see fit. That has been going on for years inside the television plant, and conspicuously within such devices as character generators and servers.

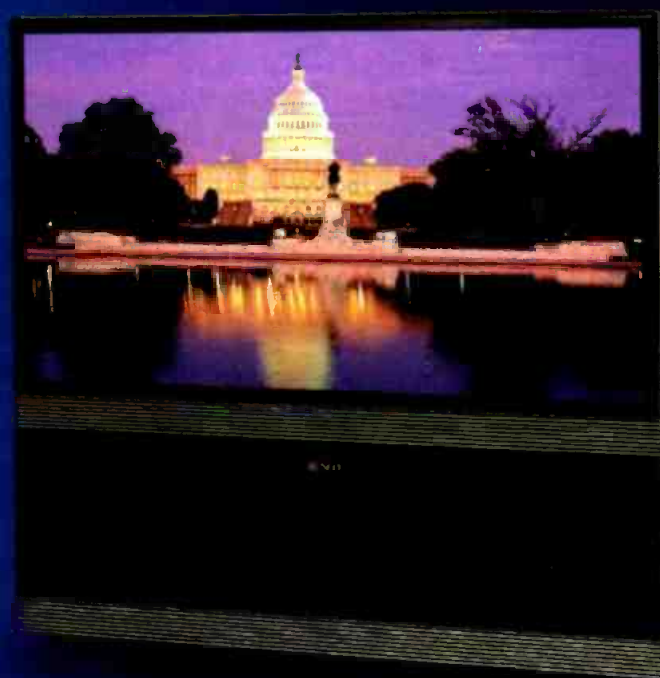
Analog is much more "what you see is what you get." The picture essentially goes in and comes out the same way, occupying the same amount of spectrum space no matter what. Digital programs take up only what is required for a particular unit of information. For example, a 6 Mhz digital broadcast channel is capable of carrying 19.4 Mbps of information. A motion picture broadcast in full HDTV at 1080p/24 frames a second may take up 13 or 14 Mbps. That leaves enough spectrum to broadcast, say, two 480i or p programs simultaneously. Thus the efficiency of digital, and the temptation to multiplex—that is, to broadcast several programs in one 6 Mhz channel.

(However, a football game broadcast live at 1080i/60 fields would take up nearly the full 19.4 Mbps and leave no room for multiplexing. Hence the temptation for television operators to opt for the lower resolution levels.)

Chuck Sherman, executive vice president for television at the National Association of Broadcasters (NAB), says that future general managers will have two budgets to worry about—their normal operating budget and the budget for bits. Making maximum use of digital spectrum will be like filling airplane seats, he said, or maximizing the sale of commercial inventory before it's gone forever. He says, however, that multiplexing on a regular basis is at least five to 10 years away, awaiting

"A terrific display shows all the quality, and it shows all the flaws, too. If they make a lousy-looking picture and put it on a good display, I assure you it looks like a lousy-looking picture."

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sufficient digital penetration to make it fly.

The secret to digital malleability is compression. In analog, all elements in a scene are captured, transmitted and displayed over and over again in each succeeding frame. In digital, a picture element that does not change or move is captured only once and is thereafter ignored or refreshed only periodically. All those bits that might have been used to capture non-changing picture elements are saved in digital, allowing the overall picture to be "compressed"—that is, sent using fewer digital bits. Without compression, terrestrial HDTV in 6 Mhz would still be beyond reach. An uncompressed HDTV signal at 1080i, for example, might require 27 Mhz to transmit, the equivalent of almost five normal television channels.

The good news is that compression enables the best of signals to be transmitted. The bad news is that there is no limit to how bad a signal it makes possible, if the provider so decides. HDTV can compound the problem. As one source put it, "A terrific display shows all the quality, and it shows all the flaws, too. If they make a lousy-looking picture and put it on a good display, I assure you it looks like a lousy-looking picture. Every manufacturer is making better and better displays. In current resolution, everything's becoming crisper. In high resolution everything's becoming startlingly better and cleaner. The better the displays get the more you'll see the bad stuff."

Cable, in a sense, gets two bangs for every digital buck. Its 6 Mhz channels afford just under 40 million bits per second, compared to broadcasters' just under 20 million. By definition, therefore, over-the-air broadcasting is a tougher trick, with some of the transmission devoted to protecting the signal from interference. On top of that, cable can use its existing plant architecture for digital—the same wires, the same repeaters, the same amplifiers. It's a matter of how the signal is put in at the headend and taken out at the set-top box. One observer, emphasizing these advantages, said: "Digital is a no-brainer for cable." Nevertheless, those in that medium would note that cable still has to build its plant one home—and one digital box—at a time, and at a current capital expenditure of billions annually.

The Grand Alliance system incorporates 18 formats, but in actuality there are 36—matching precisely multiples of the existing analog system's field rate. Only 14 are for conventional television—the four 480 lines/640 pixel formats are for computers (VGA). The FCC does not require broadcasters or set manufacturers to use any or all of the 18 formats, which break down into two general video scanning schemes, interlaced (traditionally preferred by broadcasters) and progressive (preferred by most in

the computer world and

cable). They then divide into

three basic resolution modes—that is, the number of vertical lines per screen. Those choices are 480, 720 and 1080, which further break down into aspect ratios and picture rates. Thus we speak of 480i, 480p, 720i, 720p, 1080i and 1080p. Regrettably, at present, no one now knows how to do 1080p at 60 frames, the rate required for live or electronic TV, because the bit rate exceeds 19.4 Mbps.

Then there are the pixels—the number of picture elements in each line of horizontal resolution. The ATSC DTV standard calls for 704 pixels (for the 16:9 or 4:3 aspect ratios) or 640 pixels (for 4:3 only) in the 480 format. There are 1280 pixels in 720 and 1920 pixels in 1080 (both 16:9 only). Generally speaking, the objective quality of a picture is determined by multiplying pixels times vertical lines. At the low end for conventional TV (omitting the computer formats), 480i/704 produces 337,920 pixels. 720p/1280 produces 921,600 pixels while high-end 1080i/1920 produces 2,073,600 pixels—1,152,000 more than 720. The argument comes in when you consider frame rates: interlace pixels come in every 30th of a second while progressive pixels come in every 60th of a second—twice as fast.

If that weren't complex enough, there are three frame rates—that is, the number of individual snapshots transmitted each second. They are 60 frames per second interlaced and progressive (for live transmissions), and 60 frames progressive, 30 frames progressive and 24 frames progressive for film. Interlace, itself a veteran compression technique, is considered by some to be better for motion while progressive is favored for graphics, but you can get an argument on that subject in any bar frequented by two or more engineers. All computer displays are seen in progressive, which explains that medium's hope that broadcasters would choose that format.

For Those Keeping Score, These Are the 18 Formats:

	Lines of Vertical Resolution	Pixels	Aspect Ratio	Frames Second and Scanning Format
HDTV	1080	-- 1920	-- 16:9	--- 60i
	1080	-- 1920	-- 16:9	--- 30p
	1080	-- 1920	-- 16:9	--- 24p
	720	-- 1280	-- 16:9	--- 60p
	720	-- 1280	-- 16:9	--- 30p
	720	-- 1280	-- 16:9	--- 24p
	480	--- 704	-- 16:9	--- 60i
	480	--- 704	-- 16:9	--- 60p
	480	--- 704	-- 16:9	--- 30p
SDTV	480	--- 704	-- 16:9	--- 24p
	480	--- 704	--- 4:3	--- 60i
	480	--- 704	--- 4:3	--- 60p
	480	--- 704	--- 4:3	--- 30p
	480	--- 704	--- 4:3	--- 24p
	480	--- 640	--- 4:3	--- 60i
	480	--- 640	--- 4:3	--- 60p
	480	--- 640	--- 4:3	--- 30p
	480	--- 640	--- 4:3	--- 24p



Broadcasters, who see convergence a long way off, if ever, believe the computer industry should go the extra mile to convert interlaced programs into progressive in the computer. Intel, among others, has been developing chips to do so, and other manufacturers are reportedly working on new computer cards (chips) that will handle all broadcast and cable formats along with all computer formats.

The two 480 formats are essentially equivalent to present day NTSC (National Television Systems Committee) transmissions. Both 720p and 1080i are acknowledged as HDTV, although the latter delivers more than twice as many pixels per frame while the former delivers twice as many frames per second.

The lowest-cost way for broadcasters to proceed into digital is simply to digitize their present 480i transmissions—essentially the technical scheme for direct broadcast satellite today, which begins with an analog signal, transmits it in digital and then brings it back to analog at the set. The next most economical way is to go 480p, although that requires an investment in progressive equipment or new, switchable 480i/p equipment.

The 720p option has appeal for a number of broadcasters who think it high enough in quality to satisfy the public's itch for HDTV while being more readily in sync with digital displays and computer data formats and conserving spectrum for data or multiplexing. (CBS's Joe Flaherty is

Reed Hundt's Majority of One

The former chairman of the FCC was at odds with broadcasters almost from the first day of his administration, and things haven't changed much over the years. He heard a different drummer than did his predecessors—on HDTV, particularly—and insisted on relying on the marketplace rather than industrial policy. History will judge the rightness of his point of view. The Dawn of Digital began this interview with Chairman Hundt—now in private practice—by reciting criticisms that had been leveled against him by others.

Hundt: First of all, what the high-definition story is all about is a misnomer concealing a lobbying strategy which in turn surrounds the lack of any business plan. I came to this conclusion with astonishment and sadness after more than a year, all through 1994, of studying the issue. I was stunned to discover how insignificant were the resources devoted by broadcasters to research on this topic. Even now, years later, it turns out that the so-called Grand Alliance did not have a good plan with respect to the cable conduit or with respect to antennas. Even now, it turns out that they have never done adequate testing for multicasting. Even now it turns out that their field testings were less robust and less reliable than testing of virtually any other technology in any other market.

I'm sorry all this is true, but the reality is that when you rely on the government and your lobbyist to make your business plans you're stepping out on a sheet of ice and you're going to break through and find yourself up to your neck in cold water.

The truth of the matter is that there never was any groundswell among broadcast licensees to go digital. There

never was any self-initiated entrepreneurial business plan to pursue this opportunity. There was only a broadcaster-manufacturer-lobbying alliance to make sure that the licenses were awarded to a select group instead of put on the market for sale to whoever really wanted them.

It's also clear that if local over-the-air broadcasting is going to survive on a long-term basis, it will only be by going digital.

For multiplexing?

For all the ways that digital is relevant. One, delivering more bits—which can be voice, video or data. In other words, more. Two, for compatibility with all forms of receivers—and I mean not only PCs and TVs, but the real reality of 10 years from now, which is heterogeneous devices that fundamentally are receivers of digital bitstreams. Three, for the purpose of strategic alliances with other industries, such as telephone and satellite. And four, for the new media, for the new forms of content that fundamentally will be digitally-based. So it had to be digital.

Here's what it did not have to be. It did not have to be a single pretty picture. And that's why the very first thing I did



among those unconvinced of 720's frugality. By his calculations, 720 at live or electronic rates—60 frames—uses eight-ninths the bit rate of 1080i/60, while only film transmissions at 24 frames can fit two programs into one DTV channel simultaneously.) The "picture on the wall" displays, using a plasma technique, will be progressive scan at 480, 720 or 1080. One of the superb advantages of digital, of course, is that the transmission mode need not be the display mode. For example, a signal broadcast in 480p can be displayed at the set in 1080i (scan-converted), although the quality may suffer, particularly on large-screen sets. Conversely, a DTV signal broadcast in 1080i can be received and scan-converted to 480i—and,

through a set-top box, converted to analog for display on an existing NTSC set.

The new DTV aspect ratio is another complicating consideration. The analog television picture is 4:3—four elements wide by three high. Digital is 16:9, similar to the dimensions of a theatrical screen and more in keeping with the eye's viewing propensity. It is the aspect ratio that forces television to scrap its present sets in favor of a new generation, or go through the rest of time with black bars over and under or around its picture. (Proving that there are no absolutes in digital, that statement, too, is subject to challenge. Devices have been developed to stretch or reposition 4:3 pictures to 16:9, and vice versa.)



"If free TV is surviving as a cable transmission, then I say why are we talking about digital transmission over the air? It's only an over-the-air medium that is truly universal."

was to say: "This isn't high definition. It's digital." Even now there's a strong school of thought, including lots of people in Congress, who just don't get that and don't believe it, and who think that the future of broadcasting is just a prettier picture.

I think fundamentally, one, it's wrong and, two, it's an attempt to dictate to the marketplace that which the marketplace will decide on its own—namely, what do consumers really want. And so the outcome for me—once I really formed a view on this—was that this was a classic case of the United States pretending to be Japan.

What does that mean?

Meaning let's have the government and a couple of representatives of selected industries decide what consumers are going to buy, without ever relying on competition or the reality of the marketplace to make that determination. I didn't want and I'm proud that I didn't have any part of that.

I did not buy into the plan I inherited, and it is not now the rule. So we got rid of simulcast. We got rid of the HD require-

ment. We got rid of the standard. We got rid of basically all of the key tenets of this, in my view, bankrupt policy.

The bottom line here, the virus here is governmental involvement and it infects everybody—senatorial involvement, FCC involvement. For broadcasters to be successful on a long-term basis in this intensely competitive world, one, they have to go digital and, two, they have to go without the government. They have to do their thing their way, market by market, and they have to stop thinking that the government will save them or will help them or will condition them or will constrain them, or anything.

It's hard to go without the government when you're a licensed medium.

Actually, it's easy to do, if you just adopt that as your view. Although there are constraints: newspaper-broadcast crossownership, cable-broadcast crossownership constraints, the ones that we got rid of like the financial interest-syndication rules, the prime time access rule, these have economic significance. They all should be eliminated. You've got to get rid of



Digital also plays to six-channel Dolby surround sound, a technology already popular with audio-philosophers and subscribers to direct broadcast satellite. In the opinion of many, it is this sound capability that truly distinguishes DTV from other media, and that will account for much of its popularity in the marketplace.

Policy and Politics

When the FCC first set up its advisory committee on advanced television, it had only HDTV in mind. The chairmen of that day—Dennis Patrick, who began the process, and Al Sikes, who took up the baton and pressed for an all-digital solution—wanted the country to enter the next century with a

new transmission system that would dwarf the existing NTSC. It was Chairman Reed Hundt who turned away from a concentration on HDTV and insisted that the advisory team concentrate on including standard definition TV—that is, 480i or p—and make concessions to the computer industry. It was Hundt, too, who led the commission into a marketplace policy of imposing no single digital program format standard on broadcasters. (The FCC did, however, adopt mandatory standards for digital compression, transport and transmission.) The FCC has no authority to impose transmission standards on cable.

Cable and the computer industries, to which large HDTV displays in 1080i were not as important as multiple channels progressively scanned, lobbied

all of this for broadcasting to survive as a viable free over-the-air local medium. I mean all of those things: free, over-the-air, local. For it to survive, it's going to be necessary to get rid of all of those constraints.

Why? Isn't the industry doing well now? I know that ratings are off.

No, no, no. This industry as an over-the-air medium is not doing well now. See what I'm saying here? I'm not being clear. Over-the-air, over-the-air, over-the-air. How many people are watching broadcasts over the air?

Oh. OK.

If free TV is surviving as a cable transmission, then I say why are we talking about digital television over the air? I don't have any doubt that an individual broadcaster armed with must-carry rights and armed with franchise rights as to content can in effect buy a cable channel. He can acquire a cable transmission right digitally on a long-term basis. But that is not a free over-the-air medium. And all of this is supposed to be about not just preserving the economics of a particular business, you know, like a station group. It's really supposed to be about preserving a free over-the-air medium, because it's only an over-the-air medium that is truly universal.

But that medium, that free over-the-air medium, is seriously jeopardized when virtually all of the network strategies do not depend on over-the-air.

What do you think of a strategic alliance with satellite?

Terrific. Great. Go for it.

Would you not say the same thing about a strategic alliance with cable?

The problem is that satellite is over-the-air and universal and cable is not. If you do the deal with cable—which broadcasters are apparently doing again, for the second time—you are cutting yourself off from the universality of any over-the-air transmission system.

So you do believe in over-the-air, contrary to what's been said of you.

I believe this. I believe the only reason why government should care about broadcasting is that it is universal, and it's the over-the-air dimension that makes it universal. Do you see what I'm saying? I mean, poor people and old people and people with second television sets and all of that aren't reached by a monopolist cable connection, and never will be in any time frame we can imagine. If you want to preserve that there's no reason for any government role whatsoever. If you want to preserve that then, boy, it better be digital and it better be that your policies at the government level create every opportunity in the world for digital alliances.

Now, the logical ones are satellite and telephony. You also need to open the door to newspaper/broadcast combinations that will strengthen both of those industries, both of them being industries in trouble.

Why telephony?

Telephony solves your two-way problem. In other words, a telephony/over-the-air broadcast combination is one in which the two-wayness of telephony complements the universality of the broadcast. And, of course, when I say telephony I'm also thinking of wireless telephony.

So let me give you an imaginary combination. The local telephone company and the local broadcasters sell to the consumers a package that is a local area network in your house, a wireless LAN in your house, and a broadband digital bitstream from your television station and a narrow-band connection on your telephone line. And then the services are voice, video and data. That's a darn compelling proposition, and that competes vigorously with cable.

Another way to go—and I don't think this should be mandated by government—would be a satellite combination. But then the broadcasters should very aggressively be promoting changes in the law to allow satellites to pick signals up and send them back down. Instead of being the enemies of change, they should be for a change in the law in this respect.

But here's my main point, that local broadcasters and broadcast groups have regrettably become addicted over the

against federally-mandated standards and for flexibility (SDTV as well as HDTV). Some broadcasters agreed, hoping that multicasting—that is, broadcasting a number of channels simultaneously—would produce more revenue than would HDTV.

There is no unanimity among the four major networks as to which way to go. CBS, influenced importantly by Joe Flaherty, is the most enthusiastic about 1080i. (Flaherty not only is the CBS senior vice president for technology but shares credit with Dick Wiley as the father of HDTV.) Fox and ABC are the least enthusiastic. NBC is somewhere in between. None of the networks has yet made known a business plan for multicasting, although such broadcasters as David Smith of Sinclair are vocal on the medium's prospects. At the

dawn of digital, however, Sinclair is waiting and seeing, neither multiplexing nor going HDTV.

Those who feel digital is getting off to a rocky start usually point to cable as the problem. That medium now effectively controls access to some 70% of American TV homes, although both terrestrial and satellite broadcasters have access to those same rooftops, and broadcasters' new digital spectrum has distinct advantages in competing with cable on a reception-only basis. Cable has only limited plans to pass broadcast signals, and those on a pay tier. Its modulation technique of choice (QAM) is incompatible with the Grand Alliance's or ATSC's VSB. The first digital sets will not be equipped to receive digital cable without a set-top



"I hear a sucking sound of broadcasting being pulled into the cable system... Once national advertising goes somewhere else you know the jig is up."



are over 210 million freestanding analog TVs out there, blah, blah, blah. Who are they kidding? You know, 120 million of them are already connected to cable. Logically, they are not going to be replaced by \$7,000 receivers, not when the cable industry is going to offer \$200 modems. And those numbers—the cable connections and the watching of cable channels instead of broadcast—appears to be moving inexorably by two or three percentage points a year, year and year out. Over a 10-year period you get to a tipping point. When you get down to 30%, 35%, 25%, then somewhere down the line, below where we are now but above zero, somewhere the advertisers actually just move—lock, stock and barrel. Once you lose universality you lose national advertising.

decades to the idea that the lobbyists will just take care of their business. And it's not going to happen over the next 10 years that way. I'm not saying they're doomed tomorrow. I'm saying that 10 years from now, if people don't come up with entrepreneurial ideas, the broadcasting industry will be basically so diminished from what it is today as an over-the-air medium that it will be unrecognizable and not the factor it is today in our culture or in Washington.

Cable does not give us universality. Why do we have universality in telephony? Because we have government regulation of plain old telephone service that flattened the price so low that we have 95% penetration. We don't have that in cable. The 1992 Cable Act specifically denied the federal government the ability to set the prices on the entry package and gave that power to the localities, which did not use and do not use it to create a vanilla service. That's why we don't have universality on cable.

So the thing lost in this migration that I fear is the universality of the medium. I hear a sucking sound of broadcasting being pulled into the cable system. And everybody says there

Once it goes somewhere else you know the jig is up.

Now an individual broadcaster armed with must carry and armed with proprietary rights as to content—well, the day comes when he just turns off the power and becomes an incorporeal business, one that simply has a cable channel. Fine, no problem. They'll make money. They'll have brand names. But that's the end of the free over-the-air transmission.

Do you have any specific rejoinder to the remarks about you and Bill Gates?

I begged Gates to get involved. I wish that he'd gotten more involved. I wish the whole PC industry was more enthusiastic about merging with broadcasters. I wish that the PC hardware people had more enthusiasm about joint ventures with TV manufacturers. The problem is that, by and large, the PC and hardware and software industries don't believe in the future of, one, TV manufacturers and, two, broadcasters. So they have devoted their attention, as everybody sees, to cable. It takes two to tango.

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box—a decision attributed by cable to the consumer electronics industry. And the first digital boxes the cable industry has deployed will not pass a broadcast DTV signal. Interoperability remains out of reach although not out of sight, depending on development of the right digital boxes.

The fact is, cable has a different vision for digital. It wants to compress as many signals as possible into its existing plant, avoiding the need for costly upgrades. That's particularly true of its second-largest operator, TCI, which has led the way in standing pat on digital upgrading. Others, like Time Warner and Cox, are in the "big pipe" cable category. Moreover, all in cable are concerned that if broadcasters take the high-definition route, and then secure must carry, they will have to drop some of their own programmers. (One of the most vocal naysayers is C-SPAN's Brian Lamb, who has yet to get his C-SPAN-1 on every cable system, much less C-SPAN-2, and fears wholesale displacement if digital must carry is imposed.) TCI's John Malone, making clear his reluctance to accommodate broadcast HDTV, has called 1080i a "spectrum hog." (A single 6 Mhz cable channel, wider than a broadcast channel, can carry two 1080i programs, but can carry 12 to 24 in 480. TCI reportedly reduces some of its 480 program transmissions to 240 lines, a quality approaching VHS, and occupying only 1.4 Mbps.)

The cable strategy is much more akin to Microsoft's, which may partly explain the enthusiasm shown by Bill Gates' participation in Comcast and that of his former partner, Paul Allen, in buying into Marcus Cable and, prospectively, Charter Cable. Indeed, cable's technological attention has been turned to the development of high-speed modems to compete with the telephone companies for Internet access and IP (Internet protocol) telephony.

The Satellite Option

The most dramatic prospect on the digital and HDTV horizon is the possibility that terrestrial broadcasters will strike a deal to have their signals joined at the hip with direct broadcast satellite providers. That's the vision of DirecTV President Eddy Hartenstein, who has from the beginning set aside channel positions 1 through 99 on his DBS system in hope of one day incorporating broadcasters. Thus, rather than relying on cable's multi-channel providers to reach 70% of the country beyond existing broadcast antennas, broadcasters would bet on satellites to help build their digital base.

This is how it would work:

DirecTV would operate just as it does now, digi-

tally, to an 18-inch dish at the consumer's home. Local broadcasters' analog and digital transmissions would be picked up by an independent antenna, roof-top or otherwise. (Because most digital will be in the UHF band, that antenna could be smaller than the six-foot arrays that festooned rooftops in earlier days.) The existing DirecTV digital-to-analog receiver would be replaced by a device that would combine all the signals, along with a fully integrated navigation or guide system. (That receiver might cost \$400 initially, essentially equivalent to one of cable's digital boxes.) DirecTV has already made arrangements for such an element to be incorporated in all digital sets produced by Thomson (RCA) and Hitachi, and is making similar arrangements with other set manufacturers.

Independent of that potential alliance, DBS will be a medium with which to contend. DirecTV's own feeds and those of HBO will dwarf those of other providers at digital's outset, and are likely to be among those relied upon to demonstrate digital in the nation's television showrooms. It will take advantage of whatever's available in the new digital environment, from John Glenn in outer space to C-SPAN. It is already broadcasting movies in six-channel Dolby audio digital and will have high-definition movies in its pay-per-view window.

HDTV Unity Motion, a start-up provider based in St. Louis, says it is involved in the entire process, including equipment sales, programming, transmitting and display. It plans to support a 100,000 subscriber base by spring 1999.

NAB's Chuck Sherman confirms that broadcasters are interested in the possibilities of an alliance with satellite, but says there are concerns that the satellite industry has played fast and loose with the law by bringing distant network signals into competition with local affiliates. "We're anxious to do business with them if they abide by the law. We want partners who will operate with faith and trust," Sherman said.

The broadcaster-satellite consortium could be accelerated by a service being offered by Bell Atlantic, which says it will provide the TV home



"Cable Inc. collectively hopes that digital will never catch on."

—DirecTV's Eddy Hartenstein

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an opinion borne out by "The Dawn of Digital Television" story about the retail experience, beginning on page 40. He cautioned, however, that the early adopters are not always a good indicator of what a new market might be. "Great products often do fail—sometimes because the publicity exceeds the product. Or the timing can be wrong." Cable, he said, will be disadvantaged until its interface problems are solved.

The CEMA president said a record 24 million sets were sold in 1998—in three of every 10 American homes—and concluded that HDTV was enlarging the market for analog. And the word is spreading, he says: "By this time next year you will see HDTV in airports and sports bars—50% of Americans will have seen HDTV a year from now."

Must Carry

If the broadcasting and cable industries have yet to meet on the digital playing field, they have met about must carry. "We take the position that must carry is an absolute requirement," says Chuck Sherman, executive vice president for television for the National Association of Broadcasters, "except for the small, mom-and-pop cable operators. We may be willing to give cable systems a chance to build out their plants while we're building out our programming, but at the end of the day we believe all analog and digital signals should be carried, up to one-third capacity as provided in the Cable Act."

Moreover, he says, there should be no material degradation of the 19.4 bitstream. "What we put in the bitstream—including multiplexing—should come out," says Sherman, excepting only premium (pay TV) channels.

Over our dead bodies, is the position of the cable industry. "We believe it's unconstitutional and an infringement of our rights," says Decker Anstrom. "The notion that the government is going to compel cable to carry both broadcasters' analog and digital signals as a mandate during this transition period, which is going to stretch eight years or longer, is a remarkable governmental intrusion into the marketplace. Broadcasters would be better served, as I think we would and would consumers, by putting our energy into hammering out business relationships that work for both sides, and for consumers, rather than trying to get the government to come in and tell people to do things."

Concludes Anstrom: "We will never agree to any form of digital must carry, and if the FCC acts we will appeal it all the way to the Supreme Court. We

will never again accept cable networks being relegated to second-class citizenship. The notion that every broadcaster's voice is more important than any cable network's voice can't be right. And remember, no broadcast station is going to lose its voice here because the analog signal is never going to be returned. That's the issue before the commission: our having to carry both the digital and analog signals."

Both the NAB and NCTA have made their positions official before the FCC, which has begun a notice of inquiry into the subject. No one knows how it will turn out, but the fight will be bloody and hard fought.

In the meantime, major players on both the broadcasting and cable side are meeting behind closed doors to effect an industry compromise that could avoid governmental intrusion. Essentially, it would create a pay tier for broadcast digital on cable, creating a new revenue stream in which both cable and broadcasting would share. Both major networks and major MSO's are involved in this effort, which many believe will be blessed with success by year's end. But while such an agreement would put out the immediate fire, and set a new precedent, it will leave many stations out of the loop. The disposition that will govern the widescale must-carry dilemma that will face both industries once digital is full blown will remain up to the FCC and the courts. "Broadcasters could be bitching and moaning about cable carriage for years," says one observer.

FCC Chairman Bill Kennard has his own view on the subject. "If the broadcast industry comes to the agency and says: 'We want not one, but two, channels on the cable basic tier,' my sensibilities as a lawyer tell me, 'Well, you've got to make the case for that.' And that is going to be a fairly difficult burden. If you're telling cable systems, including those that are capacity constrained, to give two six megahertz channels to every local broadcast signal, I have difficulty understanding how we can make that case in the Supreme Court, and we know the



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—FCC Commissioner
Michael Powell

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cable industry is going to take this all the way, as they always have with must carry."

Conclusion

The quid pro quo for the grant of digital spectrum to broadcasters was that their analog spectrum would be returned, once the transition was essentially complete. The government budget process is counting on that return in 2006, but only if digital penetration has reached 85%. This analysis has found no one who thinks that will happen. Most of those not friendly to broadcasting believe, perhaps cynically, that it will never happen.

One scenario has it going this way:

Not only is the analog spectrum to be returned in 2006, but that spectrum is to be auctioned in 2002, in anticipation of the return. The buyer, however, cannot claim the spectrum until digital penetration reaches 85%. It took color TV 22 years to reach 85% penetration. On that basis, the buyer would have to wait 16 years for his prize. So who would step up to the auction? Probably only today's digital broadcaster, who might buy his analog channel, say, for a dollar. In time, he could then convert that channel to digital and have two properties in the digital age.

What is certain is that there are more than 200

million analog sets out there now and the consumer electronics industry is selling over 20 million more each year. And they keep getting better and better. Digital set makers note that an analog tuner is one of the less expensive components of their new receivers, and they're prepared to keep them installed ad infinitum. And even if broadcasters go off the air in analog, the sets can be retrofitted.

In the short run (say, the 12 months beginning today), digital TV and HDTV may move at a pace disappointingly slow to many. "We're entering the beta year," says Blair Levin, who thinks most of the onerous interindustry problems—at least the technical ones—are on the verge of yielding. That's also the point of view of the NCTA's Decker Anstrom, who says: "If I were to put my finger at a time to really begin to watch this move, it would be Christmas 1999."

As Dick Wiley puts it: "Five years from now, we'll look back at this and say, 'Gee, it's too bad we had to go through all that but thank God we're where we are now. Let's face it, this is a revolution, and it's going to change video forever in this country, and all for the better. The mere fact that we've got some of these problems should not cause us to think that we aren't going to get there. Because we will.'"



Summing Up

The View from Joe Flaherty

The last stanzas go to Joe Flaherty, the remarkable CBS engineer and executive who made digital and HDTV happen against most of the odds and much of the competition. In a statement prepared for "The Dawn of Digital Television", he said:

"DTV and HDTV are a total replacement of America's TV carriage and delivery systems, and will affect every aspect of the broadcasting, cable and DTH satellite business. It is vital to understand that wide-screen, high definition is not just pretty pictures for today's small-screen TV sets. Rather, it is a wholly new digital platform that will support the larger and vastly improved displays in development for commercialization. HDTV is better than it looks! The display devices are the limiting quality factor. While improvements are being made by the month, as of now, no display has achieved the full quality potential of America's HDTV system.

"Subjectively, like many things, beauty is in the eye of the beholder, and some will prefer one DTV format to another, the objective quality of each notwithstanding. Nevertheless, full HDTV quality will rapidly improve

and will continue to widen the gap between it and all lesser formats.

"On Nov. 21, 1985, I delivered a lecture entitled '2001: A Broadcasting Odyssey,' in which I said in part:

" 'As we evaluate tomorrow's TV and HDTV and plan for its implementation, we must bear in mind that today's standard of service enjoyed by the viewer will not be his level of expectation tomorrow. Good enough is no longer perfect, and may become wholly unsatisfactory. Quality is a moving target, both in programs and in technology. Our judgments as to the future must not be based on today's performance, nor on minor improvements thereto.'"

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An Honor Roll for DTV

These are not the only heroes, sung and unsung, in the pioneering of digital television, but they come conspicuously to mind. Their ranks are being augmented daily by those putting the medium to work.

Stan Baron, NBC engineer who created the ATSC's standards documentation for both SDTV and HDTV.

Jon Blake, broadcast lawyer and prime mover in mobilizing the industry behind DTV.

Jim Carnes, Sarnoff Corp. futurist and visionary, member of the Grand Alliance.

Joel Chaseman, group broadcaster (Post-Newsweek) active in carrying the advanced TV banner to his colleagues in the industry.

Jules Cohen, veteran engineer who set the RF (radio frequency) criteria that the DTV system had to meet.

Joe Donahue, Thomson Washington representative who broke the deadlock standing in the way of formulating the Grand Alliance.

Irwin Dorros, Bellcore chief scientist who insisted on MPEG all the way.

Peter Fannon, whose Advanced Television Test Center (ATTC) proved the technology, fair and square.

Alex Felker, former aide to FCC Chairman Dennis Patrick, who gave the Wiley committee its policy framework.

Joe Flaherty, CBS's world-class engineer who joined the fight for HDTV in the 70's and has never given up. In the opinion of many the father of HDTV.

Bruce Franca, deputy chief of the FCC's Office of Engineering & Technology, who steered GTV's standard and table of assignments to completion.

Robert Graves, head of the Advanced Television Systems Committee, which brought the U.S. standards to earth and now is selling them around the world.

Dick Green, head of CableLabs and one of that medium's primary contributors to the DTV process.

Tom Gurley, ATTC's methodical test planner and director, now chairman of the HDTV Model Station technical committee.

Paul Hearty, head of Canada's Advanced Television Evaluation Laboratory, who conducted DTV viewing tests with the public.

Jerry Heller, GI executive who greenlighted development of an all-digital system.

Bob Hopkins, ATSC executive director who supervised the standards writing and crafted their adoption by the ITU and other international standards bodies.

Reed Hundt, controversial FCC chairman considered by broadcast insiders as much against as for the process, but who in the end brought it home.

Larry Irving, then chief aide to House Telecommunications Subcommittee Chairman Ed Markey, now head of the National Telecommunications and Information Administration, who rallied early congressional policy on advanced television issues.

Jim McKinney, veteran bureaucrat and engineer who excelled in both the public and private sector, who persuaded the industry to adopt the ATSC standard.

Bruce Miller, DTV operations leader at PBS and successor to McKinney as head of the HDTV Model Station Project.

Paul Misener, right hand to Dick Wiley through the advanced television process.

Masihiko (Mori) Morizono, Sony television chief who committed to make and sustain the first generation of HDTV production products.

Susan Ness, FCC commissioner who played a key role in policy development when the chips were down and mediated the so-called computer compromise.

Robert Niles, who anchored the ATTC technical committee to insure thorough and proper testing.

Woo Paik, General Instrument engineer who cracked the code to compression and designed the first all-digital HDTV transmission system.

Dennis Patrick, FCC chairman who activated the advanced television process and named Dick Wiley and Joe Flaherty to implement it.

Jerry Pearlman, president of Zenith, who championed HDTV and pioneered DTV simulcasting.

Jim Quello, FCC commissioner who saved the spectrum for digital television in the first place, and remained the broadcast medium's steadfast supporter.

Bob Rast, General Instrument's gift to the Grand Alliance, responsible for making the whole more than the sum of its parts.

Glenn Reitmeier, early MPEG enthusiast and advocate for full computer-friendly interoperability.

Charlie Rhodes, ATTC's hands-on chief scientist and backbone of the ATTC testing process.

Mark Richer, PBS technology executive who chaired the Systems Committee Working Party 2 that oversaw testing progress.

Bill Schreiber, MIT advanced television program leader, proponent of progressive scan and vocal critic of the HDTV developmental process.

David Siddall, legal assistant to Commissioner Susan Ness, who had strong staff influence on the FCC's policy formulations.

John Sie, an early voice in cable calling for a digital rather than an analog future.

Al Sikes, second FCC chairman on the watch, who encouraged a digital solution, discouraged enhanced television and declared: "Let's go for the gold"—HDTV.

Masao Sugimoto, NHK's technical chief who preceded even Flaherty in high-definition innovation.

Craig Tanner, then CableLabs advanced TV leader, now executive director of the ATSC, who is taking standards development to its next dimension.

Victor Tawil, mainstay of Association for Maximum Service Television engineering who helped bring order out of the chaos of channel assignments.

Margita White, president of MSTV, who took the policy reins for the broadcast industry in pursuing a digital and HDTV solution.

Dick E. Wiley, chairman of the FCC Advisory Committee on Advanced Television Service and the individual most responsible for shepherding digital television through the technological and political wilds.

Warren (Bud) Williamson, broadcaster and former chairman of MSTV who led the political fight in HDTV's crisis years.

The High Cost of Pioneering in DTV

Some stations are spending \$6 million just to pass the network signal; Sinclair's not spending anything at all

By Glen Dickson
Broadcasting & Cable

With over 40 stations scheduled to be on air with DTV this month, broadcasters are pleased with the progress they've made in migrating to digital television. But with the exception of a few aggressive DTV pioneers who are actively pursuing local DTV production, most stations are taking a wait-and-see attitude on doing anything more than passing



WMUR-TV Manchester, N.H., got a jump start on digital in 1995 when it moved into a renovated facility with a digital platform that cost \$8 million-\$9 million.

through their networks' DTV feed and upconverting their NTSC programming until they see significant penetration of consumer DTV receivers.

WCVB-HD Boston, for example, has no timetable for local HDTV production. The Hearst-Argyle station and ABC affiliate plans to pass through the network's 720P high-definition prime time programming, which should average about two movies a week, and simply upconvert its existing NTSC programming to 720P the rest of the time.

"We're going to eventually evolve to that," says Paul La Camera, the station's general manager. "Right now, we're just working to get the pass-through set up. We're very pleased to make the deadline."

La Camera says that so far WCVB-TV's digital conversion has gone "very smoothly." He's also happy with the early HDTV programming commit-

ments from ABC.

"The network, like us, sees the great importance of high definition in reclaiming the free over-the-air TV audience," says La Camera.

Early DTV stations have a reason to be cautious, as most have already spent several million dollars just to get on air with a digital signal [see chart at right]. The biggest cost for most is in either building a new broadcast tower or strengthening an old one.

"It's very individual, because of the complexity of this buildout," says Bob Turner, vice president of engineering for the A.H. Belo station group. "You have a big variable in towers. Some need a little work, some need a lot of work, and some need to be replaced, which can swing [tower] costs from \$500,000 up to \$3 million."

Tower costs are followed by the purchase of a transmitter (\$400,000 to over \$1 million, depending on power requirements) and antenna and accompanying transmission line (\$300,000 to \$500,000). At that point, many stations will have spent \$3 million to \$5 million even before buying a new digital studio-to-transmitter link (\$150,000 to \$200,000) to connect their master control facility to the transmitter site.

The next big-ticket item for stations is an ATSC-compliant encoder, which is used to compress both network and local programming to 19.4 Mb/s for local DTV broadcast. While there was preliminary discussion among broadcasters of a strict pass-through scenario under which local stations would simply retransmit pre-encoded network feeds, without having to buy an encoder, stations need an encoder to perform commercial insertion and broadcast local programming in digital. So most have bought encoders, to the tune of \$300,000 to \$500,000 for a system that can encode both HDTV and SDTV. The only exceptions are some PBS member stations that will simply pass through PBS's pre-encoded 19.4 Mb/s satellite feed in the early going.

To receive DTV network feeds, stations need an integrated receiver/decoder and a new satellite modem, which run around \$50,000 to \$60,000 for HDTV-capable equipment. That doesn't count any costs for new satellite dishes or modifications of the

satellite downlink infrastructure.

Stations who want to play back their own commercials in HDTV will need HD-capable tape decks (around \$90,000) and some basic HD routing (roughly \$60,000). They'll probably also want to buy an HD switcher (\$200,000 to \$400,000) and some monitors, which run \$6,000 to \$15,000 apiece. Automating their master control for their new DTV channel will cost another \$200,000 to \$350,000. That doesn't include digital audio encoding, test and measurement equipment and all the little "glue" pieces that hold a digital plant together. It also doesn't include the \$30,000 a month that high-powered UHF stations can spend on electricity.

A.H. Belo has been one of the most aggressive station groups in embracing digital, and is up and running with HDTV stations in Dallas, Houston and Seattle. Belo's Turner says that the basic DTV conversion to enable network pass-through and local origination at Belo's 17 stations will probably run from a low of \$6 million per station to a high of \$12 million in markets where Belo might need to build a new 2,000-foot tower.

"The basic hard-core stuff is coming in around \$6 million, and with the tower, running up to \$7.5," he says. "But that's strictly pass-through with commercial insertion and the ability to play back syndicated programming."

Ratcheting up to full-blown HDTV production for local news is a different story. "It wouldn't surprise me if the production part didn't cost \$15 million," says Turner. "That's not going to be incremental cost, that's replacement of existing equipment."

Stephen Flanagan, vice president of engineering for Post-Newsweek Stations, doesn't want to disclose what they've spent so far on DTV transmission and doesn't want to speculate on what local DTV production might cost. But he says that Post-Newsweek, which is scheduled to launch DTV stations in four markets in 1999, won't be spending much on studio infrastructure equipment until HDTV sets start selling.

"There's no sense doing too much until the TV sets are available," says Flanagan. "I think it's neat that there are a few folks out there who are pioneers and are putting signals on the air—but no one's watching."

Post-Newsweek has divided its capital spending on DTV at each station into five steps: getting a full-

power DTV signal on the air; playing commercials in the new digital format; playing syndicated programming in the new digital format; doing news in DTV; and shutting off NTSC, which Flanagan says could prove costly in terms of writedowns on obsolete equipment.

"We're [budgeting] each step individually, and we'll respond to each step as the market does and there's a business there," says Flanagan. For example, the playback of syndicated programming in digital could be as soon as two years away or as much as a decade away, he says.

Flanagan adds that each network's choice of digital format "is a real moving target" as well. While Post-Newsweek is currently planning to broadcast 1080I at its CBS and NBC affiliates and 720P at its ABC affiliates, Flanagan says "it would not surprise

HDTV Transmission Cost Estimates

Tower work	\$500,000-\$3 million (for new tall tower)
Antenna and transmission line	\$300,000-\$500,000
Transmitter	\$400,000-\$1.25 million (depending on power)
Studio-to-transmitter link	\$150,000-\$200,000
Upconverter	\$80,000-\$120,000
Router	\$60,000
Master control switcher	\$200,000-\$400,000
Satellite downlink (HD modem and IRD)	\$50,000-\$75,000
HD tape decks (for commercial insertion)	\$90,000-\$110,000 each, minimum of three
HD monitors	\$6,000-\$15,000 each, minimum of five
Encoder	\$200,000-\$500,000
Total estimated costs:	\$2.2—\$6.5 million <i>not counting various infrastructure equipment, test and measurement gear, automation systems, or any production equipment</i>

me if in two years people change in one direction or the other. ABC could change to 1080I or another network could go to 720P. At this early stage, no one's casting anything in concrete. I know we're not."

One station group that isn't casting anything digital in concrete is Sinclair Broadcast Group, which suffered big financial losses in October and has announced plans to sell some of its 56 owned television stations [BROADCASTING & CABLE, Oct. 12, 1998]. While Sinclair has a number of stations in the top 30 markets that are due to launch DTV in November 1999, the station group hasn't yet placed purchase orders for any DTV transmission equipment. For now, Sinclair will stick to simply planning and designing its DTV stations.

"We're waiting to see what kind of performance we get with the consumer-grade receivers that come into the market over the next 90 days," says Nat



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Ostroff, Sinclair vice president of new technology. "We're so close to having a public vote on digital TV, that for our shareholders, it's prudent to wait and see the public reaction to digital before we start spending serious capital."

Recent financial problems notwithstanding, Sinclair has always been critical of the 8-VSB modulation scheme used by the ATSC transmission system and its ability to be effectively received by consumer sets. To that end, Sinclair plans to buy its own cadre of consumer receivers and test them in markets that have multiple DTV stations, such as Philadelphia and Chicago. "We want to see whether the receivers are good enough to solve the multipath problem with the 8-VSB modulation scheme," says Ostroff.

Sinclair has also questioned the business case for HDTV and has instead talked about the potential benefits of multicasting with its stations' DTV spectrum. Not surprisingly, Ostroff is critical of the limited HDTV programming plans announced by CBS, ABC and NBC.

"They're disappointing and inadequate given the magnitude of the investment being asked," says Ostroff. "The network's performance in providing compelling programming for DTV is pathetic."

Ostroff thinks that digital set-top boxes, not new HDTV sets, will be the driver for early DTV programming. "You've got 300 million [analog] receivers out there," he says. "Are we just going to write them off?"

Belo's Turner is more sanguine about the quantity of early HDTV programming and its potential to drive set sales, citing not only the HDTV programming plans of ABC, NBC and CBS but also the HDTV plans of cable networks HBO and Discovery and start-up satellite provider Unity Motion. He says to put the DTV movement in context, one must recall color television's early days of one hour per week on one network.

"If you look at the overall universe out there, there's going to be an awful lot of programming material to drive this much earlier than we saw with color," says Turner. "Sure, I'd like to have HDTV 24 hours a day—I'm ready. We'd sell sets like crazy and the transition would happen in five years. The reality is, it costs a lot of money for the networks to transfer footage. But I think it will happen a lot quicker than people think."

DTV STATIONS LAUNCHING BY NOVEMBER 16, 1998

Market Rank	Market	Percentage of TV HHs	DTV Station*	DTV Channel	Analog Station	Analog Channel	Owner	Affiliate
1	New York	6.854%	WCBS-DT	56	WCBS-TV	2	CBS	CBS
2	Los Angeles	5.167%	KABC-DT	53	KABC-TV	7	ABC	ABC
2	Los Angeles	5.167%	KCOP-DT	66	KCOP	13	Chris Craft	UPN
2	Los Angeles	5.167%	KCBS-DT	60	KCBS-TV	2	CBS	CBS
2	Los Angeles	5.167%	KNBC-DT	36	KNBC-TV	4	NBC	NBC
2	Los Angeles	5.167%	KTLA-DT	31	KTLA	5	Tribune	WB
4	Philadelphia	2.684%	WPVI-DT	64	WPVI-TV	6	ABC	ABC
4	Philadelphia	2.684%	KYW-DT	26	KYW-TV	3	CBS	CBS
4	Philadelphia	2.684%	WTFX-DT	42	WTFX	29	Fox	Fox
4	Philadelphia	2.684%	WCAU-DT	67	WCAU	10	NBC	NBC
5	San Francisco	2.383%	KRON-DT	57	KRON-TV	4	Chronicle	NBC
5	San Francisco	2.383%	KPIX-DT	29	KPIX-TV	5	CBS	CBS
5	San Francisco	2.383%	KTVU-DT	56	KTVU-TV	2	Cox Enter.	Fox
5	San Francisco	2.383%	KGO-DT	24	KGO-TV	7	ABC	ABC
6	Boston	2.199%	WCVB-DT	20	WCVB-TV	5	Hearst-Argyle	ABC
6	Boston	2.199%	WHSN-DT	23	WHSN-TV	66	USA Bcst.	HSN
6	Boston	2.199%	WMUR-DT	59	WMUR-TV	9	Imes	ABC
7	Dallas	1.972%	WFAA-DT	9	WFAA-TV	8	A.H. Belo	ABC
7	Dallas	1.972%	KDFW-DT	35	KDFW-TV	4	Fox	Fox
7	Dallas	1.972%	KXAS-DT	41	KXAS-TV	5	NBC	NBC
8	Washington DC	1.968%	WJLA-DT	39	WJLA-TV	7	Allbritton	ABC
8	Washington DC	1.968%	WUSA-DT	41	WUSA	9	Gannett Bcst.	CBS
8	Washington DC	1.968%	WRC-DT	38	WRC-TV	4	NBC	NBC
8	Washington DC	1.968%	WETA-DT	27	WETA-TV	26	Public	PBS
9	Detroit	1.858%	WXYZ-DT	41	WXYZ-TV	7	Scripps-Howard	ABC
9	Detroit	1.858%	WJBK-DT	58	WJBK-TV	2	Fox	Fox
10	Atlanta	1.733%	WSB-DT	39	WSB-TV	2	Cox	ABC
10	Atlanta	1.733%	WXIA-DT	10	WXIA-TV	11	Gannett	NBC
11	Houston	1.676%	KHOU-DT	31	KHOU-TV	11	A.H. Belo	CBS
12	Seattle	1.558%	KOMO-DT	38	KOMO-TV	4	Fisher	ABC
12	Seattle	1.558%	KCTS-DT	41	KCTS-TV	9	Public	PBS
12	Seattle	1.558%	KING-DT	48	KING-TV	5	A.H. Belo	NBC
23	Portland	1%	KOPB-DT	27	KOPB-TV	10	Public	PBS
25	Indianapolis	.951%	WTHR-DT	46	WTHR	13	Dispatch Bcst.	NBC
28	Charlotte	.865%	WBTB-DT	23	WBTB	3	Jefferson-Pilot	CBS
29	Raleigh	.839%	WRAL-DT	53	WRAL-TV	5	Capitol Bcst. Co.	CBS
31	Milwaukee	.814%	WMVS-DT	8	WMVS	10	Public	PBS
32	Cincinnati	.811%	WLWT-DT	35	WLWT	5	Gannett Bcst.	NBC
33	Kansas City	.087%	KCPT-DT	18	KCPT-TV	19	Public	PBS
34	Columbus	.752%	WBNS-DT	21	WBNS-TV	10	Dispatch	CBS
46	Harrisburg	.596%	WITF-DT	36	WITF-TV	33	Public	PBS
71	Honolulu	.384%	KITV-DT	40	KITV-TV	4	Hearst-Argyle	ABC
84	Madison	.318%	WKOW-DT	27	WKOW-TV	26	Shockley Comm.	ABC
89	Jackson	.303%	WMPN-DT	20	WMPN-TV	29	Public	PBS

*Although several stations identify their digital station call letters with -HD (WRAL-HD, WCBS-HD) for promotional identification, the official FCC-mandated digital station tag following the call letters is -DT.

The Early Adopters Are Getting a Jump on HDTV

Retailers are bullish about customer response even before the programs arrive

By Jill Bilzi
TWICE

Customers are "blown away" with the look and sound of high definition television, retailers report, and — with the help of a lot of explaining and demonstrating from salespeople — some are buying HDTV-ready sets despite initially high price tags. Sticker shock is out there, but good, patient salespeople and a dynamic demonstration of both standard definition TV (SDTV) and

At Dow Stereo, salespeople give customers a three-tiered demonstration, showcasing SDTV first, using cable signals, then DirecTV going through an HDTV set and finally an HDTV program on an HDTV-ready set. The salesperson then goes back to regular cable channels to show customers that they can enjoy high-resolution SDTV while they're waiting for broadcasters to deliver HDTV signals.

"We show our customers that they don't have to wait for the future to enjoy this technology," Campbell said. "When they see regular cable TV converted to SDTV, they want it now."

Retailers who have held HDTV demonstrations, seminars and in-store roundtables say there is no question that the public is "hugely impressed" by the ultra-clear images and sharp sound the format delivers. High price tags on HDTV sets have given some customers pause, but others are snapping up the new technology as eagerly as audiophiles, videophiles and early adopters.

At Ultimate Electronics, the Colorado-based regional chain that also sold one of the first HDTV-ready sets in the nation, President David Workman said that the "wow factor" is a key element in early HDTV set sales. "People see it and people want it," Workman said of HDTV. "We are fortunate to have such a stunning product that really moves consumers to make that purchase." Ultimate held demonstrations for 4,000 consumers during the weekend of July 31, with the help of Panasonic's sales and marketing executives, as well as factory engineers, discussing digital broadcasting issues and what consumers should expect when purchasing television sets over the next 10 years.

Workman added that the sales training that his employees have had has been vital in educating consumers about digital TV on the sales floor. He called it "a time-consuming process" but thinks it is critical during the HDTV transition period.

Another "Customers-are-absolutely-blown-away-by-HDTV" testimonial was given by Mark Esposito, marketing director for Home Theater Store in Houston and Dallas, the first Texas retail-



Dow Stereo/Video customer Allen Farwell of San Diego takes delivery of one of the first Panasonic HDTVs sold at retail this summer.

HDTV can help customers get over the cost of the new technology, according to retailers

"We have focused on what consumers can see now," said Tom Campbell, spokesperson for Dow Stereo/Video in San Diego, which sold one of the first HDTV-ready sets in the nation. "That's our selling position and it has worked tremendously."

"We have sold dozens and dozens of HDTV sets," Campbell said. "Our customers are buying them now to see SDTV without any boxes or conversion, and they're also investing for the future when broadcasters start their HDTV programming."

er to commercially sell an HDTV set to a consumer. "The key is to show them the picture and let them hear the sound, then deliver a clear, concise explanation of all the options out there."

To help ease people into HDTV's initial steep cost, salespeople at Home Theater Store are encouraging customers who are already planning to invest over \$3,000 in a big-screen TV to step up to Mitsubishi's model 5803, an HDTV-ready set that sells for \$3,999. Salespeople explain to customers that they can return to purchase the \$3,000 set-top converter box when HDTV broadcasts start hitting the airwaves. "We're going to sell hundreds of big-screen TVs from now until Super Bowl anyway," Esposito says. "So, if people were looking for a quality 50-inch in the [Mitsubishi Diamond] series, they very often step up to a \$3,999 set when they learn about HDTV."

Esposito and his staff have been at work doing what most higher-end retailers have spent this summer and fall doing — holding demos and seminars on SDTV, HDTV and the coming revolution in digital broadcasting. Many of the demos are sponsored by TV manufacturers, while others are set up independently by retailers using engineers from local TV stations. "I think the educational end of HDTV is probably the most important aspect of the whole changeover," says Craig Abplanalp, owner of two Definitive Audio stores in Seattle and Bellevue, Wash. "Our customers reacted very positively to our demos, but they also had a lot of questions that had to be answered."

Abplanalp said the classic early adopters were the ones who purchased his first HDTV sets, many of whom attended Definitive Audio's live HDTV broadcast uplink with Unity Motion earlier this year. He said other customers were more concerned about price, even though the retailer's clientele is upscale and Definitive Audio sells between eight and 10 data-grade front projection TV sets a month at \$10,000 each. "We have a lot of customers who are concerned about the price, but we also have a lot of customers who don't care," Abplanalp said. "I think we've talked people out of purchases, but then we've gained their trust and respect."

In general, he said, customers have been able to understand the concept of the new digital TV system after they attend a seminar. "I think Mitsubishi did the best job explaining the difference between HDTV and SDTV," Abplanalp said. "Now, the issue of standards has a lot of people confused." To clear up the complex issue of broadcasting standards in the new format, Defini-



Panasonic Television Division's assistant GM Nate Apfelbaum demonstrates the company's HDTV-compatible widescreen projection TV to consumers this summer at Ultimate Electronics' SoundTrack store in Denver.



During the HDTV demonstration at Home Theater Store in Houston this summer Mitsubishi executives demonstrated their 16:9 73 inch HDTV projection TV, model 73-803. Pictured with the set are (left to right) Jim Landrum, account executive, Mitsubishi; Mihir Mody, CEO, Home Theater Store; with Matt Pugel, regional VP; Max Wasinger, VP sales & marketing; and Aki Yamamoto, product manager, all from Mitsubishi.

itive Audio will sponsor, in February 1999, an informational in-store party that features demos of four different standards, each one in a separate room. Visitors will be able to see the difference in vertical display resolution between 480p, 720p, 1080i and higher. Abplanalp has already sent direct mail to his entire customer base announcing the event. "It won't be a selling event," he said. "It's a catered party. We're trying to answer questions, deal with issues and get people comfortable with HDTV in general."

At Dow Stereo, the owner is spending

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THE FIRST CLOSED-CAPTIONED NETWORK BROADCAST

1984

THE FIRST STEREO TV BROADCAST

1990

THE FIRST DESCRIPTIVE VIDEO BROADCAST



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\$100,000 to rewire existing stores to showcase HDTV signals. Campbell reports that Dow Stereo has also taken the unusual step of applying to the FCC for a test license so the retailer can create a Dow station on UHF to broadcast HDTV signals.

For national big-box retailers, the issue is how to retrofit and redesign stores in order to accommodate the new, larger format HDTV sets. Best Buy, for example, has created Concept IV, a new retail strategy developed with HDTV in mind. The chain believes the format will increase sales of all digital technology products, especially HDTV. The strategy is already being used in the company's newest store, in Framingham, Mass. "We believe the future is going to be HDTV," said Michael London, senior VP merchandising at Best Buy and a key figure in the development of the Concept IV strategy. "We will be able to demonstrate HDTV much more efficiently with our new retail format."

To that end, Best Buy moved its commodity-priced TVs (9-inch to 27-inch) and VCRs (priced at \$100 to \$150) to a new, smaller "quick serve" area. The retailer took away square footage from the 27-inch and smaller TVs and used it to create a larger home theater/big-screen TV area, which is now located adjacent to the audio department. The new floor plan showcases higher-ticket projection TVs and 30- to 35-inch big-screen TVs, and will, ultimately, be home to Best Buy's selection of HDTV sets.

The redesigned, larger home theater area also features a 17-foot video display wall at the back of the store, ideal for showcasing the crisp, clear images that HDTV provides.

Getting customers comfortable with the new technology is a theme echoed by several other retailers, including Esposito in Texas. Home Theater Store has already held an advance showing of Mitsubishi's giant 73-inch 16 x 9 widescreen HDTV set, which, Esposito said, "whet the appetite of hundreds of Houstonians" who attended the event. Now, the retailer is making sure that people do not avoid HDTV because they assume it is too confusing and too



"We believe the future is going to be HDTV. We will be able to demonstrate HDTV much more efficiently with our new retail format."

— Michael London, Best Buy

far in the future. Esposito has purchased 12 billboards throughout Houston and full-page ads in newspapers touting the sheer pleasure of watching and listening to HDTV. The billboards feature such taglines as: "HDTV: Immaculate Reception" and "The Idiot Box Is Now a Genius." Home Theater Store also sent 30,000 direct mail pieces to potential customers inviting them to an Oct. 29 in-store event that showcased a live HDTV broadcast on KHOU, a CBS affiliate in Houston, of John Glenn's space shuttle launch.

"We're not taking a back seat on this. We're embracing it fully so our customers will too," Esposito said. "We didn't want to put [HDTV] behind a velvet rope like something at the World's Fair. We wanted to show people that the future is now." ■

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PHILIPS

Consumer electronics manufactures take different routes to DTV

By Greg Tarr

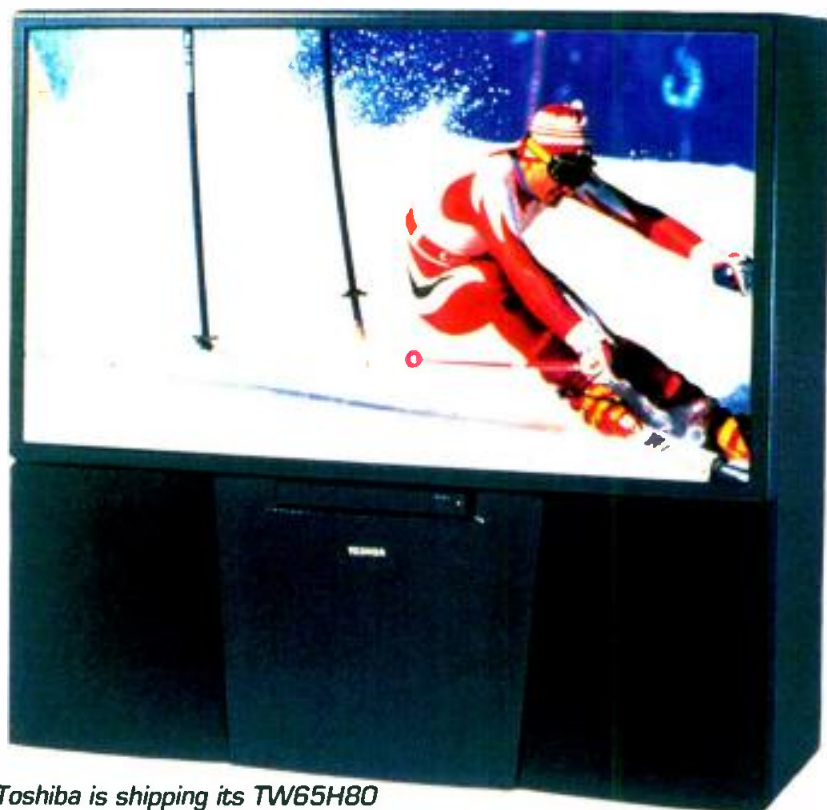
TWICE

As broadcasters begin to put the first digital signals on the air, some consumer electronics manufacturers are still scrambling to bring high-definition TV receivers to the marketplace.

Why? Chalk it up to on-going debates over standards setting and programmers' concerns with copy protection and conditional access security. As for the lack of true interactive data features in Generation 1—let's just say it's another example of computer industry vaporware. We have been assured that DTV datacasting will get here someday, but exactly when is still anybody's guess.

In the hope of getting at least the digital interface connection (expected to be IEEE-1394)

Faroudja is currently offering two DTV-ready rear projection TVs including this 48" widescreen unit which displays 1080i HDTV signals supplied by an external decoder.



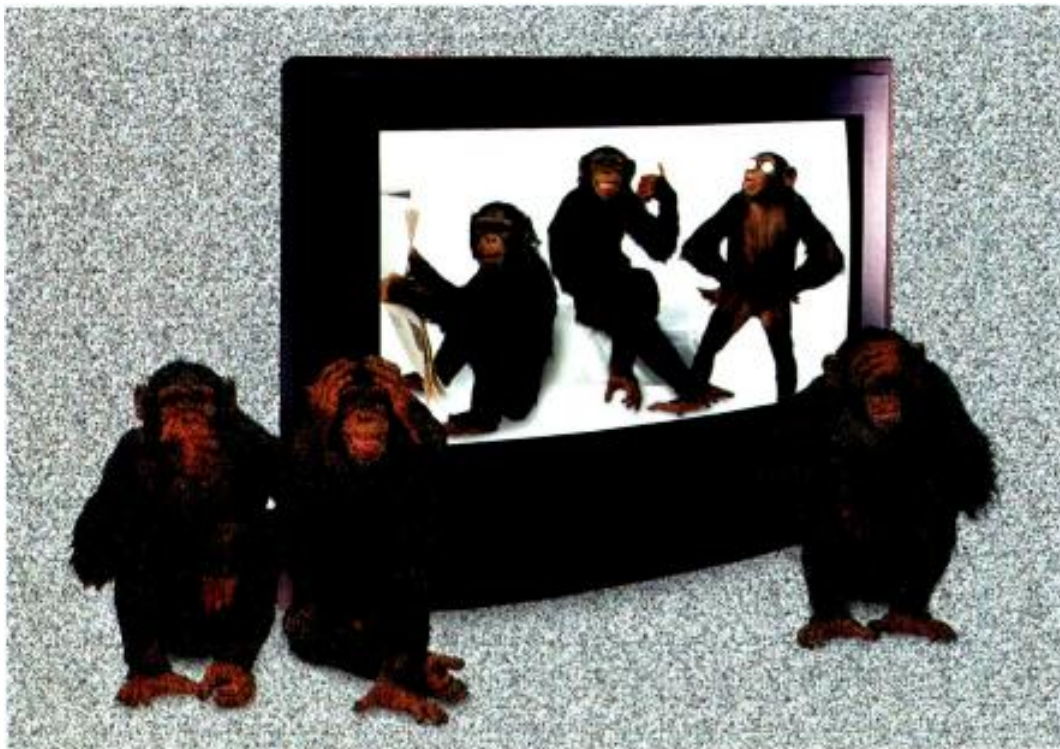
Toshiba is shipping its TW65H80 DTV-ready rear-projection TV which will display 1080i signals from an external decoder as well as 480p images from a new DVD video player.

included in their products, some manufacturers have left their plans open until the last minute while awaiting a late industry consensus. But the cold truth is that few of these products will be able to connect in the digital domain with future cable boxes and digital VCRs. Meanwhile, the delays have kept some manufacturers from diving into large-scale production this year.

By all appearances, the digital television buzz swirling across the country for most of the year will develop into little more than a call for consumers to visit their neighborhood electronics stores this Christmas season to see a high-definition TV set. Only a handful of set makers will actually have products ready to sell by Christmas, and most markets of the country won't have demonstration models until early next year.

Still, most manufacturers and retailers aren't

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reserving springboard space from the highest window ledges. Due to the high price and lack of coast-to-coast over-the-air digital broadcasts, many CE industry veterans never expected heavy sales volume for the first digital sets. Instead, the game plan has long been to use

HDTV as a lure to retail showrooms, where Christmas shoppers can view the new technology and then, after a dose of sticker shock, opt for the better value offered by current large-screen analog TV equipment.

The strategy is already working. In spite of

ALL SETS FOR HIGH DEFINITION

Whether a POP, rear-screen CRT projector or front projection system, the first HDTV sets will all be several thousand dollars higher than most of today's comparably sized NTSC products and virtually all will be followed by more complete products in the next 12 to 24 months. But for those with the will and the money, the first HDTV will include the following products (charts include listings for HDTV-capable equipment only. HDTV-ready displays will require an optional set-top tuner/converter box to receive DTV broadcasts.):

Brand	Display Model	Screen Type	Full-HDTV Display Size	On-Board Line Capability	Number of NTSC Channels	DTV Set-Top Tuners	Interface	Available	Price
Ampro	5200	3-chip DLP Front PTV	Variable	720p 1080i	Yes	0	RGB H&V-sync	Now	\$69,995
Ampro	HD-4600	"9" CRT Front PTV	Variable	720p 1080i	Yes	0	RGB H&V-sync	Now	\$29,995
Ampro	HD-3600	"8" CRT Front PTV	Variable	720p 1080i	Yes	0	RGB H&V-sync	Now	\$22,995
Ampro	HD-2600	"7" CRT Front PTV	Variable	720p 1080i	Yes	0	RGB H&V-sync	Now	\$14,995
Faroudja	RP-4800	CRT Rear PTV	"48W"-16.9"	720p 1080i	Yes	0	VGA D15	Now	\$15,500
Faroudja	RP-5800	CRT Rear PTV	"58"-16.9"	720p 1080i	Yes	0	VGA D15	Sept. 1998	\$35,000
Hitachi	60SDX888	CRT Rear PTV	"60W"-16.9"	1080i	Yes	2	Component (Y-Pb-Pr)	Oct. 1998	\$4,299
Hitachi	36SDX888	Direct View	"36"-4.3"	1080i	Yes	2	Component (Y-Pb-Pr)	Oct. 1998	\$2,799
Mitsubishi	VS-50803	CRT Rear PTV	"50"-4.3"	1080i	Yes	2	Proprietary RGB H&V-sync	Sept. 1998	\$4,299
Mitsubishi	VS-60803	CRT Rear PTV	"60"-4.3"	1080i	Yes	2	Proprietary RGB H&V-sync	Sept. 1998	\$5,399
Mitsubishi	TS-55813	CRT Rear PTV	"55"-4.3"	1080i	Yes	2	Proprietary RGB H&V-sync	Nov. 1998	\$4,299
Mitsubishi	WS-73903	CRT Rear PTV	"73W"-16.9"	1080i	Yes	2	Proprietary RGB H&V-sync	Oct. 1998	\$9,999
Mitsubishi	VS-70803	CRT Rear PTV	"70"-4.3"	1080i	Yes	2	Proprietary RGB H&V-sync	Oct. 1998	\$6,499
Mitsubishi	VS-80803	CRT Rear PTV	"80"-4.3"	1080i	Yes	2	Proprietary RGB H&V-sync	Nov. 1998	\$9,999
Mitsubishi	WS-65903	CRT Rear PTV	"65W"-16.9"	1080i	Yes	2	Proprietary RGB H&V-sync	Nov. 1998	\$6,499
Panasonic	CT-36DV60	Direct View	"36"-4.3"	1080i	No	1	Component (Y-Pb-Pr)	Sept. 1998	\$3,199.95
Panasonic	PT-56WFX90	CRT Rear PTV	"56W"-16.9"	1080i	No	2	Component (Y-Pb-Pr)	Now	\$5,999.95
Pioneer	PDP-501MX	Plasma Panel	"50W"-16.9"	720p	Yes	0	Component (Y-Pb-Pr)	Sept. 1998	\$25,000
Pioneer Elite	PRO-700HD	CRT Rear PTV	"64W"	1080i	Yes	2	Expansion Slot Connection For SH-D07	Nov. 1998	Expected to be \$7,500
Runco	DTV-1000	CRT Front PTV	Variable	720p 1080i	No	0	RGB-BNC	Now	\$48,000
Runco	DTV-852	CRT Front PTV	Variable	720p 1080i	Yes	0	RGB-BNC, Component Video	Now	\$14,995
Runco	IDP-950	CRT Front PTV	Variable	720p 1080i	No	0	RGB-BNC, Component Video	Now	\$19,995 w/doubler pkg.
Runco	Ultra IDP-980	CRT Front PTV	Variable	720p 1080i	No	0	RGB-BNC, Component Video	Now	\$22,995
Runco	DTV-991	CRT Front PTV	Variable	720p 1080i	No	0	RGB-BNC, Component Video	Now	\$24,995
Runco	Cinewide 5800	CRT Rear PTV	"58W"-16.9"	1080i	Yes	2	RGB-BNC, Component Video	Sept. 1998	\$10,995
Sony	VPH-D50HTU	CRT Front PTV	Variable	720p 1080i	Yes	0	RGB H&V-sync, Component (Y-Pb-Pr)	Oct. 1998	\$13,990
Toshiba	TW65H80	CRT Rear PTV	"65W"-16.9"	1080i	Yes	2	Component (Y-Pb-Pr)	Sept. 1998	\$5,999
Toshiba	TP61H95	CRT Rear PTV	"61"-4.3"	1080i	Yes	2	Component (Y-Pb-Pr)	Sept. 1998	\$4,999
Toshiba	TP71H95	CRT Rear PTV	"71"-4.3"	1080i	Yes	2	Component (Y-Pb-Pr)	Sept. 1998	\$6,999
Unity Motion	UHD-3200	Multi-scan Direct View	"32W"-16.9"	720p 1080i	Yes	0	Component (Y-Pb-Pr)	Oct. 1998	\$6,995
Vidikron	Vision One	CRT Front PTV	Variable	720p 1080i	No	0	RGB-BNC	Now	\$49,995
Vidikron	Vision Two	CRT Front PTV	Variable	720p 1080i	No	0	RGB-BNC	Now	\$29,995
Vidikron	VPF40HDX	CRT Front PTV	Variable	720p 1080i	No	0	RGB-BNC	Now	\$15,995
Vidikron	VPF50HDX	CRT Front PTV	Variable	720p 1080i	No	0	RGB-BNC	Now	\$19,995
Vidikron	Image Two	CRT Front PTV	Variable	1080i	No	0	RGB-BNC	Now	\$9,995
Vidikron	Stratos	DMD Front PTV	Variable	720p 1080i	No	0	RGB-BNC	Now	\$59,995
Vidikron	Epoch D-300/351	LCD Front PTV	Variable	1080i	No	0	Component (Y-Pb-Pr)	Now	\$6,995
Zenith	Pro 900	CRT Front PTV	Variable	720p 1080i	No	0	RGB H&V-sync	Now	\$12,600

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Pioneer



The SharpVision TU-DTV1000 set-top DTV decoder will receive and decode all 18 ATSC formats and will include an expansion port to add on a digital interface in the future.



Mitsubishi's HD-1080 set-top decoder will power the company's seven-model DTV-ready rear-projection TV line, but its proprietary connection means it will not be compatible with any other TV maker's digital-ready display monitors.

the media hype surrounding the launch of DTV broadcasting this year, the Consumer Electronics Manufacturers Association has reported record sales for most analog color televisions with screen sizes of 30 inches and larger.

For those that will insist on having the latest and greatest, the omission of the few aforementioned items won't spoil all the fun. In fact, the electronics and cable industries have agreed to an interim connection solution using component video (Y-Pb-Pr) jacks to link digital cable boxes with digital TVs or set-top DTV decoders. Plus, roof-top antennas and even satellite hookups should be available in some areas to capture

DTV signals off air.

In order to bring products to market for the start of digital broadcasting, electronics manufacturers have elected to take several different routes to digital television development. About a dozen brands have elected to deliver true HDTVs with ATSC digital and NTSC analog tuners built in. These sets, called DTV or HDTV receivers, will eliminate much of the fuss and muss associated with setting up a system of separate components.

To get around this obstacle, some manufacturers have elected to offer a component approach to DTV adoption. Consumers can buy an HDTV-

DTV SET-TOP RECEIVERS/CONVERTERS

Brand	DTV Format Model	Output	Scan Conversion	Includes NTSC DTV Display	Includes NTSC Receiver?	Built-In AC-3 Line Doubler?	Decoder	Available	Suggested Retail Price
Mitsubishi	HD-1080 3 Formats	All 18 Table 480P>960i, 720P>1080i 1080i>1080i	NTSC>960i, 480i>960i, H&V-Sync	Proprietary RGB	No	No (2-channel)	Yes	November	\$3,000
Panasonic	TU-DST50 3 Formats	All 18 Table All Formats>NTSC All Formats In Native Form 720P>480P 1080i>480P 480i>480P	Switchable: (Y-Pb-Pr)	Component Video	Yes	No	No	Oct. 1998	\$1,699.95
Pioneer Elite	SH-D07	1080i All Formats>480i All Formats>480P All Formats>1080i	Switchable: for Pro-700HD	Expansion Slot Connection	No	No	Yes	Nov. 1998	\$2,500
RCA	DTC100 3 Formats DSS, NTSC HQ, via DirecTV	All 18 Table	HDTV>1080i SDTV>480i	RGB via VGA	Yes	No	Yes	Q1 1999	\$700
SharpVision	TU-DTV1000	1080i All Formats>480i All Formats>480P All Formats>1080i	Switchable: (Y-Pb-Pr) RGB H&V-Sync	Component Video	No	No	Yes	Oct. 1998	TBA
Sony	DTR-HD1	480i 480P 1080i	Switchable: 480i 480P 1080i (Y-Pb-Pr)	Component Video Yes	(2-channel)	No	TBA	Dec. 1998	\$1,599
Toshiba	DST-3000	480P 1080i	Switchable: 480P 1080i (Y-Pb-Pr)	Component Video	TBA	TBA	TBA	First Half 1999	TBA
Unity Motion	Set-Top IRO 720P/60 1080i/30	480P/60 fps 1080i>1080i	480P>480P 729P>720P (Y-Pb-Pr) RGB H&V-Sync	Component Video	No	No	Yes	Sept. 1998	\$2,495
Zenith	IQADTV1W	1080i	All>1080i	RGB H&V-Sync	No	Yes	Yes	4Q 1998	TBA



Panasonic PT-56WXF90 HDTV-ready rear-projection TV has been unofficially recognized as one of the first HDTV products on the market. But the 56" widescreen unit requires an external decoder (which is just now reaching the market) to present DTV images.

ready monitor and separate set-top tuner/decoder to receive these broadcasts. Then, as the technology advances, they can swap the set-top box and hold on to the pricey display monitor. One manufacturer has also included an expansion port that will connect with some future adapter to enable the addition of a digital interface.

Because the DTV standard allows for over 18 different picture formats, electronics manufacturers have a wide range of choices to use as the primary display formats their products will be

capable of presenting on screen. As stipulated by CEMA, to be a "DTV" product, a set must be able to receive all 18 formats and display them to the highest capability of the monitor display. These displays will be split into two basic flavors: standard-definition TVs (SDTV) and high-definition TVs (HDTV). Due to the initial high prices and the desire to create the maximum possible impact at the outset, virtually all of the first DTV sets planned for market over the next year will be HDTVs or HDTV-ready systems.

As defined by CEMA guidelines, a HDTV set must:

- Display a DTV picture with a vertical display resolution of 720p or 1080i or better.
- Display a widescreen picture.
- Reproduce Dolby Digital surround sound in 5.1 discrete channels.

Standard-definition televisions must display all DTV formats at resolution levels lower than HDTV (typically 480i or 480p) and be able to produce some form of "usable audio." No aspect ratio was specified.

Most HDTV equipment to be made available this year will present HDTV in 1080i form. When such a set receives the 720p HDTV broadcasts from an ABC or Fox network affiliate, it will typically up-convert the signal from the 720 progressive format to 1080 interlace. In some sets, the 480i, 480p and NTSC formats are line doubled and up-converted to fit a 1080i display, although the end result is noticeably inferior to 1080i in its native or unconverted form.

One exception to the 720p rule will be a handful of XGA-quality flat-screen plasma display panels (PDPs), which do not require raster-scanning techniques to present an image and therefore offer all images in progressive-scan form. Some of these pricey flat panel displays promise enough resolution to produce true 720p when connected to the appropriate set-top tuner/decoder. ■

Film: The Winner and Still Champion in HDTV

The more things change, the more they stay the same in production, too

By Michael Stroud

Broadcasting & Cable

For years, the quest for high definition has been an effort to match the quality of 35mm film. Now that television has reached that pinnacle, film may be more popular than ever.

The reason: television's digital transmission system can take greater advantage of film than ever before. And because network dramas are coming in at \$1.5 million an hour, all those long years of expertise built up in Hollywood's studios are in ever greater demand.

But like any champion, it faces a challenger. Now that HDTV has arrived, the prospect of so-called "direct capture"—shooting in a television format rather than transferring from film—is attracting new adherents. Fox, for example, tried its luck with the first entertainment episode to be shown on CBS in HDTV: the Nov. 18 episode of *Chicago Hope*, ordinarily shot in film.

Marker Karhadian, president of production equipment rental company Plus Eight Video, estimates he's done about 150 rentals of HDTV camcorders to local producers in the five months he's been in the business, and predicts that three episodic TV shows will be shot in the format by next fall.

Many in Hollywood, however, remain skeptical about HDTV's potential, whether through film or direct capture. Asked at last July's annual press tour how seriously he took the technology, one top network executive wondered aloud how seriously a technology deserved to be taken that commanded "an audience of 24" in the entertainment community.

And broadcasting in HDTV doesn't necessarily mean shooting in it. ABC's first HDTV efforts focus on broadcasting movies that have been transferred from analog formats—less cumbersome than renting expensive HDTV cameras to shoot their own. Such transfers are estimated to add \$10,000-\$50,000 to the cost of one episode, but that price will go down as the networks begin dealing in greater 35mm-to-HDTV volume.

For a show like *Chicago Hope*, with its documentary style, the electronic format may have an advantage. The viewer will detect a difference



between the crisp, clean lines of HDTV and the warmer, softer tones of film, says Jim Hart, the Fox-based producer: "It's the difference between painting in oils and in water colors."

It's just that kind of distinction, of course, that has kept Hollywood primarily in the film camp for years, along with a generations-long preference for film's flexibility in editing and special effects.

Saying he'd rather lead than follow, Pierre DeLespinois, executive producer of Talisman Crest's *The Secret Adventures of Jules Verne*, a \$50 million series being shot entirely in HDTV for the Canadian Broadcasting Corp. and international distribution, explains that the economics of the new medium attracted him. He estimates film would have cost millions more, and says: "I could not afford it."

According to Joe Flaherty, CBS's senior vice president for technology, the lion's share of prime time programming continues to be shot in 35mm film—81% thus far in 1998. Videotape came in second with 10% and super-16 just behind that with 9%. Those three categories accounted for 177 hours, occupied by 197 programs.

"I think HDTV as a whole will strengthen film for years to come," Flaherty says. "It is high definition, to begin with. It has all the equipment in place. It has all those artisans, and in many ways they're still the best. Film is going to be hard to dislodge."

'Chicago Hope', ordinarily shot on film, was captured direct to HDTV.

Fast Forward Progress of Broadcast Equipment Suppliers

Current slow sales expected to bounce back once broadcasters find their business model

By Ken Kerschbaumer

Digital Television

It was only a few years ago that discussions at National Association of Broadcasters conventions concerning HDTV production and transmission equipment would have focused on the incredible costs. "HDTV World," a demonstration area set up at one NAB convention in Las Vegas in the early part of the decade might well have been called, "If You Think Your Facility Can Afford

less than it was two years ago. There was no market to justify developing new technology because the HDTV market was very small. So with this transition there's been a reason to bring the prices down on the technology."

"All the equipment is becoming a reality," says Hugo Gaggioni, Sony Business and Professional Group director of DTV Technology. "It wasn't too long ago that people were saying all that could be done in the way of HDTV programming would be telecine transfers. But now they're talking about football coverage and things like that."

Challenges Ahead

The challenge faced by broadcasters and manufacturers alike in the move to DTV and HDTV transmission is a daunting one. Those who create and transmit DTV and HDTV programming are being asked to invest in equipment that isn't guaranteed to show a return on investment. And manufacturers are being asked to make investments in research and development of equipment that might never actually be purchased in great quantities.

Adding to the difficulties is that many of the technical issues are still being ironed out by industry engineering groups. But probably the biggest problem is that DTV and HDTV will require new business models on the part of broadcasters, and that uncertainty is resulting in less-than-stellar sales for many equipment manufacturers today.

"Our industry is in a serious slump," says Ed Grebow, president and CEO of Chyron. "No one who services the broadcast industry is doing well. There's a tremendous hesitancy to come into digital equipment until it's clear as to what the future holds."

Tektronix President Tim Thorsteinson adds: "Our customer [base] is undergoing a business change and the industry is in a difficult period. If you look at the net profit generated by the move to DTV and HDTV, it's not attractive."

Because there is no specific cause for the slump, it's difficult for manufacturers to figure out how best to improve sales. For example, some industry professionals wonder if the ATSC Table 3, offering 18 different DTV and HDTV formats, would be better if it had offered only one choice, 1080i for



Panasonic is currently developing OVCPRO100

This Equipment, You're Crazy World."

But a lot has happened since then. This past NAB convention offered an improved generation of HDTV equipment that, while still expensive, was much more reasonable. Most importantly, manufacturers agree that by the next those attendees looking to purchase equipment for HDTV and DTV transmission and production will find a number of options and that competition between manufacturers in product areas will begin to drive prices down on all gear.

All in all, the pieces are beginning to fall into place.

David Wiswell, business manager, advanced television, Panasonic Broadcast & Digital Systems Co., says: "I think the equipment is cheaper than people really thought it would be. There was a lot of posturing a year or two ago on price differences, but I think the cost of HDTV equipment is much

example. This would allow broadcasters and manufacturers to move toward one common display goal, cutting research and development costs for manufacturers while allowing broadcasters to map out capital expenditures with greater precision.

Panasonic's Wiswell, however, says the flexibility of the table is something not to be taken lightly. "A table of different image formats means that manufacturers can build equipment for different business scenarios," he says. "The idea is that we aren't boxing ourselves into a technology corner and that's the blessing of DTV. It seems confusing, but it's only confusing because it's something new and we aren't used to it. The reality is it's going to offer a lot more flexibility and business opportunities than we had in the past."

In The Meantime...

So how exactly will the industry battle out of the sales slump many manufacturers face? Some manufacturers speculate that there could be some companies that lose the battle and fall by the wayside, while others see increased consolidation as manufacturers go beyond simply working together to leverage strengths by actually joining ranks.

Thorsteinson adds that for some manufacturers the solution to the current lack of sales is to look to develop additional products. "Many suppliers right now are choosing to increase engineering expenditures to be successful. But we see the key as getting the cost structure in line because you can't really grow out of this. It's going to be a tough couple of years."

Bob McAlpine, Pesa Switching Systems senior vice president, sales and marketing, sees increased synergies between manufacturers as one way to attract new sales. "Manufacturers are going to have to work together because we can't put the resources together individually," he explains. "Adding to the difficulties is that software engineers are at a premium right now."

But even working together can be tricky business. Mike D'Amore, president of Philips Digital Video Systems, thinks one of the major reasons for the current state of confusion in the U.S. is the fear of antitrust lawsuits: "As manufacturers we've become so paranoid about talking to one another because of collusion and antitrust. We need a greater freedom to work together."

With a table of 18 different formats broadcasters face greater choices and challenges when it comes to choosing a business model and then outfitting their facility to meet that model. D'Amore says there are three things a facility must do to best prepare for future demands. First, convert any current analog facilities to digital, then make sure they are

switchable between 16:9 and 4:3, and finally, realize that bandwidth has value.

Also helping ease the conversion, according to D'Amore, is understanding that DTV and HDTV are two different things. "First, don't confuse DTV and HDTV," he says. "You always have to start with the premise: Will DTV happen? Yes. Once stations understand that then they have to look at the bits they're transmitting and realize that every one saved is important."

D'Amore's point of bits is one of the recurring themes in discussions with manufacturers: almost everyone agrees that the broadcasters' new rev-



The SGI Workstation Lineup

At the low end is the O2, a workstation that checks in for less than \$6,000 and provides an integrated digital media and 3-D animation device that can also play back JPEG movies, work with live sets or 3-D topological texture maps. The next step up is Octane, used more for on-air realtime playback of multiple channels of graphics and/or video. At the top of the line is Onyx2, SGI's "ultimate graphics playback device. It provides more functionality plus full-scene anti-aliasing.

enue generator in the digital age won't be programming as much as it will be the digital bandwidth. With the use of efficient digital technologies broadcasters can maximize compression, thereby maximizing the amount of bandwidth available to offer additional, potentially revenue-generating services.

Grebrow says the important thing is for every broadcaster to begin the conversion from analog to digital, regardless of when they are mandated by the FCC. "This is not something you can do overnight," he explains. "It's important that you get experience in a small way before you rush in and place orders. We're encouraging people to try some HD production, to try some digital equipment."

Resolution Differences

The majority of attention in the trade and business press has focused on the networks and how they expect to implement HDTV technologies—most notably 1080i and 720P. However, manufacturers say that 480p equipment is a serious option

for mid- and small-market stations. Wiswell and D'Amore both point to the validity of 480p as an important standard in DTV. It eases the burden on a facility's infrastructure while bringing viewers an improved picture over today's analog interlace offering, albeit not as breathtaking as 720p or 1080i.

Wiswell explains that Panasonic sees 480p as a natural for electronic news demands. "If you look over the history of formats, stations in the larger markets adopted Betacam SP, while in the smaller markets they adopted it later or went with something

offered to consumers can upconvert the broadcast signal to amazing HDTV-like pictures or native 480p. It's not inconceivable that you could send a high-quality standard-definition signal and let the receiver do a fancy upconversion. Some stations are looking to do the upconversion at the station and then send out that signal, but that penalizes the station as far as channel capacity. By letting the set do the work broadcasters could eat their cake and have it to. That's something not too many people have thought about, but it's possible."

One of the top technical challenges all broadcasters face in implementing DTV broadcasts begins at exactly that—the top. With new transmission requirements come new demands on a station's broadcast tower. And tower manufacturers are already seeing broadcasters slip into some difficult situations.

"On the tower side broadcasters are discovering that the right solution isn't immediately available and that the changes are much more difficult than they thought," says Ray Carnovale of Larcen LeBlanc. "If they want to make the existing tower work for both analog and digital it's going to be more expensive if they don't want to make compromises. The ramp-up so far has been slower than we expected."

Carnovale says he's surprised at the paucity of tower orders to date, adding that the longer stations delay investigating how they're going to transmit their DTV signal and how that impacts tower construction and retrofitting, the stickier the situation is going to get. "Sooner or later there's going to be a capacity crunch and you're going to see stations missing their on-air dates."

Shattering Myths

Even though DTV and HDTV broadcasts are entering only their third week of official existence, there already have been a number of articles in the consumer and trade press pointing out the shortcomings and reasons why the new technology is an expensive failure. The sets are too expensive, there isn't any programming, the pictures can't be received in every part of town—the list, at this point, seems long. So are these early reviews any reason to doubt the potential for DTV? Gaggioni says he can name other technologies that received rough treatment early on.

Wiswell is also bullish on the future of DTV, if for no other reason than that it's here today. "The biggest myth was that DTV would never happen, and that's slowly fading away," he says. "Now we can get down to the serious business of figuring out how to implement it and stop arguing about whether it's going to happen or not." ■



(Above) The Videonics PowerScript Studio 4000 is available in two models.

(Right) The Chyron Infinit character generator remains the standard by which all other character generators are judged in many circles, particularly the live news or sports production environment.



else. Those stations that want to adopt something that distinguishes them from the competition will look seriously at 480p because manufacturers can make 480p equipment and systems that are priced to fit into the right business scenario for them."

Another advantage Wiswell sees 480p offering broadcasters is that, with careful planning, a station can get its facility ready without significantly changing its implementation of a 601 infrastructure. "As they're laying out an SDI infrastructure they should make sure they can handle 360 Mbps so they can handle 480p 4:2:0 as well," he explains.

Gaggioni offers one interesting alternative for broadcasters to consider. "Some of the sets being

The PC Is Still Missing in the PC/TV

Convergence is still circling offshore, but there's no landing in sight

By Richard Tedesco

Broadcasting & Cable

It wasn't that long ago—at the 1997 NAB Show—when computer powers Microsoft, Intel and Compaq spun out their vision of a progressive-scan future—with consumers eagerly buying TV-ready PCs to see it.

The reality in the marketplace has been dramatically different, with no major computer makers rushing to produce Cadillac PCs equipped with tuner cards, anticipating that interactive age of enhanced data broadcasts. Dell Computer CEO/founder Michael Dell recently observed that pairing the two technologies results in “a really bad personal computer and a not-so-good TV.”

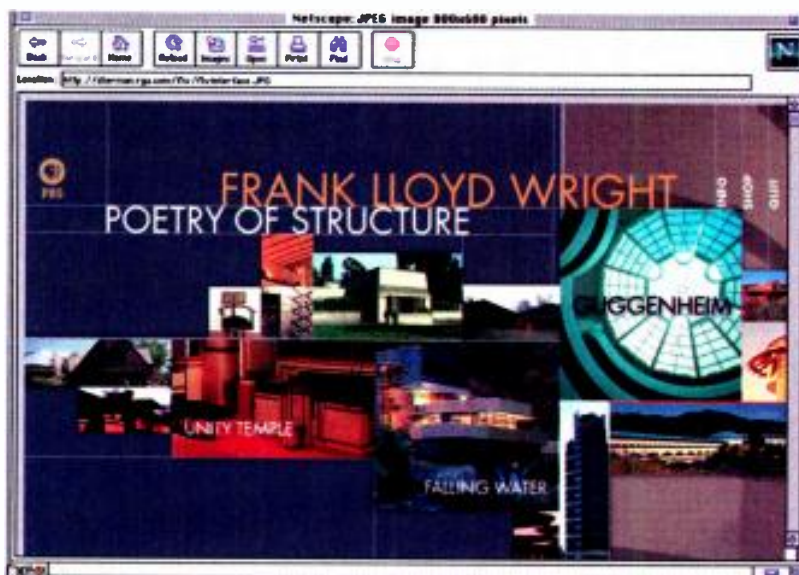
Dell is still officially considering pre-installing tuner cards. But Compaq quit building tuner cards into some high-end machines several months ago after a brief run. Now it offers the cards at less than \$200 strictly as an option, according to Trey Smith, vice president in Compaq's advanced products group, who terms it a “strategic shift” after its own consumer research indicated a limited market for TV-on-PC. “People want enhanced functionality with their viewing experience, but they don't necessarily want their computer in their living room,” says Smith.

Compaq is simply broadening its digital sights, according to Smith, who points to a recent deal with Time Warner's Road Runner as a basis for a digital strategy to explore the more obvious, if less glitzy, means of utilizing bandwidth to deliver diverse content. And the idea of casual TV viewing via PC appears to be in disrepute. “You can go well beyond putting a tuner in a PC for the person who wants to watch the World Series while he's checking his e-mail or whatever,” Smith says.

So Compaq will continue to explore the possibilities, as the computer industry's pitch for progressive scan grows more appealing among broadcasters. That has nothing to do with any expectation of TV/PCs proliferating, and Intel had already broken ranks with its computer com-

patriots late last year when it declared its intention to adapt its datacasting to any format. And Ron Whittier, Intel's senior vice president in charge of its content group, declared the NAB proposal “a smashing failure.”

It certainly appears to be in high tech limbo, notwithstanding Microsoft's estimate that it is putting three million to four million video-enabled Windows 98 machines that come with WebTV for



Windows installed. That's a basic format that includes an electronic program guide, but the PC user still has to supply the tuner cards, which Steve Guggenheimer expects to dip below \$100 in cost in time for the Christmas selling season.

Microsoft and Compaq are both optimistic that eventual establishment of PC receiver standards by the Advanced Television Enhancements Forum in which both companies participate will accelerate the advent of enhanced digital broadcasts.

Jim Berger, a Washington attorney with Dow, Lohnes & Albertson, who's been involved in the standards effort, agrees it's crucial to content development. “If you get a foundation standard here, the guys in the garage know what to write the software to,” says Berger. “It lays the foundation for combining TV and HTML.” (HTML is the language in which most Web content is created.)

Berger believes that the immediate prospects

PBS was planning to broadcast enhanced versions of a Frank Lloyd Wright documentary with a digital interactive PC element.

for data-enhanced broadcasts are bright among broadcasters opting to use the 480P transmission standard and put the excess bandwidth to use for ancillary interactive services that could also enhance their revenues. "The bottom line is, you have a lot of bits," says Berger. "Bits are bucks."

The question is just how stations address the possibility of generating revenues from ancillary datacast services that supplement programming with information and transactional functions.

Intel and Microsoft are actively exploring the technology. Intel and PBS are poised for a data-casting trial built around a Frank Lloyd Wright documentary this month, while Microsoft and a

host of programmers are set to start monthly datacast events for WebTV for Windows and its WebTV parent.

Those are the brightest points on the horizon for the very gradual dawning of data-casting as TV signals' migration proceeds slowly to a very limited universe of PCs.

Neither Intel Corp. nor NBC have ever estimated the universe of users for their nascent Intericast datacast service, which had its biggest moment at its debut in the glow of the 1996 Summer Olympics. Intericast content was also developed by NBC

to complement *The Tonight Show* and NFL games, when the network was still carrying games last season. MTV and The Weather Channel have also developed content for the Intericast format, which provides Pentium users wired with the requisite tuner data transmitted through the vertical blanking interval while they view TV programming on PC screens.

Intel's PBS test will be its first effort to combine video and data digitized and integrated for PC. Whittier calls it "an enhanced capability in the digital domain where video and data can be combined in ways that are more aggressive."

Ken Burns's recent Lewis and Clark documentary series on PBS had some rich content online with the prospect of more as it contemplates digitizing the entire series.

This month, six PBS stations were to carry enhanced versions of Burns's Frank Lloyd Wright documentary, with an expanded beta phase of datacasting slated to begin in January or February. The digital interactive PC/TV experience will present virtual walking tours of

Wright's architectural handiwork, including "walk-throughs" of New York's Guggenheim Museum. "The viewers will be able to go into rich, graphically-intense environments that we could never deliver on the Web," says Cindy Johanson, vice president of PBS Online.

The entire video of a Mike Wallace interview with Wright will also be accessible to a limited number of viewers equipped with the high-end PCs and tuners needed to see it. PBS is proceeding with its six-station alpha phase with enhanced treatment of a children's series during the 1999 first quarter. It's all intended to demonstrate "how digital TV takes that step toward real convergence," as Johanson puts it.

Meanwhile, Microsoft is moving ahead with development of content for its WebTV for Windows format, which is starting to accommodate an increasing amount of content being developed for WebTV. Some stations of Tribune Broadcasting, the first station group to work with Microsoft, are developing content for both formats, and WGN-TV Chicago produced interactive content for a Chicago Cubs telecast in WebTV for Windows. Other Cubs telecasts will likely get the interactive treatment next season as part of a potpourri of content to be tailored to the format, according to Steve Guggenheimer, Microsoft group product manager for digital TV. Awards telecasts, similar to NBC's recent Emmy Webcast, are likely candidates.

While this isn't yet truly digital, it prefigures the kind of content that will be produced in a fully digital environment. In Microsoft's current approach, disparate data is transmitted through the VBI and then reassembled with the video on the PC screen.

"A lot of what's happening in analog will translate to digital," says Guggenheimer, adding, "Once it gets integrated and easier to use, ultimately, it will become an integral part of all PCs." He declines to estimate the percentage of PCs currently equipped with the required tuner cards.

Microsoft sees the current phase as an experimental period it expects will fuel projects with E! Entertainment, The Weather Channel, The Discovery Channel and MTV, and possibly Sinclair Broadcasting stations, among others, according to Guggenheimer, who says the onus is on programmers to produce for the format. "Interactive programming isn't going to be one of those things where you just pick it up and get it right," he says. "If you're going to make mistakes, you want to do that when you don't have a lot of eyeballs."

Judging from the present rate of penetration for TV-ready PCs, Microsoft, Intel and company have plenty of time left for trial and error. ■

"Pairing the two technologies results in a really bad personal computer and a not-so-good TV."

—Dell Computer's Michael Dell

with a satellite dish and terrestrial broadcast antenna, and the appropriate receiver, for an initial installation charge of \$199 and box rental of \$6 a month. The business approach is similar to one advanced by Preston Padden when he was directing Rupert Murdoch's now-defunct ASkyB direct satellite system, which planned to bring in a number of local signals by satellite and was negotiating with telephone companies to handle the marketing and billing.

Hartenstein has pioneered in setting up new relationships with the consumer electronics manufacturers and retailers, whom he believes broadcasters have historically ignored because "they had a lock on the spectrum and they expected the world to come to them." Indeed, he was named last month by CEMA as the first non-manufacturer on its board.

Satellite's advantage over both terrestrial broadcast and cable is two-fold: its signal reaches the entire country in one bound, and its capacity far exceeds either of its present rivals. DirecTV, for example, now has 1,000 gigabits per second of capacity that it can divvy up, digitally, any way it chooses. "A channel is not a channel," Hartenstein emphasizes, when it comes to digital. As has been explained previously, operators can assign just as much digital capacity as necessary for a particular program. Cable, on the other hand, has been made "bandwidth-starved" by the advent of digital, in Hartenstein's opinion, having to rebuild its plant if it is to accommodate broadcasters' signals as well as its own. "Cable Inc. collectively hopes that digital will never catch on," he says.

Direct satellites now have about 8% penetration of the U.S. TV market, with 4.1 million consumers on the DirecTV-USSB platform, 2.2 million on PrimeStar and 1.5 million on EchoStar. The last two have a primarily rural orientation, while DirecTV-USSB is primarily urban.

Strategic Considerations

There are more ways than one to skin this cat," Hartenstein says of the race to digital and HDTV. He believes the medium was launched in a sweeping torrent of words that oversimplified the problem. "I've walked around the development labs where they are doing this thing and it is unbelievably complex. But it's going to be everything anyone dreamed of."

One way or another, digital will do more than change the pictures on television. It will change the balance of power.

For broadcasters, who have suffered erosion in

market share for decades, digital offers a chance to recapture audience through quality programming and multiplexing. Because of the quality and robustness—no ghosts, no snow—of the digital signal, it also offers hope of recapturing viewers who ordered cable primarily because of deficiencies in the broadcast picture. As described previously, the digital picture is either perfect or nonexistent; the ability to receive does not fade away, it falls off the cliff.

Moreover, digital will improve both standard definition and high-definition broadcasts, allowing broadcasters to enjoy at least the same kind of picture enhancement that characterizes DBS. If that can take place through a roof-top antenna, broadcasters can begin to reconnect with an audience they had long conceded to cable.

The broadcasters who "get it," in Hartenstein's view, are opting to go faster rather than slower in implementing digital. They see there's a market niche to be captured, he says, "and if they sit around and whine about cable carrying them, they're going to lose."

For cable, which came into being precisely to extend and enhance broadcast signals, digital is a mixed bag. Once it teamed up with fixed satellites to foster delivery of more and more signals nationally, choice became cable's *raison d'être*. Digital compression became the potential vehicle for John Malone's vaunted 500 channels—but not 500 HDTV channels. Moreover, as long as must carry is either the law of the land or a guiding principle of telecommunications policy, the expansion of broadcast spectrum becomes a spectre to cable.

Nevertheless, cable, too, has to go with the digital program. Decker Anstrom notes that "We can't afford in the marketplace to ever have a picture that is not as good as one of our competitors. And I think this is what drives this whole enterprise. If your neighbor has a picture that's better in terms of resolution quality than you have, you're going to think about getting television from this distributor. So we can't just use digital for more television. We have to use it for better television, too."

But just as cable looks forward to digital, it



"Future general managers will have two budgets to worry about—their normal operating budget and the budget for bits."

—NAB's Chuck Sherman

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looks over its shoulder at analog. "There are 250 million analog sets out there that people like, that work, that deliver pictures that people are happy with," Anstrom say. "The notion of disenfranchising 250 million sets gives us pause."

Emphasizing that analog will be around ad infinitum, if not forever, he refers to "the little secret we all know: that broadcasters are never going to give back their analog spectrum." Anstrom doesn't seem to mind; he notes that a lot of cable networks will continue to be in the analog format. It explains his and cable's digital approach: not to be the first by whom the new is tried, nor yet the last to leave the old behind. "We have a world in which the average cable customer is going to receive anywhere from 60 to 80 channels in analog format for the rest of our professional lifetimes. That's a reality. And anything we do to start changing that, I think, is going to create unholy hell and will have the effect of stopping this whole digital transition."

Anstrom takes leave of a reporter with the cable mantra: "Don't mistake our being methodical for a lack of enthusiasm."

For consumers, digital offers almost the ultimate in a home viewing experience. Over 20 million homes now have large-screen sets that cost, on average, \$3,000. That is seen as dramatic evidence of pent-up demand for what the consumer electronics industry will deliver next.

For broadcasters, the big question is whether or not to multiplex—or, indeed, whether or not to go high definition. Most will do both, to a greater or lesser extent. But multiplexing also offers the possibility of introducing pay TV into the broadcast spectrum. For example, networks and their affiliates might offer one NFL football game on Sunday for free, but offer three other games simultaneously for a fee of, say, \$10, which might be split with the league. The set-top box connection—in tandem with cable's or otherwise—would make possible the collection of such fees.

Present law specifies that if broadcasters do charge they must, in turn, pay a fee to the government. One who has observed the process closely decries that policy as a brake on innovation. "Broadcasters get the licenses for free. And the FCC must give them flexibility. But if the broadcasters use the flexibility to make money, other than through advertising, they have to pay a tax. The irony is that if broadcasters merely do the old stuff, just exactly what they've been doing, they don't pay a fee. But if they innovate and are successful and can actually generate more revenue, they get taxed on it. All economists will tell you, don't tax innovation. If you want people to exper-

iment and try things new, don't tax it before you even know what it is. Cable, of course, wants the tax, because cable doesn't want broadcasting to succeed."

Former Senator Larry Pressler advanced a variation on the taxation idea. He suggested that, after a period of time, a fee be placed on the analog spectrum—to tax the old and encourage the new.

There have been suggestions that broadcasters in a community could band together their multiplex operations to compete with cable. Few give credence to that idea. But many are sanguine about the possibilities of using multiplex to expand existing broadcast operations—for example, for offering an all-local-news channel, or a local sports channel, or breaking up the evening newscast into simultaneous news, sports and weathercasts. If they don't, the argument goes, cable will.

Ready, SETS, Go

The transition to digital is only the beginning in the vision of Gary Shapiro, the CEMA president who contributed the man on the moon analogy to the beginning of this article. "What we call HDTV today will in 50 years be laughable. This is just a leap before we take the next leap."

Taking a less quantum view, Shapiro says that "10 to 15 years from now our children will look back on current television the way we look at turntables—as historic anomalies. If they turn the channel and it's not HDTV they'll skip it. All the debates over format and cable will only be of historic interest. We are inevitably hurtling toward HDTV."

What about analog? It will coexist with digital as black and white and color coexist now, in Shapiro's opinion. "There is always a market demand for lower-priced product—we're still selling one million b&w sets every year."

As for digital sets, he says the initial public reaction and interest are so strong that there's no hesitancy by set manufacturers to enter the fray—



"What we call HDTV today will in 50 years be laughable. This is just a leap before we take the next step."

—CEMA's Gary Shapiro

The experts agree...
the best image requires the best technology



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	Original Frame Rate	Original Frame Size	Aspect Ratio	Frame Rate	Frame Size	Progressive
1	1080	1920	16:9	23.97/24.0Hz	Progressive	
2	1080	1920	16:9	29.97/30.0Hz	Progressive	
3	1080	1920	16:9	29.97/30.0Hz	Interlace	
4	720	1280	16:9	23.97/24.0Hz	Progressive	
5	720	1280	16:9	29.97/30.0Hz	Progressive	
6	720	1280	16:9	59.94/60.0Hz	Progressive	
7	480	704/720	4:3	23.97/24.0Hz	Progressive	
8	480	704/720	16:9	23.97/24.0Hz	Progressive	
9	480	704/720	4:3	29.97/30.0Hz	Progressive	
10	480	704/720	16:9	29.97/30.0Hz	Progressive	
11	480	704/720	4:3	59.94/60.0Hz	Progressive	
12	480	704/720	16:9	59.94/60.0Hz	Progressive	
13	480	704/720	4:3	29.97/30.0Hz	Interlace	
14	480	704/720	16:9	29.97/30.0Hz	Interlace	
15	480	640	4:3	23.97/24.0Hz	Interlace	
16	480	640	4:3	29.97/30.0Hz	Interlace	
17	480	640	4:3	59.94/60.0Hz	Interlace	
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The winners circle

Flashbulbs flashed, tape rolled and the 1998 class of the BROADCASTING & CABLE Hall of Fame was inducted at a dinner at the Marriott Marquis in New York last Monday. Jane Pauley and Deborah Norville compared notes, and heads turned as actress Michelle Pfeiffer entered on the arm of husband and honoree David Kelley. In his acceptance speech, Kelley combined a high compliment to his fellow honorees with a caution to the industry about responsibility, a theme that seemed to resonate with the crowd. The bulk of Kelley's remarks are reprinted below, followed by a reprise of the night in words and images.

"When I was 10 or 11 years old I used to race ponies in a sulky around the track. I had a little Shetland pony that I could maneuver very well, and in the first race, coming into the home stretch, I was in first, and one by one all of the other ponies proceeded to gallop past me. And I wasn't concerned, because it was a trotting race. They would be disqualified, and I would be the winner. And they all went across the finish line before I did, and I waited for the judges to rule accordingly. And I finished last.

"They must have figured, 'Oh, it's a children's race, and we're not going to disqualify anybody.' And I thought to myself: I followed all the rules and I finished last. And I went back to the stable and my father was there, and he looked at me and he said: 'You finished last, but you followed all the rules.' Like changing the sentence around was supposed



Back row: B&C editor at large Don West, honorees David Kelley and Joseph Collins, master of ceremonies Sam Donaldson, B&C publisher Peggy Conlon. **First row:** Honorees Mike Wallace, Jane Pauley, Agnes Nixon and Casey Kasem.

to make it better for me.

"The next race it went exactly the same. I was ahead coming down the stretch. One by one they all galloped past me. I finished last. The third race the same. The fourth race, once again I came into the home stretch. I had a little bit of a bigger lead and I could hear it. Here they come, galloping. It was like that Chuck Wagon commercial. They're going



David Kelley and Michelle Pfeiffer

right by me. And I decided, well, I'm going to gallop too. And I touched my pony and she began to gallop and I crossed the line first.

"I got my ribbon and I went back to the stable and

my father was there and he looked at me and he said, 'Are you pleased with that victory?' And I said, 'yes.' And he said: 'Don't you realize it all became about winning? And in your quest to win, you compromised the very sport you so fell in love with?'

That was a truth that he proffered my way. And I remember saying 'Dad, two weeks from now no one's going to remember how I won my blue ribbon.' And that was my truth. His was cloaked in a little more integrity, but both of them I still remember today—because in this industry, it's still dominated by a lot of people who want to get to that finish line first, no matter how you get there.

"Just this morning I picked up the [newspaper] and read an article about the guests on *Jerry Springer*. In recent months they'd stopped fighting, and the ratings had

gone down. And in the last couple of weeks the guests—either upset at the decline in ratings or maybe that the



Deborah Norville and Jane Pauley

Republicans lost five seats, I'm not sure which—they began to beat each other up again. And I couldn't escape the fact that they pass out the blue ribbons in this industry sometimes to places where they shouldn't go. It makes it particularly gratifying for me to be here tonight to be with people who are not only being honored but who achieved their success with rather a distinguished trot. I thank them for allowing me to be in their company."

Photos by Tom Schnitz / Black Star

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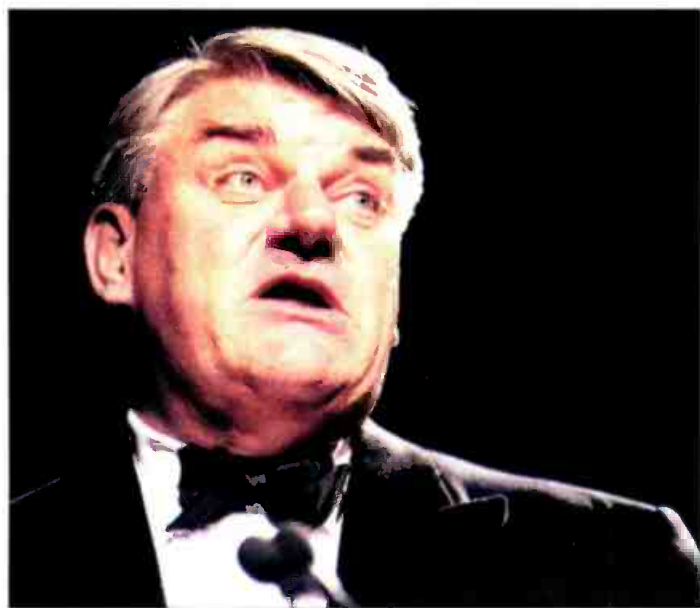
THE Martin Short SHOW

PREMIERES FALL '99!

TV producer **David Kelley** ▶ said a friend had asked him on the plane that morning why he was receiving this award. "I said, 'Basically it's what's on television.' And she looked back and said, 'They're holding you responsible.' And I thought about it—and, well, maybe they are." Then, having looked through the list of honorees, he says he realized that "these people were being honored for the right reasons, which you can't always assume in this business."



◀ Radio countdown king and voiceover artist **Casey Kasem** thanked a host of industry executives, including a mentor in the early days of Detroit disk jockeying who was "kind enough and tactful enough to wait six months to tell me what I was doing wrong so it wouldn't crush my enthusiasm." He called himself "The person trying to live up to the positive image which I hope I've projected over the air all these years."



▲ Time Warner Cable Chairman **Joseph Collins** was described by Sam Donaldson as "Like one of those headends he superintends. ... He's tall, strong and pulls in a lot of programming." Collins thanked his colleagues at Time Warner Cable, whom he said had "done all the work and had all the good ideas," and its chairman, Gerald Levin, for "creating such a nurturing atmosphere over the years."



▲ **Mike Wallace**, referring to Jane Pauley as an "adolescent," said he had to "wait around 80 years" to get into the Hall of Fame. When he started at WOOD(AM) Grand Rapids, Mich., in July 1939, he said, B&C was "our Bible. We'd all fight for the magazine because that's where the better jobs were. We paid so much attention to the magazine back then, and we were all acolytes of [co-founder] Sol Taishoff. ... It's extraordinary that all of us have had the opportunity to share down the years in this wonderful voyage of discovery called radio, television and even cable."



▲ **Dateline** co-anchor **Jane Pauley** said her profile described her as being plucked from her job at WMAQ-TV Chicago for *Today*. "Rescued might have been a better word," she said. One local critic there, she said, compared her to a hood ornament. "Three years later I'm slipping into the chair most recently occupied by Barbara Walters." But she pointed out that she was only the second woman, after Walters, not to be referred to as a "Today Show girl." She said that "standing at the entrance to the Hall of Fame when, I hope, most of my career is still ahead of me makes me feel a little like the old days, when my motto might have been, 'Better too soon than not at all.'"



◀ Master of ceremonies Sam Donaldson said that soap opera diva **Agnes Nixon** had written more words in her career than he had spoken in his. Nixon thanked all the people who had contributed to her success, "from the top tier of ABC [executives] to the youngest intern." Nixon said that *60 Minutes* creator Don Hewitt had summed up the soap opera when he was describing the reason for success in any entertainment. "It's something every child knows: Tell me a story. And that's what we do."



▲ Accepting for the late **Terry Lee**, son Jeffrey Lee said he was certain his Storer executive father would have received the award with the observation that "I was just one of many who tried to ensure that broadcasting was responsive to the communities we serve." Observing that many people would say Terry Lee "did that very well," he added that Lee helped to build the model for TV station operation that is still used today.



◀ Fellow CBS word-smith **Charles Osgood** accepted the award for America's chronicler of the road less traveled, the late **Charles Kuralt**. Osgood said that Kuralt taught him that although the business keeps changing, with different bosses to report to, the principal constituency remains "all the people whose lives we touch

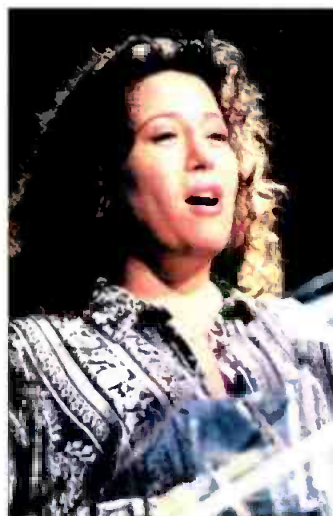
every day. ... The main thing that Charles bore in mind was that his broadcasting was of the people and for the people. And it's a lesson that none of us should ever forget."



▲ Family friend **Joanne Young** said that **Lawrence Welk**, who left home at 21 with no money, speaking only German, and determined to have a career in music, had "lived out the American dream." She pointed out that his long-running series was still airing on PBS (in its 12th season) and had raised \$20 million for the service.



▲ The posthumous award to pioneering broadcast journalist **Fred Friendly** was accepted by his wife, Ruth, and son, Andy. "If Fred were here," said Ruth, "he would no doubt be shaking his finger at all of you, reminding you that we have the most free press in the world, but not to forget that freedom demands a responsible press as well." He would close his remarks, she said, "with words you have probably heard. That journalists, in reporting tough stories, should remember that their job is not to make up anybody's mind, but to open minds."



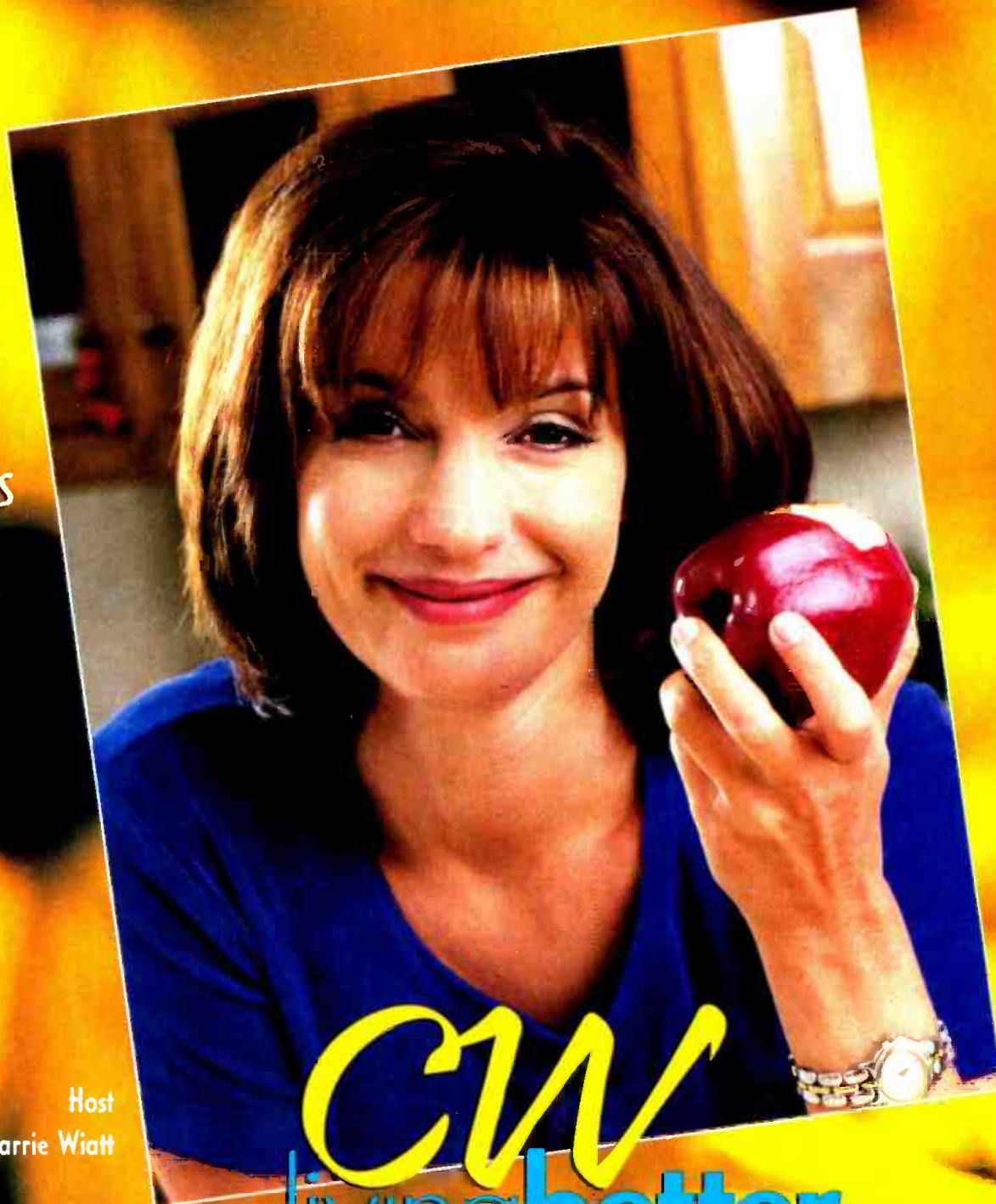
◀ **Mallory Tarcher** said that her late mother, children's show host **Shari Lewis**, "wasn't just my mom, even though I'm an only child. Somehow Shari managed to raise three generations of kids without ever aging." She closed her remarks with a tape of her mother, in her last taping, singing "Hello, Good-bye," which became a poignant backdrop to a salute to all the posthumous honorees.

—John Eggerton

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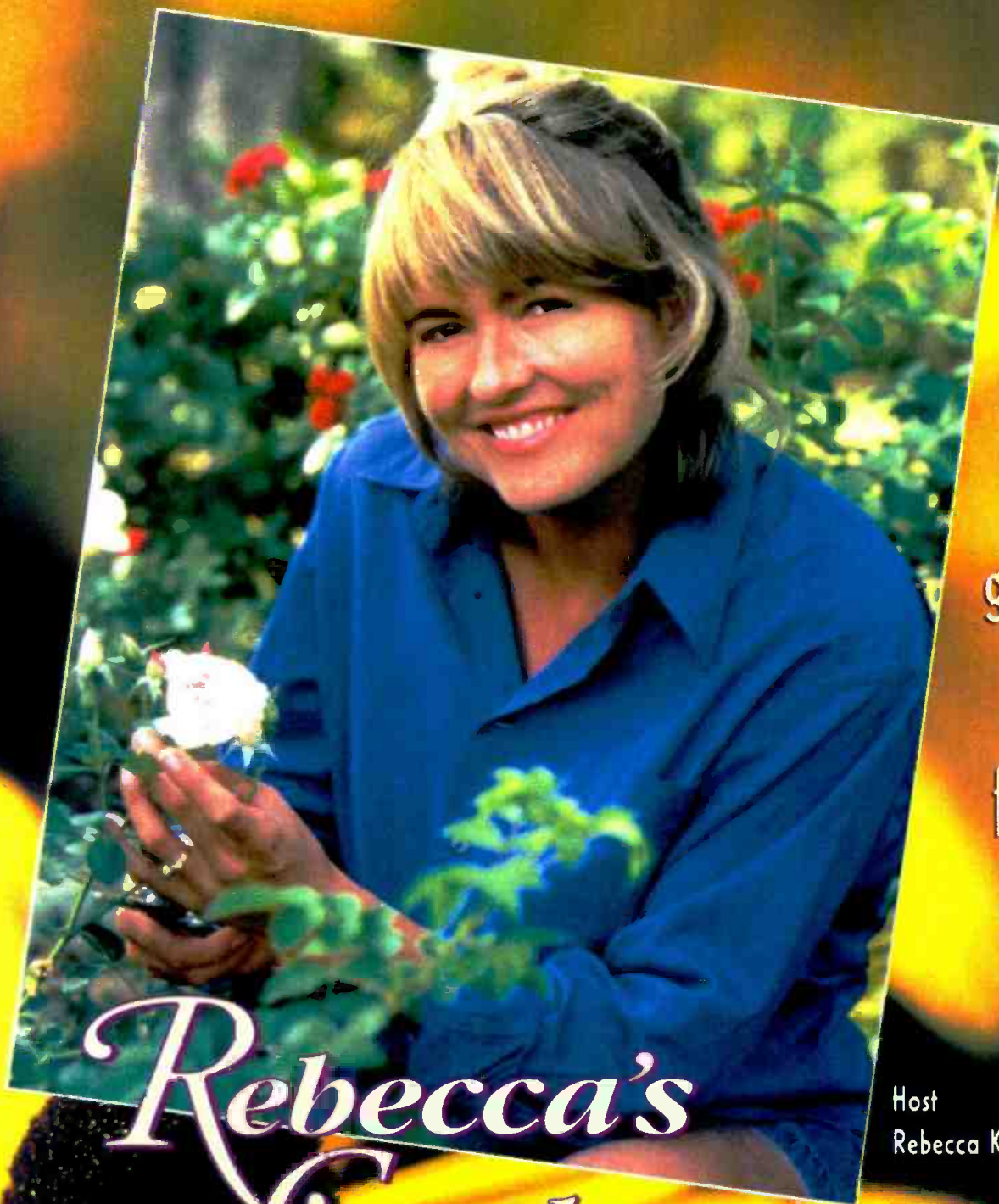
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Judy presides over highest court

Show sizzles in syndication, doubling its year-ago rating

By Joe Schlosser

Judge Judy is the hottest show in syndication, bar none.

The half-hour court series from Worldvision Enterprises/Big Ticket Television is up 100% in the ratings from a year ago, and the former New York City family court jurist is standing tall among her male counterparts in the suddenly popular TV genre.

For the week ending Nov. 1, *Judge Judy* scored a 6.4 national rating, according to Nielsen Media Research. Last year for the same week, *Judy* scored what was then an impressive 3.2 national rating. In the middle of her third season, Judy Sheindlin's show is more than doubling the ratings of its closest court show counterparts and continues to see week-to-week growth, not to mention added double runs from stations all across the country. *Judge Judy*'s national ratings are now tying or beating those of *Oprah Winfrey* and *Jerry Springer* on a weekly basis; it's playing mostly in access time periods. Sheindlin says she wanted to give the series her best shot, but she never thought the show would become such a hit.

"The truth is [that] this is my second career, and if it were to [have lasted] two years it would have been just fine," says the no-nonsense judge. "We just wanted to do reasonably well, but we didn't anticipate the reception we've been given. I was just hoping we didn't get the hook after 13 weeks."

John Ryan, Worldvision's president, says the show wasn't going to get canceled that early, but it didn't get out of the blocks too quickly.

"We had to be patient—and, thankfully, we were," Ryan says of *Judge Judy*, which ended its first season averaging a 2.0 national rating. "It was a 1.4 rating one week, a 1.5 the next, a 1.4 and then a 1.9. We saw little signs of success, and by the end of the year we knew we were on to something."

This season, Ryan and his counter-



'Judge Judy' is growing each week.

parts at Big Ticket Television (both Worldvision and Big Ticket are Spelling Entertainment divisions) launched another court series, *Judge Joe Brown*. Brown's show averaged a 2.5 rating in the latest Nielsen numbers, well ahead of *Judge Judy*'s pace during her first season on the air.

"He [Brown] is very good, and he is benefiting from Judy's success," Ryan says of *Judge Joe Brown*. "The show is growing, and that's a good sign."

The syndication marketplace is becoming more crowded every day

with new court shows that are joining *Judge Judy* and *Judge Joe Brown*. Already on the air are Warner Bros.' hour remake of *The People's Court* and Rysher Entertainment's *Judge Mills Lane*. Both series are battling *Brown* for second place in the weekly court show race, with *Lane* scoring a 2.7 rating and *The People's Court* pulling in a 2.5 in the most recent national numbers.

Also coming down the pipe for fall 1999 is a remake of *Divorce Court* from Twentieth Television and a new half-hour court series with Detroit judge Greg Mathis from Warner Bros. Asked if there is room for all the court shows, Sheindlin says: "I think what will happen is it will get pared down, and we'll be left with two or three court shows. Hopefully we'll be standing in the end." ■

SRI seeks SMART investors

Networks unlikely to provide seed money

By Steve McClellan

Statistical Research Inc. has retained Veronis, Suhler & Associates to identify potential investors in the company's new national TV ratings service, SMART (Systems for Measuring and Reporting Television).

In August SRI announced that the four major networks had signed letters of intent to subscribe to the new service and had also agreed to consider making an investment in the service (beyond just subscribership) to help SRI get it off the ground.

Network investment in the system is still a possibility, but both CBS and ABC have urged and continue to urge SRI to seek independent investors.

"We've really said all along that securing a strategic partner [outside of the networks] was the better alternative," says David Poltrack, executive vice president, research and planning, CBS. And now, he says, the idea of the networks putting up the seed money for the service "is even less attractive, given the current state of the TV marketplace."

Alan Wurtzel, senior vice president of research and business development

at ABC agrees, although he stresses that nothing has been ruled out yet.

An outside partner, Wurtzel says, would eliminate the perception that the networks, by investing, would have undue influence on the SMART process. (That perception has so far deterred several key cable companies from committing to SMART.) It would also give SRI the capital it needs and possibly bring other resources to the table. "It's a complicated area and no one entity has all the answers," he says.

Last summer SRI proposed that each of the major networks should make up to \$15 million in seed money available for SMART. In exchange, the networks would receive nonvoting and noncontrolling equity stakes in the service. NBC head of research, Nicholas Schiavone, says the network still supports the idea of an "industry consortium" to launch SMART.

SRI President Gale Metzger said last week that he is "certainly not at the point of writing off" start-up investments on the part of the networks. But he also confirmed that the search goes on for other investors. "We've identified a need, and we have the products," he said. "I think we'll find a way to get the money." ■



By Dan Trigoboff

Chasse chased

Imagine if the cameras had been there for John Dillinger's infamous escape with a wooden gun. In Dover, Me., a man who was on trial for breaking into the home of the brother of U.S. Secretary of Defense William Cohen escaped police custody when he threw some soap powder into the eyes of the sheriff and deputy escorting him. WLBT (TV) Bangor caught the escapee...on tape, that is.

"How many things like this do you get to cover?" chief photographer Ken D'Errico asks. "We happened to be the only station there." D'Errico was outside the courtroom waiting



WLBT captures an escape in progress.

for police to bring 23-year-old defendant Michael Chasse in when Chasse tried to make a clean getaway. "I was filming," says D'Errico, "when he threw some powder. It made a cloud; when I saw it, I thought it was smoke, that maybe he'd lit some sort of bomb. Instinctively, I jumped back to protect myself and hit the stop button on my camera. So I lost about a second and a half. But I got most of it."

Chasse, uncuffed and unshackled, ran off and was cornered at a nearby home, where he stabbed

the sheriff and deputy. Neither was severely injured. Chasse made off in their truck but was captured after a search that brought in a National Guard helicopter, state police airplane and dozens of police from numerous area agencies.

Renewing Spokane

KHG-TV Spokane, Wash., is joining the urban renewal trend, announcing that it will move into a downtown facility that once housed an auto dealership and market. The station—first in the market on the air, in 1952—will move to the site of the Spokane MarketPlace, at Sprague and Jefferson in the West First neighborhood. West

First, once considered crime- and drug-infested, has undergone significant changes. The station began broadcasting from a military surplus hut but plans to provide digital broadcasts in the next century from a

45,000-square-foot multi-million dollar facility. The MarketPlace, which will shut down next month, will be demolished next year.

The seven-minute solution

For the first time Hawaiian television will be on the clock. Hawaiian stations have paid little attention to details like program start times in prime time, preferring to add a few minutes, and a few dollars, for some extra commercials. As a result, the 10 o'clock news has been more like, say, 10:07. But

KITV(TV) Honolulu GM Mike Rosenberg says that his station will be using "clock time," and he hopes other stations will follow.

In the days before satellite feeds, Rosenberg explained, programs would come to Honolulu by boat weeks after initial broadcast. As a result, he said, precise broadcast time was never a priority. "But there are 70 cable networks on the islands that start on time. We did some research, and more than half of the viewers we surveyed said they'd be more likely or much more likely to watch news that began promptly at 10. We decided we have to get to clock time sooner or later."

What about the extra money? "We hope this is a business of supply and demand," he says, and "we hope we can get a little more for inventory. We didn't do this to lose money."

No news and a show about nothing

WOGX(TV) Ocala, Fla., has pulled the plug on its 6 p.m. newscast only eight months after its start-up. The Meredith-owned station will keep its 10 p.m. newscast, which is mostly produced at co-owned WOFL(TV) Orlando.

"We'll be concentrating on entertainment at six o'clock in Ocala," says Bill Avery, news and programming director for both the Meredith stations. The early evening newscast will end Dec. 20, to be replaced by reruns of *Seinfeld*. The two stations had been producing both broadcasts with some 21 people in Orlando and about seven more in Ocala. The small Ocala staff produced about six or seven stories daily for the 10-minute local contribution. "We're all reporters/photographers here," says Avery.

"They really hustle." WOFL will maintain a small bureau in Ocala, move a few staffers to Orlando and lay off a few more.

Bus stop

WPXI(TV) Pittsburgh reporter Andy Gastmeyer found local news on another continent. Gastmeyer went to Germany for the debut of U.S. Air's new Airbus. "The idea was not to go over there on a junket," Gastmeyer says, "and this was not a commercial for U.S. Air. It was our pitch [to station management, which picked up the tab] that we should do it because there are five thousand local jobs at stake." In January, the airline—which is the dominant carrier serving the Pittsburgh area—will begin the competition among communities to house a state-of-the-art airplane maintenance facility.

Up to bat

KICU-TV San Jose caught the Oakland A's. The station will broadcast up to 55 games a year for five years beginning in 1999. The independent station had been the A's station in the late 1980s, when KRON-TV San Francisco bought into a five-year deal that began in 1993. Although the broadcast rights are set, the final location of the team is still up in the air, as the city of Oakland and Alameda County look for a buyer that will keep the team where it is. Among interested suitors, however, are an investment group that might move the team south toward the South Bay and closer to its new broadcast home.

All news is local. Contact Dan Trigoboff at (202) 463-3710, fax (202) 429-0651, or e-mail to d.trig@cahners.com.



GET WITH THE PROGRAM

By Joe Schlosser

CBS pickups

CBS has agreed to pick up at least five more episodes of freshman comedy *Maggie Winters* and has ordered another nine episodes of freshman drama *L.A. Doctors* betting that the shows' audiences will build if the network gives them more time.

'Divorce Court' clears

Twentieth Television has cleared its revival of *Divorce Court* on the 22 Fox owned-and-operated stations for fall 1999. Clearances include WNYW-TV New York, KTTV(TV) Los Angeles and WFLD

(TV) Chicago. Twentieth Television executives say they will likely announce a judge for the daily series in the next two weeks. *Divorce Court*, which is being sold on a cash-plus-barter basis, will feature actual litigants. Actors were used in the original incarnation of the show.

Showtime has 'Total Recall'

Showtime Networks has acquired the cable rights to PolyGram's action series *Total Recall 2070*, which it will debut next March. The series, which is distributed domestically by PolyGram

Television, will also be available in syndication starting in January 2000. Alliance Atlantis is producing the show and will handle the international distribution. Showtime has signed on for one season and will receive 22 episodes of the sci-fi series. The series stars Michael Easton and is being taped in Toronto.

'Lane' takes bite out of Big Apple

Rysher Entertainment's new court series, *Judge Mills Lane*, scored a 5.5 rating/19 share on WPIX(TV) New York Nov. 9, according to Nielsen Media

Research. It was a personal best for the show in the Big Apple. The show, which is being double-run on the New York station, averaged a 4.9/17 in its first half-hour that day, with both episodes winning their respective time periods.

Allbritton re-ups with King World

Allbritton Communications stations carrying King World's *The Oprah Winfrey Show* have renewed the talker through the 2001 season, and those carrying *Wheel and Jeopardy!* have re-upped through the 2004 season. Allbritton owns or programs 10 ABC affiliates in eight markets. King World President Roger King said the Allbritton Group has been "rock solid for us and will remain one of our premier anchors."

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Countdown to '60 Minutes II'

Dennis Miller said to be under consideration for Andy Rooney-type segment

By Steve McClellan

With the exception of an Andy Rooney-type commentator, the pieces are in place at *60 Minutes II*, and the program will most likely debut in mid-January. Sources say the network is looking most closely at the Wednesday 9-10 p.m. hour, where the struggling *To Have and to Hold* currently airs.

The network confirmed last week that London-based CBS News correspondent Vicki Mabrey and PBS interviewer Charlie Rose would join Dan Rather and CBS correspondent Bob Simon as core correspondents for the new magazine.

Rose will continue to do his PBS interview show, and Rather will continue his duties as anchor of both the *Evening News* and *48 Hours*—although it's likely that he will be seen less on *Evening News* so that he can do all the reporting required for his latest assignment, says Jeff Fager, *60 Minutes II* executive producer.

Fager says that production is in progress, with about 20 pieces already in the can. "One of the rules at *60 Minutes* is to have a lot of pieces ready to go, so you can pick and choose when you go on the air," he says. "We're already screening pieces."

The look and feel of the broadcast, as well as the tone and texture of stories, will be very similar to the original *60 Minutes*, Fager says. The same set will be used for both shows. The one difference in the format is that each week a so-called "classic" piece from the 30-year library of *60 Minutes* segments will be updated for air on *60 Minutes II*. In most cases, whoever did the original story for *60 Minutes* will do the update.

In addition to the core correspondent team, Carol Marin will join the broadcast as a contributor, sources say. An announcement on Marin is expected shortly. In addition, *60 Minutes II* will tap other CBS News correspondents to do stories on an as-needed basis.

Fager is also searching for a commentator to do a short segment at the end of each show (Rooney declined an invitation), although he is reluctant to say much about that search at this time. But sources say the network is considering such divergent talents as Bill Geist, the wry *CBS Sunday Morning* correspondent who specializes in quirky slice-of-life stories, and comedian/actor/talk-show host Dennis Miller, who often focuses his barbed wit on political issues.

Fager's two top senior producers are Mike Whitney and Patti Hassler. Whitney was a senior producer for *The CBS Evening News*, which Fager ran before being tapped to develop *60 Minutes II*. Hassler was a producer for *60 Minutes* for 13 years before moving to CBS News Productions. The show raided ABC's *20/20* for two other senior producers—Rob Wallace and Lisa Cohen. Other *60 Minutes* veteran producers moving to *60 Minutes II* include Steve Glauber and Harry Moses. *60 Minutes* director Artie Bloom will direct both shows.

Educational TV guidelines unveiled

Two activist groups have unveiled guidelines for children's educational programming that include incorporating "educational elements" into such programming from the time a treatment is first presented. The Children's Action Network and Mediascope guidelines, entitled "Building Blocks: A Guide for Creating Children's Educational Television," recommend that producers of educational programming hire consultants, create mission statements and keep a checklist of their progress toward reaching educational goals. The guidelines stop short of defining what is meant by educational programming. The guidelines "work hand in glove with our own rules," said senior legal adviser Susan Fox in a statement released by the groups. FCC rules mandate that broadcasters include at least three hours of educational programming in their schedules each week.—Joe Schlosser

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PEOPLE'S CHOICE

'The X-Files' extra-late season premiere was the highest-rated show for Fox this week, finishing at number 12 with an 11.9/17.

Week 7	abc	CBS	NBC	FOX	U/P/N	WB
	13.1/20	9.2/14	12.2/18	8.3/12	1.3/2	3.3/5
MONDAY	8:00 27. NFL Blast/Pre 9.7/17	29. Cosby 9.5/14	48. Suddenly Susan 8.1/12	78. Melrose Place 6.2/9	114. Malcolm & Eddie 1.9/3	88. 7th Heaven 4.7/7
	8:30 10. NFL Monday Night Football—Dallas Cowboys vs. Philadelphia Eagles 13.2/20	35. King of Queens 9.0/13	39. Caroline in City 8.6/13	117. Guys Like Us 1.6/2	123. Malcolm & Eddie 1.0/1	116. Hyperion Bay 1.8/3
	9:00	20. Ev Lvs Raymd 10.3/15	8. NBC Movie of the Week—The Temptations, Part 2 14.0/21	20. Ally McBeal 10.3/15	124. DiResta 0.8/1	
	9:30	24. Becker* 9.9/14				
	10:00	43. L.A. Doctors 8.4/13				
TUESDAY	8:00 27. Home Imprvmt 9.7/15	20. JAG 10.3/16	67. Mad About You 7.5/12	83. King of the Hill 5.7/9	111. Moesha 2.4/4	95. Buffy the Vampire Slayer 4.3/7
	8:30 43. The Hughleys 8.4/13		60. Just Shoot Me 7.7/12	84. King of the Hill 5.2/8	112. Clueless 2.1/3	
	9:00 39. Spin City 8.6/13	54. 48 Hours 7.9/12	43. Just Shoot Me 8.4/13	65. Guinness World Records 7.6/12	117. Am Greatest Pets 1.6/2	99. Felicity 3.9/6
	9:30 52. Spin City 8.0/12		76. Working 6.3/10		120. Reunited 1.3/2	
	10:00 92. '98 Vote 4.4/8	87. Campaign '98: Election Night 4.8/8	91. Dateline: Decision '98 4.5/8			
WEDNESDAY	8:00 10.0/16	6.7/11	9.6/15	8.0/12	3.5/5	4.0/6
	8:30 17. Dharma & Greg 10.5/17	73. The Nanny 6.7/11	24. Dateline NBC 9.9/16	48. Beverly Hills, 90210 8.1/13	108. 7 Days 2.8/4	92. Dawson's Creek 4.4/7
	9:00 35. Two Guys, a Girl 9.0/14	76. Maggie Winters 6.3/10	56. 3rd Rock fr/Sun 7.8/12	56. Party of Five 7.8/12	98. Star Trek: Voyager 4.2/7	101. Charmed 3.7/6
	9:30 13. Drew Carey 11.3/17	81. To Have and to Hold 5.9/9	60. NewsRadio 7.7/12			
	10:00 48. Secret Lvs/Men 8.1/13	56. Chicago Hope 7.8/13	13. Law & Order 11.3/19			
THURSDAY	8:00 6.6/10	9.4/15	16.9/26	9.8/15	1.9/3	2.9/4
	8:30 74. ABC Thursday Night Movie—Mission: Impossible 6.6/10	31. Promised Land 9.3/14	2. Friends 16.8/26	41. World's Wildest Police Videos 8.5/13	114. UPN Thursday Night Movie—Riddler's Moon 1.9/3	108. The Wayans Bros 2.8/4
	9:00	27. Diagnosis Murder 9.7/15	7. Jesse 14.2/22	15. Shocking Moments: Caught 11.1/17		106. Jamie Foxx 2.9/4
	9:30	32. 48 Hours 9.2/15	3. Frasier 15.8/24			102. Steve Harvey 3.1/5
	10:00		9. Veronica's Clst 13.8/21			110. For Your Love 2.7/4
FRIDAY	8:00 9.3/17	7.7/14	7.0/13	4.7/8	1.4/3	
	8:30 48. Two of a Kind 8.1/15	37. Kids/Darndest 8.9/16	60. Dateline NBC 7.7/14	95. Brimstone 4.3/8	121. Legacy 1.2/2	
	9:00 34. Boy Meets Wrlld 9.1/16	43. Candid Camera 8.4/15	80. Trinity 6.0/11	85. Millennium 5.1/9	117. Love Boat: The Next Wave 1.6/3	
	9:30 24. Sabrina/Witch 9.9/18	81. Buddy Faro 5.9/10	68. Homicide: Life on the Street 7.3/14			
	10:00 43. Brother's Keeper 8.4/15	41. Nash Bridges 8.5/16				
SATURDAY	8:00 4.4/8	8.5/15	6.3/11	6.5/12	KEY: RANKING/SHOW TITLE/PROGRAM RATING/SHARE • TOP TEN SHOWS OF THE WEEK ARE NUMBERED IN RED • TELEVISION UNIVERSE ESTIMATED AT 99.4 MILLION HOUSEHOLDS; ONE RATINGS POINT IS EQUAL TO 994,000 TV HOMES • YELLOW TINT IS WINNER OF TIME SLOT • (NR)=NOT RANKED; RATING/SHARE ESTIMATED FOR PERIOD SHOWN • *PREMIERE • SOURCES: NIELSEN MEDIA RESEARCH. CBS RESEARCH • GRAPHIC BY KENNETH RAY	
	8:30 86. America's Funniest Home Videos 4.9/9	60. Early Edition 7.7/14	92. SNL: The Best of Dana Carvey 4.4/8	78. Cops 6.2/12		
	9:00 95. Fantasy Island 4.3/8	69. Martial Law 7.2/13	60. The Pretender 7.7/14	70. Cops 7.0/13		
	9:30			75. AMW: America Fights Back 6.5/11		
	10:00 99. Cupid 3.9/7	16. Walker, Texas Ranger 10.6/20	71. Profiler 6.8/13			
SUNDAY	8:00 8.3/13	14.6/22	9.3/14	8.8/13		2.9/4
	7:00 38. Wonderful World of Disney—A Knight in Camelot 8.8/13	4. 60 Minutes 15.2/24	88. National Geographic Special 4.7/8	88. World's Funniest! 4.7/8		102. 7th Heaven Beginnings 3.1/5
	7:30	5. Touched by an Angel 14.7/21	54. Dateline NBC 7.9/12	71. Wrlld's Funniest! 6.8/11		104. Sister, Sister 3.0/4
	8:00			32. The Simpsons 9.2/14		104. The Smart Guy 3.0/4
	8:30			56. That '70s Show 7.8/11		106. Unhap Ever After 2.9/4
WEEK AVG	8.4/14	9.4/15	9.6/16	7.6/12	2.0/3	3.4/5
	8.5/14	9.2/15	9.4/16	7.5/12	2.0/3	3.3/5

Chancellor settling down

After posting impressive 3Q numbers, radio owner says it will slow down acquisition pace

By Elizabeth A. Rathbun

Chancellor Media Corp. promises no more major acquisitions as it digests its recent deals, including August's \$3.9 billion merger with sister radio company Capstar Broadcasting Partners Inc. that created the nation's number-one radio group.

Part of that digestion includes spending more money than some analysts seemingly would like to turn radio stations around and to integrate stations into their markets, according to a conference call addressing Chancellor's quarterly financial numbers last Tuesday (Nov. 10).

"We have been investment spending," particularly for research and marketing, "as we set ourselves up for potential growth," Chancellor Radio Group President Jimmy de Castro said. For example, Chancellor recently opened marketing offices in eight major cities, including Chicago and San Francisco.

This Chancellor Marketing Group is a new division of the company that goes after advertisers in new ways, de Castro said. Instead of creating advertising that plugs a brand name, the group concentrates on creating promotions—like coupons or sweepstakes that encourage

a consumer to dip into his or her pocket. "We put a fair amount of money into creation of this marketing group," but it is already paying off with "terrific big deals from Fortune 500 companies," including \$1.7 million from Benigan's and \$1.5 million from Gillette, he said.

Clustering also is paying off, he says. For example, in Chicago, Chancellor has attracted \$1.5 million worth of business from companies—including Antrak, Ikea and Pizza Hut—that advertise across Chancellor stations there.

Analysts' assessments of Chancellor's financials ranged from "very solid" to "spectacular." Third-quarter net revenue grew 137.1%, to a record \$343.8 million, while broadcast cash flow grew 136%, to another record, \$168.8 million. After-tax cash flow rose 190.1%, to \$102.7 million.

Including Capstar, Chancellor's pro-forma results show a 15% revenue in-

crease and a 25% jump in broadcast cash flow. Chancellor anticipates combined pro-forma 1999 revenue of \$2.6 billion and broadcast cash flow of \$1.3 billion.

Chancellor executives said they were pleased with Capstar's third-quarter financials, which also were released last Tuesday. In Capstar's 39 consolidated markets (out of 77), revenue was up 15.3% and broadcast cash flow was up 37.5%.

The combined Capstar and Chancellor will remain primarily a radio company. But Chancellor is emphasizing what Chancellor President Jeffrey A.



Jeffrey Marcus says the 'heavy lifting [building Chancellor] has been done [and] clearly we have a lot of digestion work to do.'

Marcus calls a "multimedia platform" strategy to attract advertisers to its radio and TV stations and its billboards, with the help of its ad rep firms.

With "the platform...established," Chancellor has no further major acquisitions planned, Marcus said. "I don't think there's any possible way that we could ever replicate the pace of acquisitions as we've assembled the platform, and we don't intend to," Marcus said. "The heavy lifting has been done [and] clearly we have a lot of digestion work to do."



By Elizabeth A. Rathbun

Westwood one income drops

CBS Radio-managed Westwood One Inc.'s third-quarter net income fell more than 50%, to \$3.9 million, compared with the same period in 1997. Net revenue was up 5.2%, to a record \$66.7 million, which was partially offset by the elimination of certain programming, including Major League Baseball, the company said last

Tuesday (Nov. 10). After-tax cash flow rose 9%, to \$12.2 million. Westwood One's income was down primarily because of higher depreciation and amortization, higher deferred income taxes and nonrecurring items, including a settlement with a satellite carrier that resulted in a \$551,000 net charge and a \$2.5 million gain in refunds for past services. Also in the third quarter, the company had a

charge of nearly \$2.3 million for consolidating its news operations.

Bloomberg offers business in Spanish

Bloomberg last Monday (Nov. 9) launched what it says is the nation's first Spanish-language radio business report. The 60-second reports will air three times daily on Spanish Broadcasting System Inc.'s WPAT-FM New York and WCMQ(AM) Miami. Topics on *Negocios Bloomberg* will include financial, business, cultural, economic and social issues tailored to the Hispanic community, Bloomberg said in a news release.

Jackson jumps

Thirty-two-year KABC(AM) Los Angeles veteran Michael Jackson has abruptly resigned from his job as weekend talk-show host. After hosting his daily current events show for some 30 years, Jackson was consigned to weekends in July 1997 because of low ratings against Rush Limbaugh on KFI(AM), according to the *Los Angeles Times*. He was angry at first, but that's not the reason for his Nov. 5 departure, Jackson says. Rather, "I decided it was time to move on." He expects to announce his plans soon.

A&E unveils digital networks

New Biography and History channels to be carried on HITS

By Donna Petrozzello

After months under wraps, A&E Networks' first digital channels, The Biography Channel and History Channel International, will launch today (Nov. 16).

A&E has secured carriage for both channels on Tele-Communications Inc.'s digital Headend in the Sky (HITS) system, according to TCI officials. Additional carriage deals may be pending, but A&E Networks spokespeople would not comment on the channels.

A&E Networks is likely to spend several million dollars annually—although sources say it will probably not exceed \$10 million—to cover the

costs of repurposing programming from A&E and The History Channel for digital distribution and to rent transporter space, according to industry sources.

The Biography Channel is expected to air a full-time slate of A&E's *Biography* series episodes surrounded with programming from A&E and The History Channel about the times in which personalities lived, sources close to the networks say. The channel also will likely air back-to-back *Biography* episodes about two people whose lives



were intertwined, according to industry sources.

The Biography Channel may cull episodes from the series *Reputations*, the BBC co-produced equivalent of *Biography*. A&E also is leaving open the option to acquire material for the digital networks from outside sources.

History Channel International also is expected to launch as a full-time network with programming that shows "history as seen through the eyes of the rest of the world 24 hours a day," according to A&E's promotional material. ■

TCI leans forward, looks ahead

Meets with advertisers, agencies to ponder potential of interactivity

By Price Colman

By this time next year, TCI Digital Cable subscribers will be able to interact with TV advertising in ways inconceivable a decade ago.

Will they want to? Many in the media world are pretty sure they will as long as the advertising and interactivity are presented in ways that are consumer-friendly and reward the viewer.

But the territory is so new, no one knows the ingredients of a successful recipe. TCI recently hosted a gathering of high-profile advertisers and ad agencies at its suburban Denver headquarters aimed partly at generating ideas but mostly at simply stimulating discussion.

"One thing we really focused on was how important it was to take baby steps in this whole transition," says Jerry Machovina, executive vice president of ad sales at TCI Communications. "The



TCI's Jerry Machovina hopes viewers will interact with advertisers.

TV experience as we've known it is what I call a lean-back experience. The Internet experience is very much lean forward. What we're trying to do is get people [watching TV] to sit up in the chair."

Participants from the advertiser side included representatives of several of the top brands: AT&T, Anheuser-Busch, Citibank, Ford, GM, Johnson & Johnson, Kraft, Nike, Pepsi, Procter & Gamble, SmithKline Beecham, Sony Pictures, Unilever

and Visa. There were equally prominent names representing the ad agency world: BBD Needham, Campbell-Ewald, Grey Advertising, J. Walter Thompson, Jordan Case McGrath, McCann-Erickson, Media Edge, Western International Media and Young & Rubicam.

TCI is at the forefront of interactive TV advertising, not just because of its size but because it is unquestionably the MSO most aggressively deploying

digital cable. That, coupled with sophisticated set-top boxes and two-way capability, is essential to offering interactive advertising. The set-top and two-way network also allow very accurate measurement of audience and audience response, capabilities highly valued by advertisers. Until now, the tools for such measurements have been rudimentary and ponderous.

The gathering produced no pronouncements or official communiqués. Instead, the operative attitude was caution.

"We don't plan on having a 'Field of Dreams' approach to a lot of these advertising technologies and associated advertising applications," says Machovina. "We don't want to build a field and assume consumers will come."

What TCI does want to do is ensure the biggest bang possible for the advertisers' buck, not to mention plenty of repeat business for TCI specifically and cable MSOs in general.

Machovina estimates the annual TV advertising marketplace at about \$40 billion. "Local and network revenue this year will be around \$10 billion for cable. We have a big chunk of opportunity."



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What advertisers and their agencies want is simple: ads that translate into sales. TCI earlier this year signed a deal with Kraft Foods that is intended to produce ads so targeted that they will zero in on zip code, neighborhood, specific address—even different viewers of different sets in the same house.

"I think it's pretty exciting," says Salomon SmithBarney analyst Spencer Grimes of the future of interactive advertising. "You certainly begin to get a definite premium when delivering highly targeted messages the consumer can react to to get more information and even interact with the product."

Machovina says TCI is close to announcing several other "Kraft-like alliances," but declined to identify the other participants. TCI Chairman John Malone, perhaps hinting at what's



TCI pitches the value of interactive advertising to viewers in this presentation tape.

ahead, has previously mentioned companies including Nike and pharmaceutical firms, such as SmithKline.

The purpose of the day-long session with Machovina and Malone wasn't primarily to pitch potential clients, however. It was more an effort to

understand the evolution from passive TV viewing to active participation.

It's not TCI's intention to own the franchise on interactive TV advertising or push cable into a gatekeeper role, Machovina says. "Only through the set-top box and two-way network capability is this experience possible," he says. "It's not something you can do over the air. But we very much want to sit down and talk to broadcasters.... I see this as very much a universal thing. It would be less than intelligent for us to do it any other way."

That said, TCI intends to capitalize on its "friends and family" strengths. "We now have the ability with our partners to deliver over 90% of TV markets...and be a lot less wasteful," says Machovina. ■



CABLE'S TOP 25

PEOPLE'S CHOICE

Nickelodeon's 'Rugrats,' in its 7:30 p.m. weeknight timeslot, claimed three of basic cable's top 10 spots for the week. 'Rugrats' averaged a 3.9 rating, with 2.9 million homes on three consecutive nights, Nov. 3-5.

Following are the top 25 basic cable programs for the week of Nov. 2-8, ranked by rating. Cable rating is coverage area rating within each basic cable network's universe; U.S. rating is of 99.4 million TV households. Sources: Nielsen Media Research, Turner Entertainment.

Rank	Program	Network	Day	Time	Duration	Rating Cable	U.S.	HHS (000)	Cable Share
1	NFL: Oilers vs. Buccaneers	ESPN	Sun	8:15P	183	7.4	5.6	5,555	10.8
2	WWF War Zone	USA	Mon	10:00P	65	4.9	3.7	3,660	7.5
3	WCW Monday Nitro	TNT	Mon	8:00P	60	4.8	3.6	3,558	6.7
4	WWF Raw	USA	Mon	9:00P	60	4.7	3.6	3,536	6.4
5	NFL Primetime	ESPN	Sun	7:30P	45	4.3	3.2	3,200	6.5
6	WWF Sunday Night Heat	USA	Sun	7:00P	60	4.2	3.1	3,119	6.3
7	NASCAR: NAPA 500	ESPN	Sun	1:30P	24	4.1	3.1	3,102	9.2
8	Rugrats	NICK	Tue	7:30P	30	3.9	2.9	2,902	6.2
8	Rugrats	NICK	Wed	7:30P	30	3.9	2.9	2,874	6.3
10	WCW Monday Nitro	TNT	Mon	10:00P	66	3.8	2.9	2,858	5.9
10	Rugrats	NICK	Thu	7:30P	30	3.8	2.8	2,823	6.2
12	WCW Monday Nitro	TNT	Mon	9:00P	60	3.7	2.8	2,782	5.0
12	WCW Thunder	TBS	Thu	8:05P	59	3.7	2.8	2,778	5.7
14	Hey Arnold	NICK	Wed	8:00P	30	3.6	2.7	2,652	5.5
15	WCW Thunder	TBS	Thu	9:04P	71	3.5	2.7	2,672	5.3
16	Rugrats	NICK	Mon	7:30P	30	3.4	2.6	2,538	5.3
16	Saturday Nicktoons TV	NICK	Sat	9:30A	30	3.4	2.5	2,534	10.7
16	Saturday Nicktoons TV	NICK	Sat	10:00A	30	3.4	2.5	2,500	10.3
19	Walker, Texas Ranger	USA	Wed	8:00P	59	3.3	2.5	2,442	4.9
20	Hey Arnold	NICK	Mon	8:00P	30	3.2	2.4	2,382	4.6
20	Rugrats	NICK	Fri	7:30P	30	3.2	2.4	2,356	5.9
20	Saturday Nicktoons TV	NICK	Sat	10:30A	30	3.2	2.4	2,354	9.7
20	South Park	COM	Wed	10:00P	30	3.2	1.8	1,776	5.0
24	Wild Thornberrys	NICK	Tue	8:00P	30	3.1	2.3	2,296	4.5
24	Saturday Nicktoons TV	NICK	Sat	9:00A	30	3.1	2.3	2,277	10.0
24	Wild Thornberrys	NICK	Thu	8:00P	30	3.1	2.3	2,273	4.6
24	Real World VII	MTV	Tue	10:00P	30	3.1	2.2	2,220	5.0

ZD likely to buy ZDTV

Computer magazine publisher ZD Inc. is likely to exercise an option to buy cable network ZDTV from its largest shareholders, a ZD executive says. The start-up cable network is owned by executives at Softbank, ZD's major owner, and was segregated from ZD's Ziff-Davis magazine operation to keep its \$55 million expected 1998 loss from hurting last summer's initial public offering.

ZD received an option to buy ZDTV by Dec. 31. ZD CFO Tim O'Brien says that exercising the option is contingent on ZDTV executives' ability to secure 8 million-10 million subscribers, but carriage commitments in place are expected to carry the network past that level. ZD's stock price has been hammered since the IPO because of disappointing performance. But although ZDTV is expected to cost another \$25 million-\$35 million next year, O'Brien says he doesn't expect exercising the option to cause any problems, because ZDTV looks much more solid than it did at launch, and investors have been expecting ZD to buy the network. "We've been telling them that the option [is up] at the end of the year," O'Brien says. "I think it's already in the price."

—John M. Higgins

'Awful Truth' and Moore on Bravo

Half-hour show is part of push for more originals

By Donna Petrozzello

Bravo is teaming up with filmmaker and social satirist Michael Moore to launch *The Awful Truth*. The half-hour documentary-style news show, hosted by Moore, will begin next April.

Ed Carroll, Bravo executive vice president and general manager, says Moore will challenge conventional news storytelling by reporting stories with an off-beat, humorous twist. Bravo has ordered 14 initial episodes of *The Awful Truth*, which is slated to premiere on Bravo on April 14 at 9 p.m.

In early episodes, the camera follows Moore as he leads a group of Puritans to Judge Kenneth Starr's home to offer their "witch hunt" services for "less than \$40 million," Carroll says.

Moore devotes another episode to "scouring the globe for a [Rupert] Murdoch-free community," Carroll says. And in another, Moore tells the story of trying to smuggle a group of American workers into Mexico to reclaim their jobs.

"This series lets Bravo take its camera out into society," Carroll says. "Moore, and others like him, are the equivalent of the American storytellers," he continues. "TV has become a place for alternative storytelling, and that's a form of creative expression that's just right for Bravo."

Positioning *The Awful Truth* in a 9 p.m. Wednesday time slot will force Bravo to push back the start time of its Wednesday night film to 9:30. Carroll says scheduling Moore's series in prime time "represents Bravo's objective to add more original programming in prime time and decrease our dependence on films."



Michael Moore's latest sardonic vision will air Wednesdays at 9 on Bravo.

Malone, Hindery, Wright headline Western Show

The California Cable Television Association has set its lineup of speakers for this year's Western Cable Show. They include Tele-Communications Inc. Chairman John Malone, TCI President Leo Hindery and NBC Chairman Bob Wright. The convention runs Dec. 2-4 at the Anaheim Convention Center. The opening general session will include Hindery, Wright, USA Networks Inc. Chairman Barry Diller and Capital Research and Management Senior Vice President Gordon Crawford, the most influential investor in media. Malone will appear the second day with Oxygen Media Chairman Gerry Laybourne and Cox Communications Inc. President James Robbins.

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Encore, TCI forge digital deal

TCI Communications (TCIC) is teaming with Encore Media Group in a marketing campaign designed to convert basic-cable subscribers into digital customers. Using the Encore channel and three of its thematic multiplexed channels—Love Stories, Mystery and Westerns—as the hooks, the companies are touting TCI Digital Cable as a money-saving alternative to the video store. Under the promotion, customers who sign up for TCI Digital Cable receive Encore and the

three thematic channels free for up to a year. Greg Mills, Encore's VP of digital strategy, says the target market is some 6.1 million non-premium basic cable subscribers. The idea is to bring them into the digital fold and enable TCIC to market other digital services, such as high-speed data and, eventually, telephony via the TV.

'South Park's' chef in a jam

Just in time for Thanksgiving, Comedy Central is releasing "Chef Aid: The South Park Album," a collection of tracks recorded

by musicians ranging from Elton John to Perry Farrell inspired by the cartoon series' Oct. 7 "Chef Aid" episode.

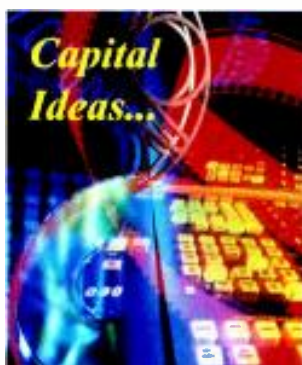


sode. The South Park album, released by American Recordings/Columbia Records, is expected to hit the stores on Tuesday, Nov. 24. Singer Isaac Hayes, who voices the Chef character on *South Park*, sings some of the album's tracks, including "Tonight is Right for Love" in a duet with Meat Loaf.

Comcast makes gains

Comcast Corp. says third-quarter consoli-

dated operating cash flow rose 15.3%, and consolidated revenue rose 12.5%. Results were in line with analysts' expectations. Comcast characterized the quarter as strong, but basic subscriber growth was up only 1.3%. Comcast told analysts and investors that it is concentrating on launching digital cable. Comcast reported operating cash flow of \$420.7 million and a net profit of \$706.6 million on revenue of \$1.355 billion. Comcast attributed the boost to the bottom line, which showed a \$62.2 million loss in the comparable quarter last year, and to a nearly \$1.1 billion pretax gain from the AT&T/Teleport merger. Absent that, the company would have had a one-cent-per-share net loss for the quarter.



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CHARTER FINANCIAL

TV Land tops MSO survey

By Donna Petrozzello

More cable operators said they would add MTV Networks' retro sitcom channel TV Land to their channel lineup than opted for any other basic cable channel, according to the 1998 Beta Research Cable Operator Study released last week. Beta reported that 42% of 150 cable operators surveyed said they would be interested in adding TV Land by the end of 1999.

Discovery's Travel Channel, Food Network, Animal Planet and Turner Classic Movies rounded out the top five picks. Also named as desirable add-ons by operators were Fox News Channel, FX, MSNBC, Bravo and Home & Garden TV.

Among emerging digital networks, the majority of operators say they're most likely to add Discovery Communication's digital networks. Operators were equally bullish on adding Toon Disney, the latest all-animation channel from Disney Channel, to a digital tier. ■

CBS broadcasts NFL in hi-def

Airs regional game on seven DTV stations

By Glen Dickson

CBS became the first broadcast network to show a live high-definition sports event when it successfully broadcast the New York Jets vs. Buffalo Bills National Football League game in HDTV on Sunday, Nov. 8.

"We're finally on the air," said Joseph Flaherty, CBS senior vice president for technology.

The Jets/Bills game was shown locally on WCBS-DT New York and distributed regionally to six CBS O&Os and affiliates: KYW-DT Philadelphia; WUSA-DT Washington; WBTV-DT Charlotte, N.C.; WRAL-DT Raleigh, N.C.; WKRC-DT Cincinnati, and WBNS-DT Columbus, Ohio.

Originally, CBS planned only to show the game locally on WCBS-DT. But the week before the game, the NFL upgraded the Jets/Bills matchup (which determined first-place standings in the AFC East division) to a regional contest, and CBS identified a number of local stations capable of retransmitting it digitally. The network plans to broadcast three more NFL games this season, all on a national basis, on Dec. 19, Dec. 26 and either Jan. 9 or Jan. 10.

Flaherty said the Jets/Bills broadcast went off without a hitch, despite a power surge at WCBS-DT's transmitter site that briefly knocked its signal off the air a few hours before game time. CBS used fiber optics from Vyvx to backhaul a 45 Mb/s HDTV signal from Giants Stadium to the CBS Broadcast Center in New York, where it was decompressed for graphic treatment, recompressed to 19.4 Mb/s and passed on to the Empire State Building for local broadcast. For regional distribution, a 45 Mb/s signal was sent via fiber to Micronet Communications in Glenwood, N.J., and uplinked for satellite transmission to CBS O&Os and affiliates.

CBS affiliate WRAL-DT Raleigh, N.C., received the satellite signal with no problems, says Tom Beauchamp, the station's director of engineering. "We picked it up and showed it to two to three different locations." One interested viewer was Jim Goodman, president of station owner Capitol Broadcasting, who watched the game on an HDTV set at his home.

WKRC-DT Cincinnati, which is current-

ly broadcasting DTV under a temporary FCC license, also successfully retransmitted CBS's HDTV feed of the Jets/Bills game, according to Leon Brown, vice president of TV engineering, WKRC-DT. Brown, who watched the game at the station on a

receiver provided by encoder supplier Harris, says the picture was flawless. Brown adds that Circuit City, which received the game and displayed it to consumers, called the station to say "the picture looked great."

CBS's 1080-line interlace HDTV broadcast, which was produced separately from the network's NTSC broadcast of the game, came complete with HDTV graphics and HDTV commercials. (There also were some upconverted 4:3 spots.) The HDTV graphics were created on CBS's Silicon Graphics workstations. The commercials came from Sony, which supplied the HDTV equipment for CBS's production truck and organized promotional events at consumer electronics stores throughout

the New York market.

James Palumbo, vice president for consumer television products for Sony, says that local dealers had made a big advertising push to draw consumers into their stores to watch WCBS-DT's HDTV broadcast.

"HDTV sets are not expected initially to be a huge business for Sony, or for anybody else," says Palumbo. "But the interest and enthusiasm are really high." Palumbo adds that Sony's latest consumer research indicates that 60% of American consumers plan to visit retailers over the next three months to see HDTV. The company plans to have HDTV sets in stores by Thanksgiving. ■

—Karen Anderson contributed to this story.



The Jets/Bills HDTV broadcast from CBS's control center.

PBS digital week a success

PBS kicked off its long-awaited digital week last Monday (Nov. 9) at 9 p.m. with three hours of 1080i programming—*Chihuly over Venice*, *Digital TV: a Cringely Crash Course* and *Washington the Beautiful*—to five of its East Coast affiliates. PBS repeated the broadcast at midnight for a feed to two West Coast affiliates. "It couldn't have gone better," says John Toleffson, PBS vice president and chief technology officer.

PBS sent the feed from its broadcast facility in Alexandria, Va., via microwave to its satellite uplink facility. The HDTV feed was distributed at 19.4 Mb/s on half of PBS's leased transponder on GE-3. (PBS was using the other half to test-broadcast the enhanced digital Frank Lloyd Wright program that was scheduled to air last night (Nov. 16).) PBS followed its HDTV broadcast with four multicast channels of identical programming.

According to Jerry Butler, PBS senior director of DTV, the Frank Lloyd Wright program with enhanced digital data provided by Intel was successfully broadcast from the network to all seven stations.

—Karen Anderson

WKOW-TV, retailer promote HDTV

By Karen Anderson

Shockley Communications-owned ABC affiliate WKOW-TV Madison, Wis., is teaming with local retailer American TV & Appliance to educate the public about HDTV and to generate set sales, says Terry Kelly, vice president of Shockley's television division.

WKOW-TV and American TV are constructing an HDTV demonstration van that will travel to shopping malls, area sporting events and other community events where people can view and ask questions about HDTV. The van is scheduled to hit the streets on Feb. 1.

"Another key thing we're doing is keeping lists of people who are interested in high-definition television so that we can communicate with them ... to inform them more about this developing technology, provide an advisory service as to what they ought to be buying and when and also to stay in touch



Consumers get to view HDTV at a Madison, Wis., demo.

with them on programming opportunities," Kelly explains.

In addition, WKOW-TV is running an on-air contest in which the grand prize is a Samsung HDTV set donated by American TV. But Kelly says even a strong marketing campaign cannot help sell HDTV sets if there is no pro-

gramming to watch.

"What we have is the chicken and the egg problem," he explains. "We are pleased that the network is committed to showing at least *Wonderful World of Disney* and their movie of the week in hi-def, but we need more programming than that to really stimulate set sales."

Kelly says the station is planning to produce high-def local programming in 1999, starting with one sporting event and several features each month. With Shockley-owned production company ProVideo, American TV also is completing production of its first HDTV commercial spot, due to air by 1999.

WKOW-TV and American TV already have sponsored an in-store showing of John Glenn's Oct. 29 space launch in high-definition and a Nov. 1 HDTV premiere party at the station that celebrated ABC's first 1080i network HDTV telecast of "101 Dalmatians." ■



CUTTING EDGE

By Glen Dickson and
Karen Anderson

PAS-8 launch a success

PanAmSat is one step closer to its mission to grow its fleet of satellites to 25 over the next 16 months. Its PAS-8 Pacific Ocean region satellite was successfully launched aboard a Proton rocket from Baikonur Cosmodrome in Kazakhstan on Nov. 4. The Space Systems/Loral-built PAS-8 contains 24 C-band transponders and 24 K-band transponders. PAS-8's orbital location at 166 degrees east longitude is just three degrees west of PAS-2 and enables PanAmSat to offer

increased services in the Pacific Ocean region. PanAmSat says that PAS-8 already is scheduled to support the 2000 Summer Olympic Games in Sydney, Australia.

National Digital Television Center chooses Ikegami/Fujinon

National Digital Television Center, a network origination and production center with facilities in Denver, Hong Kong, New York City and Hollywood, will gear up its new Los Angeles site with Ikegami HK-388 and HK-388P

4:3/16:9 switchable cameras equipped with Fujinon lenses. The Ikegami cameras, which have five 20x1 studio lenses, three 20x8 hand-held camera zoom lenses and one 10x4.8 wide-angle lens, will be used within the center's in-house studios.

USA fires up effects/editing system

USA Network has purchased Discreet Logic's Fire online editing and finishing tool and Inferno visual-effects tool for its New York-based studio production facility. "Our production exists in an increasingly interactive environment where the editorial process is tightly integrated with graphics, special effects and other aspects of finishing," says Dick Ross, USA Network senior vice president of

operations. Both systems offer a picture-based interface and allow users to browse files on remote networked systems and transfer files between Windows NT or Mac workstations.

DirecTV picks Tektronix, Sarnoff

Tektronix and Sarnoff Corp. will develop a real-time, in-service picture-quality monitor system for DirecTV. The system is designed to ensure the highest picture quality on more than 185 DirecTV channels and to identify unused satellite capacity that can be used for additional programming. The system will be based on Sarnoff's JNDmetrix simulation of the human vision system and will allow DirecTV to monitor and adjust the bit rate of each channel to match the needs of its program material.

CNN streams Gates

Virage software lets PC users search and download VOD testimony

By Richard Tedesco

Taking an approach that substantially changes online news streaming, CNN is making Microsoft CEO Bill Gates's testimony in the Department of Justice antitrust suit accessible in a searchable format using technology from Virage.

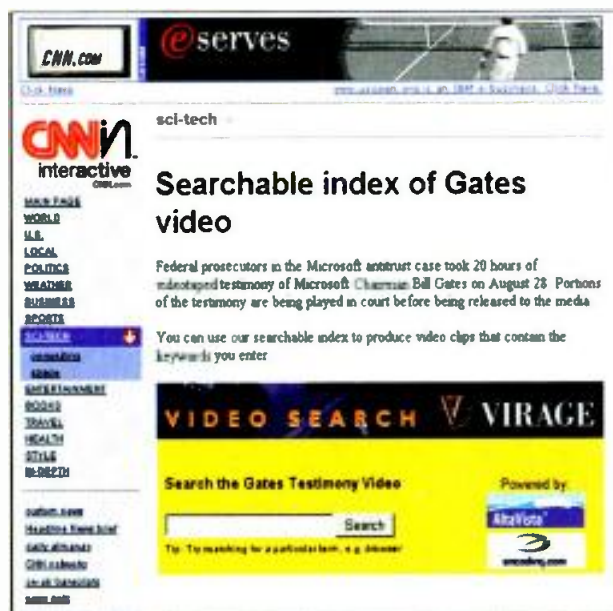
The new wrinkle from CNN Interactive is actually a prelude to anticipated use of the software to sort through the looming congressional impeachment hearings. "We saw the potential with the [impeachment] hearings coming up and the Clinton testimony that has already happened," says Chuck Westbrook, managing editor of CNN Interactive. "More and more electronic media tends to get into court records and [is] the way people are experiencing procedures in government."

Enhancing streamed content that otherwise would be unwieldy or time-consuming to sort through, the Virage VideoLogger software that CNN Interactive is using lets PC users call up Gates's comments on specific subject areas in the deposition that he videotaped for the ongoing trial in federal district court. CNN offers the clips in RealVideo or Microsoft Windows Media (formerly NetShow).

The initial two hours of Gates testimony is now posted on CNN's site (www.cnn.com/TECH/computing/video/gates). It will be updated as the trial progresses and the DOJ releases subsequent segments of Gates's testimony.

In addition to viewing segments of the testimony relevant to their specific interests, PC users also can pull down a text transcript of each segment. Plugging in a company name, such as Netscape or Apple, brings the user a menu of references from the court record for streaming or reading. Users can navigate video content synchronized with an index to permit scrolling through to a keyframe, individual word or marked clip before replaying the section.

CNN anticipates using the technology as news events warrant, according



This CNN site lets you search through the Bill Gates Justice Department deposition by topic.

to Westbrook, who says that lengthy reports, hearings or depositions are the ideal types of online content for it. The potential for treating historic archived content is also there. "If you had the Watergate tapes, it would be an amazing way of sifting through that content," Westbrook observes.

AltaVista used the same VideoLog-

ger software to stream President Clinton's videotaped grand jury testimony last month, drawing 500,000 hits the first day it posted the testimony for selective parsing.

"We're working with these companies to create another category: searchable-use media," says Carlos Montalvo, Virage vice president of marketing. "Searchable video is here."

And there's likely to be more of it as Virage aggressively seeks to license VideoLogger to other broadcast news providers for similar applications. VideoLogger is search-engine independent, according to

Montalvo, who says that Virage wants to do business with various Internet portals, both inside and outside the traditional news business.

The San Mateo, Calif.-based software company has been providing video search capabilities to government agencies and corporate entities since its inception in 1994. ■

VideoSeeker adds news, flicks, laughs

Archive increases its content from variety of sources

By Richard Tedesco

NBC's VideoSeeker online on-demand video archive made content deals last week to increase and diversify its stock of TV clips. Clips from MSNBC News, CNBC Dow Jones Business Video, Film Scouts and ComedyNet will start streaming on the site that now primarily showcases NBC fare. Content stored on the site (www.videoseeker.com) includes Jay Leno monologues from

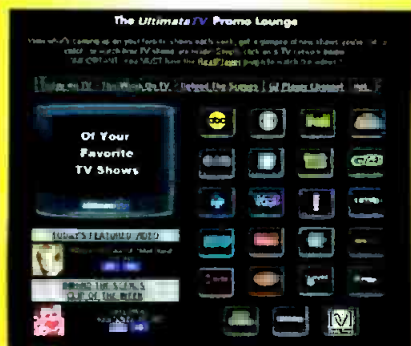
The Tonight Show, bits from *Late Night With Conan O'Brien*, *Access Hollywood* celebrity interviews and music videos from myLaunch.

Film Scouts presents news and commentary about Hollywood and independent films, including online multicast events. ComedyNet offers short-form video online, including stand-up comedy, sketch comedy groups and so-called "alternative" entertainers.

A new Movie Lounge section on the site enables PC users to pull down clips

SITE OF THE WEEK

www.ultimatetv.com



Ultimate TV Encino, Calif.

Site features: Aptly named Promo Lounge features video clip previews streamed for each day's TV shows along with exclusive behind-the-scenes footage; comprehensive daily TV grid has accessible clips; one of specialized areas is list of all-time top 100 TV shows, with clips; links to broadcast and cable network sites

Site launched: December 1996 (originally launched as TVNet in 1994)

Site director: Mary Van Plank, UltimateTV production director

Streaming technology: InterVu

Traffic: Averaging 4.5 million page views monthly

Advertising: Banner ads from TV programmers, including UPN, PBS, ZDTV, various individual shows

Revenues: N/A

Highlights: Streamed sneak preview of new *Highlander: The Raven* series from Rysher Entertainment drew 12,000 PC users tuning in for the 15-minute clip; similar exclusive online series previews planned

—Richard Tedesco

from current first-run blockbuster movies, through a link to the Internet Movie Database.

VideoSeeker also has expanded the e-commerce section of its site in deals with DVD Express and Impulse Buy Network. PC users will be able to preview DVD titles online and browse virtual point-of-sale racks from Impulse Buy Net.

VideoSeeker launched an online shopping service pushing NBC videos and direct-response products from Guthy-Renker in April.

NBC has been the most aggressive of the three major broadcast networks in migrating video content online and advancing convergence. In addition to excerpting highlights from its late-night comedy shows

online, NBC has extended the plot lines of its *Pretender* series and created a parallel plot line with a second shift of detectives for its *Homicide* series.



News and comedy are among the menu of choices offered by VideoSeeker's on-demand archive.

'WhirlGirl' to get cable gig

Online comic character moving to another medium

By Richard Tedesco

Time-traveling WhirlGirl may soon enter another media dimension in a cable TV deal.

The Internet cult heroine (who saved Bill Clinton and Leonardo DiCaprio in recent episodes) normally resides in the mid-21st century, fueled by Flash animation. But she also has an emerging future on cable TV, according to Dave Williams, president of Visionary Media, which produces the edgy sci-fi fantasy strip.

Visionary is closing in on a deal with a major cable network that will transform WhirlGirl from cult cartoon star to an online cable property. The transmigration to broadcast animation would take place during the next six to 12 months. In addition to the current monthly five-minute Flash animation feature, Visionary plans to produce shorter weekly takes online for its prospective cable partner, according to Williams, who expects to have an equity deal in place by year's end.

The most likely players are HBO's Comedy Central or Viacom's MTV Networks. To help seal a cable deal, Visionary has hired former Hanna-Bar-

bera executive Buzz Potamkin, who calls WhirlGirl "sharp, sassy and edgy, without being obnoxious, something I wouldn't mind an 11-year-old seeing."

That could threaten to make WhirlGirl seem positively mainstream—an accusation her creators have certainly avoided until now.

Next up, Visionary has a more intricate project on its drawing board: *Retro Rockers*, a series about a boy whose uncle is Jules Verne, who inspires his nephew to "dream of the land of yesterday's tomorrows, where visions of the future from the past come back to life," as Williams puts it. An educational component will provide its intended young PC user audience with background about the cultural milieus that spawned different literary sci-fi fantasies.

Broadcasting & Cable ONLINE

The big news on the Internet is Broadcasting & Cable Online. With 24-hour access to over 30 sections of the latest industry news, www.broadcastingcable.com is an address you'll want to bookmark.

CHANGING HANDS

The week's tabulation of station sales

TVS

WHAG-TV Hagerstown, Md.; **WFFT-TV** Ft. Wayne, Ind.; **KSVI(TV)** and **KHMT(TV)**, both Billings, Mont.

Price: \$65 million

Buyer: Quorum Broadcasting Co., Boston (J. Daniel Sullivan, president); also owns seven TVs

Seller: Great Trails Broadcasting, Dayton, Ohio (Alexander J. Williams, president); no other broadcast interests

Facilities: WHAG-TV: ch. 25, 1,352 kw, ant. 1,230 ft.; WFFT-TV: ch. 55, 600 kw, ant. 780 ft.; KSVI: ch. 6, 100 kw, ant. 817 ft.; KHMT: ch. 4, 100 kw, ant. 1,062 ft.

Affiliations: WHAG-TV: NBC; WFFT-TV: Fox; KSVI: ABC; KHMT: Fox

COMBOS

WHYL-AM-FM Carlisle, Pa.

Price: \$4.5 million

Buyer: Citadel Communications Corp., Bigfork, Mont. (Lawrence R. Wilson, CEO); also owns 37 AMs and 81 FMs

Seller: Zeve's Broadcasting Co., Carlisle, Pa. (Lincoln Zeve, president); no other broadcast interests

Facilities: AM: 960 khz, 5 kw day, 22 w night; FM: 102.3 mhz, 3 kw, ant. 328 ft.

Formats: AM: MOR; FM: country

WKRS(AM)-WXLC(FM), both Waukegan, Ill.

Price: \$4.3 million

Buyer: Belvidere Broadcasting Co. LP, Chicago (Bruce Buzil, manager); Buzil is a general partner of Marathon Media Inc., which also owns 10 AMs and 20 FMs

Seller: Spring Broadcasting LLC, New York (William Sherard, president; Broadcasting Partners Holdings, controlling member); also owns four AMs and three FMs; BPH also owns Pilot Communications LLC (four AMs and 10 FMs), Mercury Radio Communications LLC (one AM and three FMs), Sound Broadcasting LLC (three FMs) and Gleiser Communications LP (four AMs and one FM)

Facilities: AM: 1220 khz, 1 kw; FM: 102.3 mhz, 3 kw, ant. 322 ft.

Formats: AM: news/talk; FM: top 40

WHBU(AM) Anderson and **WAXT(FM)** Alexandria, both Ind.

Price: \$2 million (estimated)

Buyer: Indiana Radio Partners, Providence, R.I. (Michael Schwartz, principal); also owns one AM and five FMs

PROPOSED STATION TRADES

By dollar volume and number of sales; does not include mergers or acquisitions involving substantial non-station assets

THIS WEEK

TVs □ \$65,000,000 □ 1
Combos □ \$12,730,000 □ 5
FMs □ \$5,121,000 □ 7
AMs □ \$5,650,000 □ 1
Total □ \$88,501,000 □ 14

SO FAR IN 1998

TVs □ \$8,968,207,610 □ 75
Combos □ \$2,207,122,992 □ 244
FMs □ \$986,602,004 □ 311
AMs □ \$573,726,040 □ 224
Total □ \$12,735,658,646 □ 854

SAME PERIOD IN 1997

TVs □ \$6,812,680,330 □ 105
Combos □ \$7,666,342,551 □ 288
FMs □ \$1,869,796,332 □ 365
AMs □ \$332,916,608 □ 209
Total □ \$16,656,725,821 □ 967

SOURCE: BROADCASTING & CABLE

Seller: Clearwater Enterprises.

Anderson, Ind. (Tom Hayth, president); no other broadcast interests

Facilities: AM: 1240 khz, 1 kw; FM: 96.7 mhz, 2.3 kw, ant. 367 ft.

Formats: AM: news/talk; FM: country
Broker: Berger & Co.

WVLD(AM) and **WQPW(FM)**, both Valdosta, Ga.

Price: \$1.6 million

Buyer: Brooks Broadcasting Corp. Inc., Valdosta, Ga. (Albert L. Brooks, president); Brooks also owns WWRQ(FM) Valdosta, Ga.

Seller: Metro Media Broadcasting Inc., Valdosta, Ga. (Harrison Cooper, president); no other broadcast interests

Facilities: AM: 1450 khz, 1 kw; FM: 95.7 mhz, 35.9 kw, ant. 606 ft.

Formats: AM: news/talk; FM: AC

WOBG(AM) Clarkesburg/**WOBG-FM** Salem, both W.Va.

Price: \$330,000

Buyer: Burbach Broadcasting Co. of Delaware, Carnegie, Pa. (Nicholas A. Galli, president); also owns three

WAITT BROADCASTING

has acquired

WPGX-TV

Panama City, Florida

from

WICKS BROADCAST GROUP

for

\$7,100,000

The undersigned acted as exclusive broker in this transaction and assisted in the negotiations.



Kalil & Co., Inc.

3444 North Country Club Tucson, Arizona 85716 (520) 795-1050

AMs and three FMs

Seller: Hilber Corp., Bridgeport, W.Va. (Bob Hilber, president); no other broadcast interests

Facilities: AM: 1400 khz, 1 kw; FM: 105.7 mhz, 6 kw, ant. 581 ft.

Formats: AM: golden oldies; FM: oldies

FMS

WERK-FM Muncie and WLHN(FM) Elwood, both Ind.

Price: \$2.25 million (estimated)

Buyer: Indiana Radio Partners, Providence, R.I. (Michael Schwartz, principal); also owns one AM and five FMs

Seller: Dream Weaver Broadcasting, Muncie, Ind. (Wade Weaver, principal); no other broadcast interests

Facilities: WERK-FM: 104.9 mhz, 3 kw, ant. 328 ft.; WLHN: 101.7 mhz, 3 kw, ant. 328 ft.

Formats: WERK-FM: oldies; WLHN: oldies

Broker: Bergner & Co.

WWWO(FM) Hartford City, Ind.

Price: \$1.2 million (estimated)

Buyer: Indiana Radio Partners, Providence, R.I. (Michael Schwartz, principal); also owns one AM and five FMs

BY THE NUMBERS

BROADCAST STATIONS

Service	Total
Commercial AM	4,734
Commercial FM	5,639
Educational FM	2,000
Total Radio	12,373
VHF LPTV	556
UHF LPTV	1,545
Total LPTV	2,101
FM translators & boosters	3,133
VHF translators	2,168
UHF translators	2,750
Total Translators	8,069
Commercial VHF TV	559
Commercial UHF TV	656
Educational VHF TV	125
Educational UHF TV	243
Total TV	1,583

CABLE

Total systems	11,517
Basic subscribers	65,864,090
Homes passed	94,850,000
Basic penetration*	66.3%

*Based on TV household universe of 98.4 million
Sources: FCC, Nielsen, Paul Kagan Associates
GRAPHIC BY BROADCASTING & CABLE

Muncie, Harrisburg consolidate

In two recent radio-station deals, two companies consolidated holdings in Muncie, Ind., and Harrisburg, Pa. Indiana Radio Partners juggled three separate sellers to buy five stations in Muncie, broker Michael J. Bergner says. The total sale price is \$5.5 million for WAXT-AM-FM from Clearwater Enterprises, WERK-FM and WLHN-FM from Dream Weaver Broadcasting and wwwo(FM) from Viking Communications. One of the principals in Indiana Radio Partners is former ABC Radio Networks President Aaron Daniels.

In Harrisburg, Citadel Communications Corp. said it will pay \$4.5 million for Zeve Broadcasting Co.'s WHYL-AM-FM, bringing the company's holdings there to five stations. All deals are subject to FCC approval. —Elizabeth A. Rathbun

Seller: Viking Communications, Muncie, Ind. (Judy Kvale, principal); no other broadcast interests

Facilities: 93.5 mhz, 3.04 kw, ant. 456 ft.

Format: Classic rock

Broker: Bergner & Co.

WPTG(FM) West Point, Va.

Price: \$1 million

Buyer: Colonial Broadcasting LLC, Glen Allen, Va. (James E. Campana, managing member); Campana also owns 25% of a construction permit for WSRV(FM) Deltaville, Va.

Seller: Real Radio Inc., Williamsburg, Va. (Gilinda Rogers, president); no other broadcast interests

Facilities: 107.9 mhz, 6 kw, ant. 328 ft.

Format: Hot country

WTUS(FM) Mannington, W.V.

Price: \$340,000

Buyer: Burbach Broadcasting Co. of Delaware, Carnegie, Pa. (Nicholas A. Galli, president); also owns three AMs and three FMs

Seller: Summit Media Broadcasting LLC, Fairmont, W.Va. (N. Al Sergi, principal); no other broadcast interests

Facilities: 102.7 mhz, 3.21 kw, ant. 453 ft.

Format: Country

WLWJ(FM) Masontown, Pa.

Price: \$250,000

Buyer: Bible Broadcasting Network Inc., Charlotte, N.C. (Lowell L. Davey, president); also owns/is buying three AMs and 27 FMs

Seller: He's Alive Inc., Grantsville, Md. (Dewayne Johnson, president); also owns six FMs

Facilities: 88.5 mhz, 16 kw, ant. 304 feet

Format: Religious

KCOU(FM) Columbia, Mo.

Price: \$80,000

Buyer: The Curators of the University of Missouri, Columbia, Mo. (Theodore C. Beckett, president); also own five FMs

Seller: The Independent Residence

Halls Association, Columbia, Mo. (Dennis Larimer, general manager); no other broadcast interests

Facilities: 88.1 mhz, 435 w, ant. 110 ft.

Format: Progressive rock

KHOY(FM) Laredo, Tex.

Price: \$1,000

Buyer: Laredo Catholic Communications, Laredo, Tex. (Rebecca C. Sepulveda, president); no other broadcast interests

Seller: Diocesan Telecommunications Corp., Corpus Christi, Tex. (Bennett McBride, general manager); also owns KLUX(FM) Robstown, Tex.

Facilities: 88.1 mhz, 1.8 kw, ant. 575 ft.

Format: AC

AMS

WLQY(AM) Hollywood, Fla.

Price: \$5.65 million

Buyer: Z Spanish Radio, Sacramento, Calif. (Amador S. Bustos, president); also owns seven AMs and 15 FMs; Bustos also owns KZSJ(AM) San Martin, Calif., 20% of Hispanic Media Group Inc. (KAFY[AM] Bakersfield, Calif.) and 40% of J.B. Broadcasting Inc. (KZMS[FM] Patterson, Calif.)

Seller: Genesis Communications II Inc., Atlanta (Bruce Manduri, president; Starter Enterprises Inc. is sole stockholder); Starter also owns Genesis Communications I Inc. (three AMs), Genesis Communications of Tampa Bay Inc. (wwba[AM] Pinellas Park, Fla.); Manduri also owns 50% of BCM Media Inc. (wsga[AM] Savannah, Ga.)

Facilities: 1320 khz, 5 kw

Format: Religious

—Compiled by Alisa Holmes

Amplification

Mayville Communications Inc.'s purchase of wwrs-TV Mayville, Wis., for \$3.3 million (B&C, Oct. 26) was brokered by Fox Media.

RADIO

HELP WANTED MANAGEMENT

General Manager/General Sales Manager. Burbach Broadcasting Company is seeking qualified candidates for management positions in its Pennsylvania, Ohio and West Virginia Radio station operations. Qualifications: prior GM or strong GSM, extensive sales background and leadership abilities. Multipart compensation and benefits package. Excellent opportunity for the right individual. Please forward your resume and references to: Nicholas A. Galli, President, Burbach Broadcasting Company, 104 Broadway Ave., Carnegie, PA 15106. EEOC.

HELP WANTED ALL POSITIONS

Wanted: Applicants for Broadcast Industry Opportunities - All Positions. The members of the New Hampshire Association of Broadcasters (NHAB) are committed to the FCC's goals of non-discrimination and affirmative action. Post resumes on the NHAB web page at www.nhab.org Or mail resumes to: New Hampshire Association of Broadcasters, Attn: Job Bank, 10 Chestnut Drive, Bedford, NH 03110. The members of the NHAB are Equal Opportunity Employers. Please specify the position(s) you wish to be considered for. No phone calls.

SITUATIONS WANTED MANAGEMENT

How can I help your operation? Complete small-medium market background includes programming, sales, sales training, management, ownership, multi-station operation. Michael 308-384-6453.

SUBCARRIER LEASE

Subcarrier available. WNYE-FM, New York. 91.5 Mhz. 20 KW. Data/Paging Services only. Contact: Frank Sobrino (718) 250-5829.

PROGRAMMING SERVICES

"FAMILY HEALTH"™-Free 2 1/2-minute health radio series produced at Ohio University. For a demo, phone 1-800-381-1251. Online at <http://www.fhradio.org>.

TELEVISION

HELP WANTED MANAGEMENT

WNOL-TV is seeking a General Manager. Qualified applicants must have a strong background in television sales and marketing with a minimum of 5 years management experience and a track record of success. Please send resume and references to A. Oliva, WNOL-TV, 1661 Canal Street, New Orleans, LA 70112. No phone calls. Deadline: December 11, 1998. EOE.

Group owner has an immediate opening for a General Manager in a top 30 Southeastern market. Station is a big four affiliate. Candidates must have a successful record of accomplishment through strong leadership, especially in Sales and News. We are looking for a leader who can and will take us to the next level. Reply to Box 01454 EOE.

General Manager. WHTM-TV, ABC affiliate in the Harrisburg-Lancaster-Lebanon-York, PA market, needs an experienced, hands-on leader for our successful operation. Hyphenated market presents challenges for individual with previous track record of success. Solid station in an attractive market, owned by an aggressive, growing group. Market experience helpful, strong management background a necessity. Send resume, cover letter and salary history to Ray P. Grimes, II, WHTM-TV, 3235 Hoffman Street, Harrisburg, PA 17110. No phone calls, please. EOE M/F.

General Manager. Top 50 WB affiliate is searching for a General Manager. Qualified applicants must have a minimum of 5 years experience in management also a strong background in television sales and marketing. Please send resume and references to Box 01463 EOE. Deadline: December 10, 1998.

General Manager/General Sales Manager. Pappas Telecasting Companies is currently accepting applications for the position of General Manager/General Sales Manager for Sioux City, Iowa, KPTH-TV, Channel 44, a new FOX affiliate scheduled to launch in the first quarter of 1999. The successful candidate will recruit, hire and lead a new staff of broadcast professionals. The position requires keen leadership skills, superior sales management experience, strategic planning and analytical expertise and team building capabilities. Please send or fax your resume to: KPTM FOX 42, Attention: Personnel Department, 4625 Farnam Street, Omaha, Nebraska 68132. Fax: 402-554-4290. Applications will be accepted until the position is filled. No phone calls please. EOE.



VICE PRESIDENT, AFFILIATE RELATIONS The WeB

The WeB, The WB Television Network's 100+ station group, is looking for an experienced leader to become part of our innovative new senior management team. You must have a strong advertising sales background, exceptional presentation and communication skills, the talent to foster solid relationships with station group owners and general managers across the country and the ability to manage staff both in person and while traveling. If you are computer literate, think outside the box and on your feet and can maximize non-traditional revenue opportunities, please rush your resume and salary history to:



Job #ARWEB
Human Resources
The WB/The WeB
4000 Warner Blvd., Bldg 34R
Burbank, CA 91522
Fax No.: 818-977-7003



E-mail: wbnetworkjobs@warnerbros.com

No phone calls, please.

Equal Opportunity Employer

GENERAL MANAGER / CEO

WJCT, located in Jacksonville, Florida, one of the southeast's premier public telecommunications centers, is seeking an experienced/proven leader at senior management level to direct future growth of television and radio stations. Must be skilled professional with vision in national production and multi-media technology. Development/marketing, sales, and community service experience required. Undergraduate degree or equivalent required; advanced degree preferred. Strong communicator. Salary negotiable.

Send resume, postmarked no later than December 15, 1998, to:

James Stewart
The Stewart Group
201 ATP Tour Boulevard
Ponte Vedra Beach, Florida 32082
Equal Opportunity Employer M/F/V/D

HELP WANTED SALES

WTTA in Tampa, FL is looking for a GSM. Responsibilities include overseeing both local and national sales, strategic planning, sales and marketing promotions and putting together a sales management team. WTTA will be Tampa's Warner Brothers affiliate next year, and we're looking for a leader. If you're interested in competing in the nation's 14th largest market, then please send your resume to WTTA-TV 38, 5510 W. Gray St., Suite 38, Tampa, FL 33609-1016. Attn: Steve Marks.

Underwriting Account Executive. Nation's fastest growing public station seeks aggressive salesperson to energize radio/TV underwriting. Currently 50% over last year's sales pace. Be a part of our success, and enjoy our South Florida sunshine! Salary + commission. Reply to WXEL-TV/FM, Human Resources, PO Box 6607, West Palm Beach, FL 33405. EOE.

Local Account Executive. Minimum one-year experience in local TV station or national rep firm sales. Send resume to WBZL-TV, 2055 Lee Street, Hollywood, FL 33021. No phone calls please.

**Responding to a
Blind Box ad?**

Easy enough!
Just mail your resume to:

**Broadcasting & Cable
Box # _____
245 W. 17th Street
New York, NY 10011**

Traffic Manager. Hearst-Argyle Television Station and #1 affiliate in Monterey/Salinas market is seeking a Traffic Manager to direct and administer all functions of a department of three. Accuracy and efficiency is imperative! Columbine AS400 is in place. Must have strong analytical skills and be detail oriented with solid communication skills. Three to five years experience required. Send resume to: Wendy Hillan, GSM. Attn: BC, KSBW, PO Box 81651, Salinas, CA 93912. EOE.

National/Regional Sales Manager Position. Experience preferred. Communication and negotiating skills, positive attitude a must. Experience with TVWORKS and Bias a plus. Send salary requirements and resume to General Manager, KECI-TV, Box 5268, Missoula, MT 59806. EOE.

National TV Advertising Sales Assistant Wanted: Leading national TV production/media marketing company seeks sports-oriented TV advertising sales assistant to be based in Atlanta headquarters. Fortune 1000 sales experience a must. ESPN, TBS, FOX network a plus. Fax resume to Mr. Bonner at (770) 487-9614.

National TV Advertising Rep Wanted: Leading national TV production/media marketing company seeks sports-oriented TV advertising sales representative to be based in Atlanta headquarters. Fortune 1000 sales experience a must. ESPN, TBS, FOX network background a plus. Generous compensation package. Fax resume to Mr. Bonner at (770) 487-9614.

Local Sales Manager: UPN38 WSBK-TV Boston, a Paramount Stations Group owned station, is seeking an individual with proven leadership, organizational and communications skills to direct our local team. Knowledge of TvScan, Scarborough and BIAS is beneficial. Minimum of three years broadcast sales experience; management experience is a plus. Please send cover letter and resume to: WSBK-TV UPN38, Dept. 13, 83 Leo Birmingham Pkwy., Boston, MA 02135. EOE.

Local Sales Manager-WMC TV. Successfully motivate local sales to incremental revenue growth through tradition and non-traditional selling. Must be able to plan and execute sales strategies, projects, pricing, package and incentive programs. Must direct departmental functions: hiring, training, evaluations and prepare and submit revenue budgets for Local Sales. Please send resume to: LSM, WMC Stations, 1960 Union, Memphis, TN 38104. Must be able to pass drug test.

General Sales Manager. The Paramount Stations Group has an immediate opening for a general sales manager with a proven track record for proposed TV station acquisition in Pittsburgh, PA. The person we're looking for should have 5+ years experience in inventory control, budgeting, forecasting, sales promotion, new business development, sales research, sales personnel recruitment and management, local and national client relations. Forward letter of application and resume to GSM-Pitt., Dept. 578, WPSG, UPN 57, 420 N. 20th Street, Philadelphia, PA 19130. We are an Equal Opportunity Employer.

General Sales Manager. Pappas Telecasting seeks a sales leader for its "Nebraska Television Network" stations. The network consists of two heavily news oriented ABC affiliates and two emerging FOX stations (LMA) in the Lincoln/Kearney/Hastings (101) market. Our ideal candidate will have strong leadership and organizational skills for use in directing the exciting growth of our stations. A strong local/regional and developmental bias along with 5 years experience in sales management will give you the background for success in this job. General sales management experience would be a plus...but an able and ready local manager might be successful. This is a terrific opportunity to have a major role in an exciting, growing situation. Please apply to: Stephen Morris, General Manager, Nebraska Television Network, Box 220, Kearney, NE 68848. 308-743-2494. Pappas Telecasting is an Equal Opportunity Employer.

Account Executive. UPN38 WSBK-TV Boston, a Paramount Stations Group owned station, is seeking a highly motivated salesperson who is organized and possesses new business development skills. One to three years broadcast sales experience. Computer skills are essential, knowledge of TvScan/Scarborough is preferred. Please submit resumes: WSBK-TV UPN38, Dept. 13, 83 Leo Birmingham Parkway, Boston, MA 02135. EOE.

ABC affiliate WTVO in Rockford, Illinois is looking for a General Sales Manager with strong developmental know-how, demonstrated inventory control skills, and the ability to lead a team of champions. Experience with qualitative research and promotion as tools for market growth is a plus. Resumes to: Human Resources, c/o WTVO-TV, PO Box 470, 1917 N. Meridian Road, Rockford, IL 61105.

HELP WANTED TECHNICAL

Assistant Chief Engineer. WTTA-TV in Tampa, FL is seeking an ACE with sound digital experience. Our buildout and conversion to an all digital plant will require experience with the analog world, and a future with the digital. The successful candidate will have experience with installation, operation and maintenance of video servers, automation and LAN administration. In addition, the candidate will need to be able to assist the Chief Engineer with training and supervision of master control technicians, and will need to assist with component level repair on studio and UHF transmitter equipment - as well as have knowledge of FCC rules and regulations. Please send resume to: WTTA-TV, 5510 W. Gray St., Suite 38, Tampa, FL 33609. No phone calls please.

Chief Engineer. WCBD-TV, the Media General station in Charleston, South Carolina has an immediate opening for a Chief Engineer. Successful candidate will have 3-5 years solid experience as a chief or assistant chief. Should be thoroughly familiar with transmitter operations and maintenance, studio operations, FCC regulations. Computer literacy a must. Send or fax resume and salary requirements to WCBD-TV, Personnel Department, 210 West Coleman Blvd., Mt. Pleasant, SC 29464. Fax 843-881-3410. M/F. EOE, pre-employment drug test required.



SYSTEMS ENGINEER, The WeB Affiliates

The WeB, The WB Television Network's new consortium of tv stations - is seeking an experienced technical professional to join our revolutionary new venture. In our state-of-the-art new digital Broadcast Operations Center, you will be responsible for evaluating and solving technical issues related to The WeB's affiliated cable distribution system while establishing a methodology for performance measurement and technical support troubleshooting procedures. You will develop strong working relationships with our cable tv affiliates' technical staffs as well as with hardware and software suppliers as required. Strong knowledge of satellite and computer technology/operations as well as broadcast cable tv industry required. Experience in digital video compression preferred, strong desire to expand your knowledge in cable tv technology preferred. BA/BS degree required along with a minimum of 8 years experience in a technical job function, understanding of Windows NT environments, computer literacy and familiarity with Crystal reports, cc:mail, Word and Excel.

If this is the professional challenge you've been waiting for, please send your resume and salary history to:



Jcb #AFFENG
Human Resources
The WB/The WeB
4000 Warner Blvd., Bldg 34R
Burbank, CA 91522
Fax No.: 818-977-7003
E-mail: wbnetworkjobs@warnerbros.com



No phone calls, please.

Equal Opportunity Employer

Broadcast/IT Engineer. Location: New York, NY. *Responsibilities:* With the Chief Engineer, provides daily IT system support to the APTN Broadcast Services Center in New York and APTN news offices in Washington, Los Angeles and Miami. *Qualifications:* Must have a minimum of 3 years experience in the broadcast industry, with knowledge of a wide range of broadcast equipment, including studios, Betacam VTRs and edit suites and Master Control systems. Must also have thorough knowledge of IT, including PC support, LAN/WAN and software applications support. Must have excellent interpersonal skills and the ability to work well as part of a small team under the pressure of an on-air environment. Some domestic and international travel required. *To Apply:* Send cover letter and resume to Chris Stocking, International Television Manager, APTN, Suite 710, 1825 K Street NW, Washington, DC 20006. The AP is an equal opportunity/affirmative action employer. M/F/V/D.

Chief Engineer. WBTW-TV13, the CBS affiliate in Florence/Myrtle Beach, SC and the dominant news operation in the market, has an immediate opening for a Chief Engineer. The individual chosen will have experience as Chief or Assistant Chief, be familiar with studio and transmitter maintenance, and know the administrative aspects of running an engineering department, including project management and capital. The ideal candidate will have a degree in electronics (BSEE preferred, ASEE or ASEET acceptable) and/or military electronics experience and hold SBE certification. Mail or fax letter of application with resume to: Bob Richardson, Dir. of Engineering, Spartan Communications, Inc., PO Box 1717, Spartanburg, SC 29304. Fax 864-595-4605. Spartan Communications is an EOE and encourages minority and female applicants.

Chief Engineer. Candidate must possess strong skills and at least 5 years of studio maintenance experience. UHF transmitter experience a must. Strong computer background is required with an emphasis on networking. Will be responsible for the evaluation, procurement, and installation of station equipment. Ensure station compliance with FCC rules and company technical policies. Must have good management and communication skills. Send resume and salary requirements to Human Resources, WUPW FOX 36, Four Seagate, Toledo, OH. WUPW is an EOE.

Chief Engineer. Location: New York, NY. *Responsibilities:* Provides engineering support to the APTN Broadcast Services Center in New York and APTN Engineering team in news offices in Washington, Los Angeles and Miami. With the APTN Engineering team in London, coordinates day-to-day technical operations and plans future developments for the Center and the news offices. Supervises Broadcast/ IT engineer and oversees the MCR operations. Some international and domestic travel required. *Qualifications:* Must have minimum of 6 years experience in the broadcast industry, with detailed system and component-level knowledge of Studio equipment, Master Control systems, satellite and terrestrial transmissions, Betacam VTRs and edit suites, ENG equipment and computer systems. Must be able to work independently and supervise staff. Must possess excellent interpersonal skills to deal with internal departments and a wide range of international clients. *To Apply:* Send ENG cover letter and resume to Chris Stocking, International Television Manager, APTN, Suite 710, 1825 K Street NW, Washington, DC 20006. The AP is an equal opportunity/affirmative action employer. M/F/V/D.

Director of Engineering. KUSA-TV, Denver, Colorado, a leading NBC affiliate owned by Gannett Co. Inc., is seeking an experienced Director of Engineering. Qualified candidates will bring 3+ years of supervisory experience in a large broadcast engineering department. Responsible for supervising operations, maintenance and engineering functions. Reviews work schedules, coordinates cross training, supervises staff reviews and interfaces with vendors. Will oversee development of digital television service and the ultimate construction of a new digital television plant and transmitter. We offer an excellent salary and benefits package. Please send your cover letter with salary requirements and resume to Manager of Human Resources, KUSA-TV, 500 Speer Boulevard, Denver, CO 80203. Email to careers@9news.com or fax to 303-871-1739. Gannett is an Equal Opportunity Employer.

ENG/SNG Engineer. Come work for the most aggressive news station in New England. Positions are now open. Live news coverage, a multitude of sporting events and special programming are all part of the mix as we continue to grow our live and on the road programming. If you are a road warrior looking to go live with at least 2 years experience, send your resume today. Reply to Box 01461 EOE.

Master Control Operator. Come work for the most aggressive news station in New England. Positions are now open. Responsibilities include spot insertion, taking feeds and coordinating live ENG and SNG receive. If you can multi-task while paying close attention to details, send your resume today. Reply to Box 01460 EOE.

Senior Engineering Manager- Major market broadcaster is looking for an experienced senior engineer with strong management skills. The candidate should have a minimum of 10 years immediate experience in network affiliate television with a strong emphasis on a competitive news product. Leadership skills are a must as this individual will be responsible for major projects including the transition to DTV. Working knowledge of all components of the broadcast television signal path along with appropriate educational background and industry certification is expected. Forward background and experience along with compensation history and expectations to Box 01464. EEO employer M/F. Pre-employment drug test required.

Studio Engineer. Come work for the most aggressive news station in New England. Positions are now open. The right candidate will have experience installing and maintaining a diverse complement of analog and digital studio equipment. You'll work with a full range of formats including NTSC, SMPTE 259 and 292, MPEG-2 and more. An understanding of computer networking is a plus. Five years experience in a fast paced news environment preferred. Reply to Box 01459 EOE.

Studio/RF Maintenance Technician. ABC6 WLNE-TV has a full-time opening for Studio/RF Maintenance Technician. Qualified applicant should be well versed in all aspects of studio and ENG maintenance, as well as having VHF transmitter maintenance experience. The ideal applicant will have the ability and attitude it takes to maintain a broadcast television station. Applicants should send a cover letter and resume to WLNE-TV, Attn: Director of Engineering and Operations, 10 Orms Street, Providence, RI 02904. EOE.

TV Maintenance Engineer. KTTC-TV is looking for a highly motivated engineer. The ideal candidate will have computer skills, facility design and experience in all types of studio equipment, including S-VHS, 1", DVC PRO, switcher, routers, etc. Candidate should also have UHF/VHF transmitter and microwave experience. FCC license or equivalent. Excellent group with benefits. Fax resume and cover letter to: Director of Engineering at 507-288-6324 or send to KTTC-TV, 601 1st Avenue. SW, Rochester, MN 55902. EOE.

HELP WANTED NEWS

We need a creative genius with top-notch organizational skills to take charge of Special Projects at San Diego's #1 news station. Duties include managing a 4 person investigation unit, 3 person Consumer Team, and 2 person Medical team. You will also be in charge of planning and coordinating sweeps series. Minimum 3 years producing/field producing required. Management experience preferred. Please send resume and tape to: Ms. Pamela Sanchez, Human Resources, KFMB-TV, 7677 Engineer Road, San Diego, CA 92111.

You can simply fax
your classified ad to
Broadcasting & Cable
at (212)206-8327.

WGNX, CBS in Atlanta seeks News Producer. Candidates should possess excellent writing skills, news judgement, creativity and ability to visualize top-notch graphic packaging. Three to five years line producing experience as well as an undergraduate degree in journalism or communications is required. Send resume and non-returnable tape to: Nicole Thibault, Executive Producer, WGNX, 1810 Briarcliff Road, NE, Atlanta, GA 30329. Phone: 404-327-3212. EOE. A Tribune Station.

WFMJ Television has an immediate opening for a full time morning newscast producer. We are upbeat and lively, but take our news seriously. Candidates must possess previous television news producing experience. Send tape and resume to Mona Alexander, News Director, WFMJ Television, Inc., 101 W. Boardman Street, Youngstown, OH 44503. No phone calls.

Univision 33 has an immediate opening for a Newsroom leader, an experienced journalist with the ability to lead and motivate a team. Capable of communicating a clear news vision, skilled in news judgement decisions and deployment of personnel. Skilled in the use and placement of promotions. Should be knowledgeable of technical equipment and its applications with keen interest in technological development. Efficient in the use of resources and with a clear aptitude for managing all budgeting aspects of a news operation, including long term forecasting. A vocal upper management participant to clearly keep the News Department needs on the forefront of station growth. Bilingual English/Spanish is preferred. Candidates with a love for the business should respond with resume/tape/letter of interest to: General Manager, Univision 33, 3019 E. Southern Avenue, Phoenix, AZ 85040. EOE.

Television Director: The International Broadcasting Bureau an international TV/Radio service of the U.S. government, is seeking candidates for full-time employment as a TV Production Specialist at WORLDNET TV & Film Service in Washington D.C. Extensive experience as a director of news and information programs in a major television commercial market is required. Starting salaries range from \$55,969 to \$72,758. *Candidates must be fluent in English and Mandarin.* Call 202-619-3117 for a complete listings of the qualifications requirements, including special rating factors that *must be addressed* and instructions on how to apply. Send a completed application and a non-returnable aircheck with directors track by the close of business or postmarked by December 4, 1998 to: International Broadcasting Bureau, Office of Personnel, Room 1543, Attn: Susan King, 330 Independence Ave., SW, Washington D.C. 20547.

Senior Director. KGUN 9 (ABC), Tucson, AZ is searching for an experienced, team leader to direct our 5:00 and 10:00 pm news hours. At least two years experience directing newscasts. Minimum of two-year degree, four-year degree preferred. Excellent communication and supervisory skills required. Send current week's tape and resume by *November 30, 1998* to: KGUN 9 Television, Attn: Human Resources, 7280 E. Rosewood St., Tucson, AZ 85710. It is the policy of this station not to discriminate in its employment policies and practices because of a person's race, color, religion, sex, age, national origin or disability. The Federal Communication Commission specifically prohibits discriminatory employment practices.

Reporter. WAVY News 10 is looking for an aggressive weeknight reporter who loves live shots. The ideal candidate will be an aggressive journalist who can enterprise a story yet jump directly into spot news when duty calls. You must be a self-starter with at least 3 years reporting experience. No beginners! Send non-returnable VHS tape and resume to David T. Strickland, News Director, WAVY-TV, 300 Wavy Street, Portsmouth, VA 23704. No phone calls please! WAVY News 10 is an Equal Opportunity Employer.

Producer/Director. WSPA-TV seeks creative eye to work with great equipment at top notch facility-market 35. Experience at directing live newscasts. Have opportunity to write, shoot, edit, light and produce psas, promos, specials. Problem solver, self-starter, team player! Send resume and tape: Bill Walton, Production Supervisor, WSPA-TV, 250 International Dr., Spartanburg, SC 29303. Pre-employment drug test required. EOE/M/F/D/V.

Producer. WFTX-TV in the Ft. Myers/Naples market is seeking a producer for it's award winning newscasts. College degree and two years experience preferred. The successful candidate will be a leader and FOXIFIED. Send non-returnable tape and resume to FOX WFTX-TV, Mark Pierce, 621 SW Pine Island Road, Cape Coral, FL 33991. We are an Equal Opportunity Employer.

Photographer/Editor. WSOC-TV is looking for a creative hustler who loves breaking news and winning. We are a number one shop that needs go-getters in the field. If you are a photographer with a flair who wants to grow and learn please send your resume and tape to: WSOC-TV, Attn: Bill Bruce, News Operations Manager, Dept. 95, 1901 N. Tryon Street, Charlotte, NC 28206. No phone calls please. EOE M/F.

News Videographer. Full-time position. Shoot video for news stories and features. Must be personable and able to work without close supervision. Editing ability a must. Prefer a related degree and one year experience as a news videographer at a commercial television station. Not an entry level position. 1/2 VHS non-returnable samples. No phone calls please. Send resume or pick up application. Mail to: Dan Steele, Operations and Program Manager, WPSD-TV, PO Box 1197, Paducah, KY 42002-1197. M/F. EOE. ADA.

News Photographer. Join area's top news team. Requires solid news judgement plus videography and editing skills. Must have at least one year of TV news experience. Send resume and tape to Chief Photographer, WTVG, PO Box 1150, Chattanooga, TN 37401. Equal Opportunity Employer.

News Co Anchor. For 6 and 10pm newscasts. At least two years experience full time reporting and anchoring. Candidate will compliment our male co anchor. Excellent writing, personable on-air manner, and commitment to community are all of equal value. Send a non-returnable VHS tape to: News Director, KTTC-TV, Rochester, MN 55902. No phone calls please. EOE.

News Assignment Editor: Creative person to assign news stories, maintain story files, do beat checks, and develop potential stories. Previous news reporting or producing experience desired. No beginners please. Send resume and statement of news philosophy to: Mr. Mark Vittorio, News Director, WIFR-TV, PO Box 123, Rockford, Illinois 61105. Please no phone calls. EOE.

Executive Producer. Telemundo O&O in Los Angeles is looking for an Executive Producer who is ready to take on the challenge of leading our newscasts to new heights. The ideal candidate should have a minimum 3 to 5 years producing experience for a large market newsroom, and must be fluent in both the English and Spanish languages. The candidate must possess superb news judgement and be able to manage and inspire a diverse staff. We're looking for a creative producer who has the ability to take advantage of compelling video or stories. The candidate should possess working knowledge of state and community issues in Southern California. Submit resume to: KVEA-52, Attn: Human Resources Dept., 1139 Grand Central Ave., Glendale, CA 91201. Or fax to 818-502-5864. EOE. No phone calls please.

Director. Looking for experienced "take charge" person to direct our newscasts. Minimum two years directing experience required. Television Production degree preferred. Resume to: Jim Lueck, Chief Engineer/Operations, WLUK FOX 11, PO Box 19011, Green Bay, WI 54307-9011. EOE.

Bureau Reporter/Photographer. WSOC-TV is looking for a multi-talented storyteller to run one of our bureaus. This person is responsible for making contacts and generating story ideas from this area of our market. This person should be able to shoot and edit as well as deliver on-camera. If you can do the job, please contact: Robin Whitmeyer, Senior Executive Producer News and Special Projects, WSOC-TV, Dept. 95, 1901 N. Tryon Street, Charlotte, NC 28206. No phone calls please. EOE M/F.

HELP WANTED PROMOTION

Director of Advertising and Promotion. WTHI-TV, a CBS affiliate in Terre Haute, Indiana--and the number one station in the market--is looking for a hands-on person to direct its promotion and community service department. Responsible for on- and off-air promotion, media buying and branding. The ideal candidate should have a strong background in news, station and program promotion. Strong writing and hands on producing skills are a must. If you are ready to manage a department of four employees with your own AVID system, send tape and resume to Human Resources, WTHI-TV, 918 Ohio St., PO 1486, Terre Haute, IN 47808. WTHI-TV is an Equal Opportunity Employer.

ACME Television, one of the fastest growing broadcast groups in the nation, currently 6 WB affiliates and counting, is seeking a Creative Director to oversee Promotion and Production for its Salt Lake City affiliate. Must have extensive television promotion experience, independent background preferred, radio background a plus, and Kids' Club experience a necessity. Looking for extensive managerial experience, strong organizational skills, work well with clients and computer literate (Media 100 background a plus). We are an EEO employer, minorities, women, and Vietnam Vets are encouraged to apply. Send resume and tape to: Human Resources, 6135 South Stratter Street, Murray, UT 84107. No phone calls please.

HELP WANTED FINANCIAL & ACCOUNTING

Director of Finance. New Mexico Broadcasting is searching for an experienced broadcast financial manager to oversee accounting and financial management for our flagship CBS station KRQE located in beautiful Albuquerque and for satellite operations KBIM (Roswell), KREZ (Durango), and for independents KZIA (El Paso) and KASY (Albuquerque). We need an individual who can analyze and recommend solutions to business opportunities and strategies, and function as the internal financial consultant to the management team. The successful candidate will have the knowledge and experience to take a proactive roll in analyzing revenue and expense forecasts, inventory and rates, rating performance, and in building databases to provide critical information for managers. The Director of Finance will manage the Business Development, have overall responsibility for accounting and will report to the General Manager of New Mexico Broadcasting. This position involves on-site financial and budgeting assistance to the satellite operation's managers with frequent travel expected. The successful candidate will have a B.A. in Accounting or Finance and a minimum of five years accounting or financial management experience. Broadcast operations experience is required. Individual to assist in evaluating program acquisition, market share performance and yield management/inventory control. Send resume and letter of interest to: Fran Perea, Human Resources Director, KRQE, 13 Broadcast Plaza, SW, Albuquerque, NM 87104. Fax: 505-243-0883. CBS-KRQE-TV13 offers the opportunity to join a successful company, which includes a highly competitive salary and comprehensive benefit package. EEO M/F/D/V.

HELP WANTED CREATIVE SERVICES

Design Director. KPIX-TV CBS O&O, San Francisco. Are you an experienced pro and veteran of the news wars? Are you known for your outstanding creativity and leadership? Are you ready for the 5th market and the country's best city? Then this is your opportunity to join the best team in the business. Rush your tape and resume to: Brian Blum, Marketing Director, KPIX-TV, 855 Battery St., San Francisco, CA 94111.

HELP WANTED PRODUCTION

Post-Production Editor. KOTV, a member of the 17 station A.H. Belo group, is seeking a full-time, Post Production Editor with 1 to 2 years experience to post promos and spots. We're well equipped w/GVG 141, GVG 250, GVG Kaleidoscope, Quantel Paintbox and Picturebox, Digital Betacam, Chyron MAX, and an AVID arriving next month. We're looking for great technical strength, positive attitude, and the creativity to match. Rush letter of application, resume, and non-returnable demo reel to: Personnel Dept., KOTV, PO Box 6, Tulsa, OK 74101. EOE M/F. an A.H. Belo Broadcasting Company.

Post Production Editor. Kelly Broadcasting is seeking a Post Production Editor. The candidate must be a creative editor who can collaborate with Promotion producers on cutting edge spot production. The post facility is a multi format analog edit suite. A GVG VPE-351 editing systems, connected to a full production studio with cameras, computerized lighting grid and integrated audio currently operates it. Salary: DOE. Resume to: Kelly Broadcasting Company, Gene Robinson, Promotions Director, 3 Television Circle, Sacramento, CA 95814. No phone calls please. Position will be filled at earliest possible date. Employment is contingent upon passing a test for drug and alcohol use. EOE/M/F/ADA.

Graphic Designer. NBC's number one rated affiliate seeks experienced designer to join our creative team. We work on a wide variety of projects where the goal is quality design, not quantity. If you want to be an integral part of a creative team, then we want to see your best work. Please send a tape and resume to: KSDK-TV, Human Resource Administrator, 1000 Market St., St. Louis, MO 63101. No calls please. EOE.

Christian TV Producer for teaching/talk shows of Happy and Jeanne Caldwell. Programs are flagship shows for The Victory Television Network, a growing network of full power television stations spreading the Good News of Jesus Christ. This position requires an experienced, creative, hands-on individual who will oversee all aspects of production. Take the initiative and make your mark! Send tape and resume (no calls please) to Terry Thrums, Victory Television Network, 701 Napa Valley Drive, Little Rock, AR 72211.

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HELP WANTED NEWS

Foreign Language Sportscaster, Bristol, CT. Multiple openings; serve as foreign sports announcer for live play-by-play, news & background color on Portuguese language sportscasts to Brazil; flexible schedule: \$40k to \$100K/yr DOE. Must have bachelor's or equivalent in Journalism, Communications or related area plus 2 yrs.' experience in sports journalism/broadcasting; fluency in English and Brazilian Portuguese w/ good accent, including specialized sports vocabulary, general knowledge of soccer and variety of other popular telecast sports; good on-air language skills. Send resume and cover letter documenting qualifications to Attn: Job Order #3224229, Program Support, 3rd Fl., CT Dept. of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109. Applicants will be required to present proof of legal authority to work in the United States.

HELP WANTED RESEARCH

Research Manager. Bethesda-based Discovery Communications, Inc. seeks a Research Manager to perform audience analyses to help formulate programming, marketing and affiliate sales strategies as well as create audience estimates. 4yrs experience in TV audience analysis and familiarity with Nielsen ratings required. Strong report writing, math abilities and communication skills a must as well as proficiency in spreadsheet packages and graphics software. Send cover letter, resume and salary requirements to: Discovery Communications, Inc., c/o Ingrid Gorman, Director, Programming Research, 7700 Wisconsin Avenue, Bethesda, MD 20814. ingrid.gorman@discovery.com. No phone calls please.

ALLIED FIELDS

HELP WANTED INSTRUCTION

MANSHIP CHAIR IN MASS COMMUNICATION

Louisiana State University

The Manship School of Mass Communication at Louisiana State University seeks an accomplished media professional to fill its Manship Chair position for a two year appointment beginning fall, 1999. The successful applicant will teach graduate and undergraduate courses in such disciplines as reporting, editing, media management, and innovative technology. A terminal degree, professional graduate degree, or equivalent professional experience is required.

LSU is a Research I flagship institution located in the state capital. Review of applications will begin January 4, 1999, and continue until the position is filled. Submissions must include a letter of application, a current vita, and the names and contact information for three references. Applications should be sent to: Professor George J. Lockwood, Chair, Search Committee, Manship School of Mass Communication, Louisiana State University, Ref: #010007, Baton Rouge, LA 70803-7202; (225) 388-2223.

LSU is an Equal Opportunity/ Equal Access Employer

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Two tenure-track faculty positions at the rank of assistant professor in the School of Communication's Journalism Division, beginning Fall 1999, to teach undergraduate and graduate courses in full-time and weekend programs. *Responsibilities:* Teach an average five-course load per year; advise students; continue creative, professional, and scholarly work; participate in School and University activities and governance. Teaching responsibilities will be in both (1) professional courses, such as reporting and editing, and (2) broad-based lecture courses emphasizing the social, political, and economic impact of the media. In the broadcast position, teaching responsibilities may include radio and television news writing, field and studio production, and on-air talent skills. Some Saturday teaching may be required in both positions. *Qualifications:* Substantial professional experience required, with national reporting experience desired for the position in print, experience with new media desired. Teaching experience at the college or university level required. M.A. degree in relevant discipline required; a second language desired. For the position in broadcast, experience in producing radio and television newscasts required, and familiarity with new media and digital editing desired. For the position in print, experience with new media desired. *Rank and Salary:* The successful candidates will be appointed at the rank of assistant professor. Salary is negotiable, depending on qualifications and experience. Review of applications will begin January 15, 1999, and continue until the positions are filled. *The School:* The School of Communication has 750 undergraduate majors and 300 graduate students in three divisions: Journalism, Public Communication, and Visual Media. *Application:* Curriculum vitae/resume and three letters of recommendation should be sent to: Journalism Search, School of Communication, American University, 4400 Massachusetts Avenue, N.W., Washington, DC 20016-8017. *Faculty Position in Visual Media:* A tenure track faculty position at the rank of assistant professor in the School of Communication's Visual Media Division beginning Fall 1999, to teach undergraduate and graduate courses in full-time and weekend programs. *Responsibilities:* Teach an average five-course load per year; advise students; assist in facilities and equipment management; continue creative, professional or scholarly work; participate in School and University activities and governance. Teaching responsibilities will be primarily in the area of visual media, including courses in production, screenwriting, producing, and media studies. Production areas could include basic and advanced film production, video production, and photography. Media studies sources could include media history, theory as it relates to practice, and visual literacy. Other courses could include producing for feature film and documentaries, production planning and management, and financing and marketing independent productions. Some Saturday teaching may be required. *Qualifications:* Substantial professional production experience in visual media is desired. Teaching experience at the college or university level is required. Teaching experience at the college or university level is required. MA degree in relevant discipline required, MFA or PHD is desirable. *Rank and Salary:* The successful candidate will be appointed at the rank of assistant professor. Salary is negotiable, depending on qualifications and experience. *The School:* The School of Communication has 750 undergraduate majors and 300 graduate students in three divisions: Journalism, Public Communication, and Visual Media. *Application:* Curriculum vitae/resume and three letters of recommendation should be sent to: Visual Media Search, School of Communication, American University, 4400 Massachusetts Avenue, N.W., Washington, D.C. 20016-8017. The American University is an equal opportunity/affirmative action employer committed to a diverse faculty, staff and student body. Women and minorities are encouraged to apply.

HELP WANTED ADMINISTRATION

Broadcast Engineering, Assistant Administrator. The Educational Communications Board, partners in the Wisconsin Public Television and Radio services statewide, has an opening for a senior management positions as Assistant Administrator of the Delivery Division. Responsible for the day-to-day planning, development, and ongoing management of all delivery functions for statewide public radio, public television, satellite systems, ITFS, and Emergency Weather Service systems. This position will also have primary project responsibility for leading the network through the conversion to digital television and eventually digital radio. Successful applicants will have a degree in Electrical Engineering and 5-10 years of professional and managerial experience in broadcast engineering or equivalent. Preference will be given to applicants with a thorough knowledge of digital and emerging technologies and computer assisted systems. The salary range for this position is \$48,182 to \$77,464 and includes an excellent benefit package. Location: Madison, WI. For application materials contact ECB Personnel at (608) 264-9669. Applications must be returned by December 15, 1998. An Equal Opportunity Employer.

HELP WANTED FACULTY

Medill School of Journalism, Northwestern University, seeks superior television journalist of national stature, achievement and intellect for expanding school's leading-edge broadcast program. High level news and executive experience required. Teaching experience desired. Candidate should fit as comfortably into the classroom as the boardroom. Expect to teach both at the graduate and undergraduate level and play a major role in developing Medill's new multi-million dollar state-of-the-art production facility. Ability to lead research projects and obtain funding is an advantage. Ability to lead research projects and obtain funding is an advantage. Advanced academic degree desired. This is a full-time position as an associate or full professor. Applicant with sufficient stature and credentials could be hired with tenure. Northwestern University is an Affirmative Action, Equal Opportunity employer. Hiring is contingent of eligibility to work in the United States. In order to receive full consideration, applications must be received by Dec. 31, 1998. Anticipated start date is Sept. 1, 1999, but earlier employment is a possibility. Send letter and C.V. or resume to Prof. David Nelson, Chair, Search Committee, Medill School of Journalism, Northwestern University, 680 N. Lake Shore Drive, Suite 818, Chicago, IL 60611-4402.

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BROADCASTING & CABLE'S CLASSIFIED RATES

All orders to place classified ads & all correspondence pertaining to this section should be sent to BROADCASTING & CABLE, Classified Department, 245 West 17th Street, New York, NY 10011. For information call Antoinette Pellegrino at (212) 337-7073 or Francesca Mazzucca at (212)337-6962.

Payable in advance. Check, money order or credit card (Visa, Mastercard or American Express). Full and correct payment must be in writing by either letter or Fax (212) 206-8327. If payment is made by credit card, indicate card number, expiration date and daytime phone number.

Deadline is Monday at 5:00pm Eastern Time for the following Monday's issue. Earlier deadlines apply for issues published during a week containing a legal holiday. A special notice announcing the earlier deadline will be published. Orders, changes, and/or cancellations must be submitted in writing. NO TELEPHONE ORDERS, CHANGES, AND/OR CANCELLATIONS WILL BE ACCEPTED.

When placing an ad, indicate the EXACT category desired: Television, Radio, Cable or Allied Fields; Help Wanted or Situations Wanted; Management, Sales, News, etc. If this information is omitted, we will determine the appropriate category according to the copy. NO make goods will run if all information is not included. No personal ads.

The publisher is not responsible for errors in printing due to illegible copy—all copy must be clearly typed or printed. Any and all errors must be reported to the Classified Advertising Department within 7 days of publication date. No credits or make goods will be made on errors which do not materially affect the advertisement. Publisher reserves the right to alter classified copy to conform with the provisions of Title VII of the Civil Rights Act of 1964, as amended. Publisher reserves the right to abbreviate, alter or reject any copy.

Rates: Classified listings (non-display). Per issue: Help Wanted: \$2.50 per word, \$50 weekly minimum. Situations Wanted: 1.35¢ per word, \$27 weekly minimum. Optional formats: Bold Type: \$2.90 per word. Screened Background: \$3.00. Expanded Type: \$3.70 Bold. Screened, Expanded Type: \$4.20 per word. All other classifications: \$2.50 per word, \$50 weekly minimum.

Word count: Count each abbreviation, initial, single figure or group of figures or letters as one word each. Symbols such as 35mm, COD, PD etc., count as one word each. A phone number with area code and the zip code count as one word each.

Rates: Classified display (minimum 1 inch, upward in half inch increments). Per issue: Help Wanted: \$218 per inch. Situations Wanted: \$109 per inch. Public Notice & Business Opportunities advertising require display space. Agency commission only on display space (when camera-ready art is provided). Frequency rates available.

Color Classified Rates

Non-Display: Highlighted Position Title: \$75. Display: Logo 4/C: \$250. All 4/C: \$500.

Online Rates: \$50 additional to cost of ad in magazine

Blind Box Service: (In addition to basic advertising costs) Situations Wanted: No charge. All other classifications: \$35 per issue. The charge for the blind box service applies to advertisers running listings and display ads. Each advertisement must have a separate box number. BROADCASTING & CABLE will now forward tapes, but will not forward transcripts, portfolios, writing samples, or other oversized materials: such are returned to sender. Do not use folders, binders or the like. Replies to ads with Blind Box numbers should be addressed to: Box (number), c/o Broadcasting & Cable, 245 W. 17th Street, New York, NY 10011

Confidential Service. To protect your identity seal your reply in an envelope addressed to the box number. In a separate note list the companies and subsidiaries you do not want your reply to reach. Then, enclose both in a second envelope addressed to CONFIDENTIAL SERVICE, Broadcasting & Cable Magazine, at the address above.

Broadcasting & Cable Classifieds

Order Blank (Fax or Mail)

CLASSIFIED RATES

Display rate: Display ads are \$218 per column inch. Greater frequency rates are available in units of 1 inch or larger.

Non-Display rates: Non-Display classified rates (text only) are \$2.50 per word with a minimum charge of \$50 per advertisement. Situations Wanted rates are \$1.35 per word with a minimum charge of \$27 per advertisement.

Online Rates: \$50 additional to cost of ad in magazine

Blind Boxes: Add \$35.00 per advertisement

Deadlines: Copy must be in typewritten form by the Monday prior to publishing date.

Category:

Line ad ☐

Display ☐

Online:

1 Week ☐

2 Weeks ☐

Ad Copy: _____

Date(s) of insertion: _____

Amount enclosed: _____

Name: _____

Company: _____

Phone: _____ **Fax:** _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

Authorized Signature: _____

Payment:

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Credit Card #: _____

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The screenshot shows the homepage of Broadcasting & Cable Online. At the top, the logo reads "Broadcasting ONLINE & Cable". Below the logo is a search bar with a "SEARCH" button. To the left of the main content area is a sidebar with links: "Subscribers log in here", "TODAY'S UPDATE", "Online Daily", "Today's Job Bank", "Station Sales", "People", "Policy Briefing", "Industry Calendar", "SUBSCRIBE", and "THIS WEEK'S MAGAZINE". The main content area features "TODAY'S TOP STORIES" with a headline "Powell: Spectrum not scarce" and a sub-headline "Broadcast spectrum is no longer scarce says FCC Commissioner Michael Powell." To the right of the main content area is a sidebar with "BREAKING NEWS", "TOP OF THE NEWS" (listing Comedy Central's South Park), "TODAY'S JOB BANK" (with a "Select a Job" dropdown and a "Submit" button), and "Stock Watch" (with a "Get the latest stock information" link).

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Dec. 1-4—The Western Show, conference and exhibition presented by the **California Cable Television Association**. Anaheim Convention Center, Anaheim, Calif. Contact: (510) 428-2225.

Jan. 25-28, 1999—35th annual **National Association of Television Programming Executives** conference and exhibition. Ernest Morial Convention Center, New Orleans. Contact: (310) 453-4440.

April 19-20, 1999—**Television Bureau of Advertising** annual marketing conference. Las Vegas Hilton Hotel, Las Vegas. Contact: (212) 486-1111.

April 19-22, 1999—**National Association of Broadcasters** annual convention. Las Vegas Convention Center, Las Vegas. Contact: (202) 429-5300.

May 17-20, 1999—39th annual **Broadcast Cable Financial Management Association** conference. MGM Grand Hotel, Las Vegas. Contact: Mary Teister, (847) 296-0200.

June 13-16, 1999—Cable '99, 48th annual **National Cable Television Association** convention and exposition. McCormick Place, Chicago. Contact: Bobbie Boyd, (202) 775-3669.

THIS WEEK

Through Nov. 17—**National Association of Broadcasters** 1998 European Radio Conference. The Palace Hotel, Madrid. Contact: Mark Rebholz, (202) 429-3191.

Nov. 16-20—"Harris/PBS DTV Express," DTV dual seminar series featuring technical and business operations seminars presented by **Harris Corp.** and **PBS**. Miami. Contact: (888) 733-3883.

Nov. 17—"Covering Television: The Reporters Who Write About Television," **Hollywood Radio and Television Society** newsmaker luncheon. Beverly Hilton Hotel, Los Angeles. Contact: (818) 789-1182.

Nov. 18—"Kids TV: Around the World in a Day," screening of innovative children's television from round the world presented by the **American Center for Children's Television**. Goethe House, New York. Contact: David Kleeman, (847) 390-6499.

Nov. 18—**Cabletelevision Advertising Bureau** traffic and billing/sales automation business interest group regional workshop. Atlanta Marriott Suites Midtown, Atlanta. Contact: Nancy Lagos, (212) 508-1229.

Nov. 19—"Gender Differences: Leadership and Influence," seminar presented by **Women in Cable & Telecommunications**. Westin Tabor Center, Denver. Contact: Laurie Empen, (312) 634-2353.

Nov. 19—**Federal Communications Bar Association** Ninth Annual Charity Auction to benefit See Forever/The Maya Angelou Public Charter School. Grand Hyatt Hotel, Washington. Contact: Paula Friedman, (202) 736-8640.

Nov. 19—"Career Transitions," **International Radio & Television Society Foundation** under-30s seminar. NBC, 30 Rockefeller Plaza, New York City. Contact: Jim Cronin, (212) 867-6650.

Nov. 19-20—**Arizona Broadcasters Association** 46th annual convention and SBE exhibition. Tempe Mission Palms Hotel, Tempe, Ariz. Contact: Art Brooks, 602-274-1418.

Nov. 19-20—IDATE 98, **Institut de l'Audiovisuel et des Télécommunications en Europe** international conference. Le Corum, Montpellier, France. Contact: +33 (0)4 67 14 44 44.

Nov. 19-20—Third U.N. Television Forum, presented by the **International Council of NATAS**, **NHK** and **RAI**. United Nations Bldg., New York City. Contact: Linda Alexander, (212) 489-6969.

Nov. 20—19th annual **Broadcast Pioneers of the Washington Area** Awards Banquet. Kenwood Country Club, Bethesda, Md. Contact: Vince Curtis, (703) 812-0420.

NOVEMBER

Nov. 23—26th annual International Emmy Awards, presented by the **International Council of NATAS**. New York Hilton Hotel, New York City. Contact: Linda Alexander, (212) 489-6969.

Nov. 24—8th annual International Press Freedom Awards Dinner to benefit the **Committee to Protect Journalists**. Waldorf-Astoria, New York City. Contact: (212) 465-9344.

Nov. 24—**International Radio & Television Society Foundation** newsmaker luncheon featuring Wall Street media analysts. Waldorf-Astoria Hotel, New York City. Contact: Marilyn Ellis, (212) 867-6650.

Nov. 30-Dec. 1—"New Tools for the New Rules: Targeting Customers in a Competitive World," pre-Western Show workshop presented by **CTAM**. Anaheim Marriott Hotel, Anaheim, Calif. Contact: (703) 549-4200.

Nov. 30-Dec. 4—"Harris/PBS DTV Express," DTV dual seminar series featuring technical and business operations seminars presented by **Harris Corp.** and **PBS**. Norfolk, Va. Contact: (888) 733-3883.

DECEMBER

Dec. 1—**Cabletelevision Advertising Bureau** traffic and billing/sales automation business interest group regional workshop. Wyndham Los Angeles Airport, Los Angeles. Contact: Nancy Lagos, (212) 508-1229.

Dec. 1-3—"DTV4," digital TV forum and conference presented by **World Research Group**. Hotel Inter Continental, Los Angeles. Contact: (800) 647-7600.

Dec. 2—**Cabletelevision Advertising Bureau** local sales workshop. Anaheim Marriott, Anaheim, Calif. Contact: Pam Pearlman, (212) 508-1237.

Dec. 2-4—"Exploring Telecom Opportunities in Brazil," conference presented by **IBC USA Conferences Inc.** Westin Resort Miami Beach, Miami. Contact: (508) 481-6400.

Dec. 4—**Associated Press TV-Radio Association** station crawl. KGO Radio, San Francisco. Contact: Rachel Ambrose, (213) 626-1200.

Dec. 5—**Associated Press TV-Radio Association** station crawl. KDTV, San Francisco. Contact: Rachel Ambrose, (213) 626-1200.

Dec. 9—**CTAM** Washington-Baltimore chapter annual holiday party to benefit Ronald McDonald House Charities. Sequoia Restaurant, Washington. Contact: Anne Wolek, (703) 790-8107.

Dec. 10—**Hollywood Radio and Television Society** Holiday Party Benefit. Beverly Hilton Hotel, Los Angeles. Contact: (818) 789-1182.

Dec. 10-11—16th annual Telecommunications Policy and Regulation Conference, sponsored by the **Federal Communications Bar Association** and the **Practising Law Institute**. Washington Hilton Hotel, Washington. Contact: (800) 260-4754.

Dec. 14-18—"Harris/PBS DTV Express," DTV dual seminar series featuring technical and business operations seminars presented by **Harris Corp.** and **PBS**. Baton Rouge. Contact: (888) 733-3883.

Dec. 16—**International Radio & Television Society Foundation** Christmas benefit. Waldorf-Astoria Hotel, New York City. Contact: John Kienker, (212) 867-6650.

JANUARY 1999

Jan. 21-23—**Cabletelevision Advertising Bureau** cable sales management school. Mission Inn, Orlando, Fla. Contact: Nancy Lagos, (212) 508-1229.

Jan. 23-28—12th annual **International Teleproduction Society** president's retreat and management conference. Hilton Jalosies Resort and Spa, St. Lucia, W.I. Contact: (703) 319-0800.

Jan. 25-26—**West Virginia Broadcasters Association** winter meeting and legislative reception. Charleston Marriott Town Center, Charleston, W.Va. Contact: (304) 744-2143.

Jan. 30-Feb. 2—56th annual **National Religious Broadcasters** convention and exposition. Opryland Hotel Convention Center, Nashville. Contact: (703) 330-7000.

FEBRUARY 1999

Feb. 2-3—**Arizona Cable Telecommunications Association** annual meeting. Phoenix Hilton Hotel, Phoenix. Contact: (602) 955-4122.

Feb. 4-6—**Eckstein, Summers & Co.** annual conference on new business development for the

television industry. Don CeSar Beach Resort, St. Pete Beach, Fla. Contact: Roland Eckstein, (732) 530-1996.

Feb. 4-7—RAB '99, 19th annual **Radio Advertising Bureau** international conference. Hyatt Regency Hotel, Atlanta. Contact: Wayne Cornils, (800) 722-7355.

Feb. 8-10—16th annual **CTAM** Research Conference. Hilton San Diego Resort, San Diego. Contact: (703) 549-4200.

Feb. 9-12—**Milia**, the international content market for interactive media. Palais de Festivals, Cannes, France. Contact: Patrick Lynch, (212) 689-4220.

Nov. 17—"The Cable Presidents," **Hollywood Radio and Television Society** newsmaker luncheon. Beverly Hilton Hotel, Los Angeles. Contact: (818) 789-1182.

Feb. 16-17—"DBS: The Five Burning Questions," presented by **The Carmel Group**. Sheraton Gateway Hotel, Los Angeles. Contact: (831) 643-2222.

Feb. 22-24—**North American National Broadcasters Association** annual general meeting. The Freedom Forum, Washington. Contact: Paul Ferreira, (416) 598-9877.

Feb. 21-24—21st **Monte Carlo TV Market** conference and exposition. Loews Hotel, Monte Carlo, Monaco. Contact: (201) 869-4022.

Feb. 24-26—Texas Show '99, cable convention and exhibition presented by the **Texas Cable & Telecommunications Association**. San Antonio Convention Center, San Antonio, Tex. Contact: (512) 474-2082.

MARCH 1999

March 3-5—**CTAM** digital and pay-per-view conference. New Orleans Marriott Hotel, New Orleans. Contact: (703) 549-4200.

March 4—**Cabletelevision Advertising Bureau** 17th annual Cable Advertising Conference. New York Marriott Marquis, New York City. Contact: (212) 508-1214.

March 10-13—30th annual Country Radio Seminar, presented by **Country Radio Broadcasters Inc.** Nashville Convention Center, Nashville. Contact: (615) 327-4487.

March 18—15th annual **National Association of Black Owned Broadcasters** Communications Awards Dinner. Marriott Wardman Park Hotel, Washington. Contact: (202) 463-8970.

March 23-24—10th annual **Consumer Electronics Manufacturers Association/IEEE Consumer Electronics Society** Digital Engineering Conference. Crown Plaza Hotel, Hasbrouck Heights, N.J. Contact: (703) 907-7660.

APRIL 1999

April 6—SkyFORUM XI, direct-to-home satellite TV business symposium presented by the **Satellite Broadcasting and Communications Association**. Marriott Marquis Hotel, New York City. Contact: Carrie Cole, (703) 549-6990.

April 6—T. Howard Foundation fundraising dinner, presented by the **Satellite Broadcasting and Communications Association**. Tavern on the Green, New York City. Contact: Carrie Cole, (703) 549-6990.

April 25-27—First annual ENTERTECH Conference, presented by **IDG Conference Management Company**. La Costa Resort & Spa, Carlsbad, Calif. Contact: (877) 223-9753.

—Compiled by Kenneth Ray
(ken.ray@cahners.com)

Traveling the long road to success

Back in his childhood in Romania, Abe Peled (born Abe Bartfeld) couldn't imagine what it was like to have indoor plumbing. "As a kid I wanted to not have to go out to an outhouse," Peled recalls. "Your thinking is pretty simple; you just want to get out of there."

In his mission to build a better life, Peled managed to earn a doctorate from Princeton University, become a vice president of IBM and build the \$300 million digital compression and conditional-access equipment powerhouse NDS.

Since its inception in 1995, NDS—part of News Corp.—has developed pay television solutions for digital broadcasters. Now, with digital television a reality for terrestrial broadcasters, NDS has cornered a whole new market and is working to help broadcasters make the transition. In the past few weeks alone NDS has seen major purchases of its HDTV encoders by Tribune Broadcasting Group and Fox Television.

Peled says he also sees wide-open opportunities related to the development of the Internet. "As broadcasting moves to digital and meets the sprawling world of the Internet and computing, NDS can build on its core technologies and know-how to expand its product range and reach," Peled says. "I see NDS security technology solving copyright protection and privacy challenges of the Internet and our advanced compression expertise applied to providing quality video on the Internet."

Dov Rubin, vice president and general manager of NDS Americas, says it is this vision, combined with Peled's "jovial sense of humor," that has helped make the company so successful.

In 1995 Rupert Murdoch recruited Peled to help build his dream of a pay-TV empire as head of News Data Com, a producer of conditional-access hardware. During his tenure at IBM, Peled had served as a member of News Corp.'s executive committee, working with Andy Setos, News Corp. vice president of news technology.

"[Peled] is a lot of fun. ... I consider him a friend, someone I enjoy working with. [He's] very enriching and brings a lot of value to the conversation," Setos says.

After just three months at News Data Com, Peled saw the opportunity to buy a small division of U.K.-based NTL, a producer of MPEG compression, multiplexing and modulation hardware. He believed that



"We are here too short a time not to have fun."

Abraham Peled

President/chief executive officer, News Corp.'s NDS, London; b. Sept. 21, 1945, Suceava, Romania; BS, MS, electrical engineering, Technion-Israel Institute of Technology, Jerusalem, Israel, 1967, 1971; MA, PhD, electrical engineering, Princeton University, Princeton, N.J., 1972, 1974; researcher, IBM's Thomas J. Watson Research Center, Yorktown, N. Y., 1974-80; manager, computer science, IBM San Jose Research Lab, San Jose, Calif., 1980-83; vice president, systems and software, IBM TJW Research Center, Yorktown, N.Y., 1985-93; senior vice president, business development, Elron Electronic, Haifa, Israel, 1993-95; current position since 1995; m. Judith Oberndorf, Aug. 22, 1967; child: Daphna, 28

by combining that technology with News Data Com's conditional-access hardware, the company "could evolve much faster into new areas. We would have that complete system understanding," he says.

Six weeks later, Murdoch shelled out \$150 million for the NTL division and created News Data Systems, later renamed NDS. "[Murdoch] must have taken a big risk," Peled says. "I think no pain, no gain; no risk, no reward."

As rewarding as Peled says his career has been, it has been a long road paved with hours of intensive research and study. In 1958, when Peled was 13 years old, he and his parents emigrated from Romania to Israel, where he earned his bachelor's and master's degrees in electrical engineering from Technion-Israel Institute of Technology.

Following college, he served as platoon commander during the June 1967 Six-Day War between Israel and the Arab States; he married his high school sweetheart two months later, on Aug. 22. That same day, he enlisted in the army signal corps, where he was exposed to digital technology. In 1971, along with his wife and year-old daughter, he emigrated to the United States, changing the family surname to Peled to meet Israeli emigration standards of the time.

Most of Peled's professional life has been spent at IBM, where he held several management positions and worked on collaborative projects—including the development of a supercomputer used by Hollywood designers for special-effects creation.

Leading group projects gave Peled a chance to develop a management style. "We are here too short a time not to have fun," he says. "I like to have other people at ease, and I always try to keep things light and to keep a sense of humor."

Affable as he is, he is a no-nonsense manager who expects the best from his employees. "If people don't measure up, I'm pretty impatient with that," he says. "Everybody has something that they're good at, and you shouldn't waste your time doing something that you're not good at."

Peled certainly has found something that he is good at—and most important, he says, something he enjoys. As a boy, Peled could not have imagined his life today, but he says, "That's why life is exciting. Life is an adventure—you know where you start, but you never know where you end."

—Karen Anderson



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FATES & FORTUNES

BROADCAST TV

Missy Halperin, VP, talent relations, Fox Broadcasting Co., New York, named senior VP, talent relations.



O'Grady

Anne O'Grady, VP, promotion and marketing, CBS Television, New York, named senior VP, marketing and events.

Phil Paligraf, local sales manager, WTTV(TV) Indianapolis, named VP/GM.

Appointments at KWBA(TV) Sierra Vista, Ariz.: **Barbara Walsh**, executive assistant, KOLD-TV Tucson, Ariz., named executive assistant/human resources manager; **Michael Cowman**, news director, KOLD-TV Tucson, Ariz., named executive producer/special projects.

Appointments at KCBS-TV Los Angeles: **Kim Philo**, local sales manager, named general sales manager; **William Gonzales, Jr.**, account executive, named retail sales manager; **Mary Coghlan**, account executive, named local sales manager.

Ben Kulikowski, general sales manager, WTOO(TV) Birmingham, Ala., joins WBDC-TV Washington as general sales manager.

Don Wiggins, local sales manager, WEYI-TV Flint/Saginaw/Bay City, Mich., named general sales manager.

Philip M. Stolz, president, WBAL-TV Baltimore, named senior VP of parent Hearst-Argyle Television there.

Jeff Turner, community relations director, Oklahoma State University, Tulsa, joins KJRH(TV) there as sales manager, new media.

PROGRAMMING

Martine Bazin, personal assistant to VP of sales, Twentieth Century Fox International Television, Los Angeles, named sales manager.

Terry Wood, executive director, development, Harpo Entertainment, Chicago, joins Paramount Domestic Television, Los Angeles, as VP, programming.

Dan Casey, VP, Fox Sports World, New York, named VP, domestic programming ventures.

Paul Crystal, VP, finance, Children's Television Workshop, New York, named group VP, finance and administration.

Caroline Beck, senior VP, marketing and business development, Game Show Network, Los Angeles, joins Intertainer Inc., Santa Monica, Calif., as COO.

Paul Major, VP/GM, Panache Broadcasting, Indianapolis, joins Metro Networks, Houston, as GM for Cincinnati and Dayton, Ohio.

JOURNALISM

Darlene Pomaes, general assignment reporter, WCBS-FM New York, joins WNBC(TV) there as reporter.

Gina London, television news consultant, Professional Media Program, U.S. Agency for International Development, Bucharest, Romania, joins CNN, Atlanta, as national correspondent, *CNN Newsource*.

Jeff Newpher, news director, KJAC-TV Beaumont, Tex., joins KAUZ-TV Wichita Falls, Tex., as news director.

RADIO

Bob Visotcky, general manager, KYLD(FM) San Francisco, named market manager for parent Chancellor Media Corp., Denver.

David Meszaros, GM, WJZF(FM) and WCNN(AM) Atlanta, named VP/GM, WJZF and WSB-FM there.



Loscalzo

John Loscalzo, senior director, programming, SW Networks, New York, named VP, programming.

Phillip Weber, producer, Jacor Communications, Denver, joins WYXX (FM)/WYXX (FM)

Chicago as production director.

CABLE

Gary Kanofsky, executive in charge of production, Hollywood Close-Ups, Los Angeles, joins CNBC, Fort Lee, N. J., as producer of *Before the Bell* and *This Morning's Business*.

Scott Durand, director of trade advertising, Encore Media Group, Los Angeles, joins Great American Country, Englewood, Colo., as VP, marketing.



Bortone

Lou Bortone, VP, marketing and advertising, Fox Family Worldwide, Los Angeles, named senior VP, marketing and advertising.

Appointments at Select Media Communications, New York: **Gerard**

Mackie, chief engineer for Worldwide Television News (WTN), New York, joins as director of engineering; **Rick Sannicandro**, operations manager, WTN, New York, joins as director of operations, and **Mark Dachel**, assistant controller, WTN, New York, joins as director of finance.

Steve Mars, director, on-air promotion, SportsChannel New York, joins MSG Network there as VP, marketing.



Gilbert

Appointments at Insight Communications, Columbus, Ohio: **Bill Gilbert**, VP, advertising sales and new business, Coaxial Communications, Columbus, joins as VP, advertising sales; **Susane Newell**,

corporate director of programming, Century Communications, Dayton, Ohio, joins as VP, programming.

Gig Barton, manager, East Coast sales, Court TV, New York, named executive VP, advertising sales.

Douglas Butts, producer/director, INSP-The Inspirational Network, Charlotte, N. C., named production manager.

ADVERTISING/MARKETING/PUBLIC RELATIONS

Bruce Jones, president, CableSoft, Boston, joins Dove Associates there as senior consultant, cable and media group.

Appointments at Adknowledge, Palo Alto, Calif.: **John Lipinski**, manager, server management tools group, Sun Microsystems, Palo Alto, Calif., named director of engineering; **Simona Panduru**, manager, software quality assurance, Integrated Systems, Los Angeles, named director of quality assurance engineering.

Appointments at Saatchi & Saatchi,

New York: **Scott Tegethoff** and **Bob McKinnon**, VPs, group media directors, named senior VPs.

ALLIED FIELDS

Scott Bausback, director of marketing, Tektronix, Beaverton, Ore., named VP/GM, TV communications test business unit.



McCraw

Dan McCraw, manager, Western market development, Bexel Corp., Santa Monica, Calif., named national sales manager, Plus 8 Video, Burbank, Calif.

Appointments at Harris Corp.,

Cincinnati: **Dale Mowry**, general manager, Earth station antenna products, Andrew Inc., Columbus, Ohio, joins as VP, TV systems; **John Delay**, product manager, AM radio line, named director, systems product management.

Rob Miller, executive VP, Unipix North America, Unipix Entertainment, New York, named president, Unipix North America, and executive VP, TV, Unipix Entertainment.

Andrew Knox, assistant music supervisor, *Guiding Light*, CBS, New York, named music director, Superdupe Recording, New York.

TECHNOLOGY

Preston Stone, director, network products, Trilogy Communications, Jackson, Miss., named director, international sales.

Jeff Joseph, senior VP, Ogilvy Public Relations Worldwide, New York, joins Consumer Electronics Manufacturers Association, Arlington, Va., as VP, communications.

SATELLITE/WIRELESS

Kay Sears, on-site consultant, Intelsat, New York, joins American Tower Corp., New York, as director, Internet services.

INTERNET

Ken Goldstein, VP, Broderbund Software, Palo Alto, Calif., named senior VP, Disney Online, Hollywood.

Kevin Gavin, regional VP, Teligent Inc., Los Angeles, joins SoftNet Systems there as senior VP, marketing.

ASSOCIATIONS/LAW FIRMS

Lon Lee, president, KHQ-TV Spokane, Wash., named chairman of Washington State Association of Broadcasters, Olympia, Wash.

DEATHS



Harley in 1977

William Gardner Harley, 87, a pioneer in the fight to establish non-commercial television and radio, died Nov. 10 at a Washington rehabilitation center. As president of the National Association of Educational Broadcasters from 1960 to 1975, Harley played an instrumental role in the creation of the Corporation for Public Broadcasting and National Public Radio. Harley began his career in his native Wisconsin, first as a professor at the University of Wisconsin and later as the program director of the Wisconsin State Radio Network. In

1954 he helped found the country's fourth educational TV station, in Madison. Harley also served as a consultant to the State Department and was chairman of the Peabody Awards board. He is survived by his wife, Jewell, and daughters Cynthia Foster and Linda Cunningham.

Lynette J. Simpson, 52, director of member services for the Small Cable Business Association, died Nov. 9 of cancer at her home in Pleasanton, Calif. Simpson began her cable career in the 1970s as corporate development coordinator for Total TV Inc., an MSO based in Janesville, Wis. In 1981 she was a co-founder and VP of Sun Country Cable in Pleasanton. Simpson was associated with SCBA since the association's founding in 1993, first as business partner with the group's first chairman, David Kinley, then as a consultant, and later as staff member. She is survived by her husband, Jeff, and a son, Matt. Donations may be made in her name to the University of California at San Francisco Cancer Research Fund.

—Compiled by Nolan Marchand
e-mail: nmarchand@cahners.com

OPEN MIKE

Chopper camera correction

EDITOR: As a sales professional in broadcast equipment, I feel compelled to notify you that inaccurate information was published in your Sept. 21 article, "Chopper wars heat up the sky."

The statement: "Now priced at \$100,000, down from \$1 million just a few years ago, these new high-powered gyrostabilized cameras can magnify images up to 72 times" is inaccurate based upon the fact that 72:1 zoom, gyrostabilized technology is found only in equipment priced in the \$250,000-\$300,000 range.

While, indeed, there is stabilized camera-system technology in the \$100,000 range, it falls tremendously short of being compared to the systems referred to in the article. Equipment costing \$100,000 has limited stabilization with a low-end broadcast camera and lens with only 20 times zoom capability.—*Larry Krieg, sales manager, broadcast division, Flir Systems Inc., Portland, Ore. (via Broadcasting & Cable Online: www.broadcastingcable.com)*

Another DTV pioneer

EDITOR: In your Nov. 2 "Top of the Week" story regarding the launch of HDTV as of Nov. 1, one station was missing—KATU-DT, ch. 43 (DTV)/KATU(TV), ch. 2 (NTSC), the ABC affiliate in Portland, Ore. We launched Oct. 23 [when] we became the first commercial TV station in the state of Oregon to broadcast a digital upconverted signal 24 hours a day along with several hours a week of ABC's HDTV 720P feed.

On Oct. 29, we invited 200 of our viewers to the KATU studios to experience the thrills of the space shuttle launch with John Glenn on a crystal-clear picture on an HDTV projector. Their reaction was "outstanding!" On Nov. 1 we joined ABC and several other stations across the country to roll out HDTV with the showing of Walt Disney's "101 Dalmatians." These past two weeks have been a great accomplishment for the future of television, KATU staff and our viewers.—*Stefano Esposito, director of engineering, KATU(TV)/KATU-DT Portland, Ore.*

ABC's lockout of NAT-BET workers is entering its third week today with no end in sight.

Meanwhile, NABET and NBC have held some preliminary "off the record" talks to see what kind of common ground there is before the start of formal negotiations on a new contract. The NBC NABET contract expires next March. A union source says that the two sides are "far apart" on certain issues, including some of the same issues between the union and ABC. Also last week, ABC reached a new four-year agreement with the International Association of Theatrical Stage Employees and Moving Picture Operators of the U.S. and Canada. It covers 500 stagehands working on shows that include ABC soaps, *GMA*, *The View* and *Regis & Kathie Lee*. Meanwhile, NABET has asked the National Labor Relations Board to rule ABC's lockout of them illegal and has requested that the NLRB seek a court injunction forcing ABC to let the union workers go back to work. No decision from the NLRB at deadline.

King World has agreed to pay Paula Jones an undisclosed amount of money to appear on two of its syndicated shows.

Jones will sit down for a two-part interview with Deborah Norville of *Inside Edition* on Nov. 18 and 19 and make a November sweeps appearance on *The Roseanne Show* on Nov. 25. King World executives say Jones will continue to speak out about her sexual harassment suit against President Clinton.

A conflict of interest has caused syndicated newsmagazine *Extra's* executive producer Steve Lange, to be pulled from the show.

Lange's wife, Terry Wood, was named VP of programming at Paramount Domestic Television earlier in the month; under her direct supervision is the syndicated news magazine *Hard Copy*, one of *Extra's* rivals. Fellow executive producer Sheila Sitomer is now running *Extra* while Lange's lawyers work with Warner Bros. executives. Lange, Wood and Paramount executives were unavailable for comment.

MGM Worldwide Television has cleared its new syndicated magazine strip *National Enquirer* in over 52% of the country for next fall.

Fourteen Fox owned-and-operated stations have picked the show up, including WNYW(TV) New York, WFLD(TV) Chicago and WFX(TV) Boston. The show also is cleared on KCAL(TV) Los Angeles. MGM executives say they are working on clearances for their other announced strip slated for fall 1999, *Daily Edition*.

NCTA President Decker Anstrom used what he saw as broadcasters' lack of election coverage two weeks ago to argue against the FCC requiring cable operators to carry any broadcasters during the transition to digital TV.

In a letter to FCC Chairman William Kennard last week, Anstrom wrote that in Washington, two local stations had no election coverage in prime time, three public broadcast stations had only minimal coverage and no local station had more than an hour and a half of election coverage—

while CNN, C-SPAN, MSNBC, CNBC and Fox News Channel had continuous coverage most of the night. "The role cable has taken in covering our local and national elections is just one more example ... of why there is no rationale for mandating [a] 'double dose' of must carry during the transition from analog to digital television and for putting every broadcast station in line of any cable network," Anstrom wrote. NAB President Eddie Fritts responded that cable news networks are positioned for round-the-clock election coverage and pointed out that three out of five of the cable networks mentioned are owned by broadcast networks. "Cable wants to prevent viewers from receiving those services, either by denying carriage of digital signals completely or by restricting the formats and services that they will transmit," Fritts wrote.

House Telecommunications Subcommittee Chairman Billy Tauzin (R-La.) is not running for a new leadership office, but he is strongly supporting fellow Louisianan Bob Livingston (R) in his unchallenged bid to be Speaker of the House. "Livingston is the right man for the job at the right time," says Tauzin spokesman Ken Johnson. Tauzin already is a deputy whip and aims to chair the House Commerce Committee when the term of Rep. Tom Bliley (R-Va.) is up in 2000.

Full cable carriage of broadcasters' digital and analog signals during the transition to digital TV is "unlikely to serve the public interest," wrote Rep. John Dingell (D-Mich.), ranking member on the House Commerce Com-

TCI's 3Q: unimpressive, except for digital

Tele-Communications Inc. posted surprisingly strong sales of digital cable, hitting a million subscribers, but also had surprisingly weak third-quarter results for its core cable business.

TCI President Leo Hindery earlier had predicted that the MSO would be able to sell digital cable packages to 800,000 subscribers by the end of the year. But he disclosed last Friday that TCI passed the million mark on Nov. 4.

However, as AT&T prepares to complete its \$48 billion takeover of TCI, TCI's core business has sagged. Cash flow from the company's cable systems grew just 4% during the three months ended September, reaching \$616 million, adjusting for the transfer of systems to partnerships with other MSOs. Cable subscriber growth was essentially flat during the third quarter, compared with the second quarter.

Sales of the @Home high-speed Internet service were also relatively sluggish. They are not expected to grow strongly until new modems that are standardized across the industry—whose development has been delayed—are available next year.

Hindery focused on the unexpected strength of digital cable. "The bad news is we're having to scramble to get devices," he said, referring to the General Instrument Corp. set-top converters. Each digital customer is generating an additional \$15.46 per month in revenue at a huge 63% cash flow margin.

—John M. Higgins

New recipe at Food: Ober replaces Gruen

In an effort to expand Food Network's programming focus, Scripps Networks has replaced Food President Erica Gruen with Eric Ober, chief of Scripps-owned Cinetel Productions studios.

Ober's appointment last week as president/general manager of Food was made by Scripps Networks President Ken Lowe, who also moved several senior managers within Scripps in a companywide management restructuring. Before joining Scripps, Ober was president of CBS News (1990-96) and president of CBS TV Stations (1987-90).

Lowe said that placing Ober at the helm of Food "had a little bit to do with" wanting a Scripps executive in charge of Food. Lowe also said that Ober is "a great hands-on leader and is slightly different in his style of management from Erica." (Gruen was head of the channel when Scripps acquired majority control of Food from A.H. Belo Corp. in October 1997.)

Lowe, who also is president of Scripps' Home & Garden Television, called the split with Gruen "very amicable" and said it was made by "mutual agreement." Likewise, Gruen said the parting was peaceful and added, "Scripps has been very fair to me."

Under Gruen over the past two years, Food's subscriber base has jumped from 16 million to 34 million. Its net revenue from advertising alone has tripled (the network does not yet charge subscriber fees), and its ratings in prime time—from mostly original shows—also have tripled, according to Nielsen data and Food officials.

But Scripps still is waiting for Food Network to turn a



Ober will add theme shows and specials to Food's menu.

profit. Lowe says Food has not yet recouped Scripps' initial investment in the channel, estimated at \$100 million-\$125 million. He says that Scripps' business model for Food does not anticipate the network becoming profitable until 2000 or perhaps 2001.

In Scripps Networks' second quarter 1998 fiscal returns, Food Network recorded a loss of \$1.8 million in earnings before interest, taxes, depreciation and amortization. Operating income losses for the quarter totaled \$2.3 million after taxes, or 3 cents per share, according to the company's fiscal statement. Lowe says that Food's 1998 financial returns are better than expected and at least 33%

better than last year.

"Erica's departure has nothing to do at all" with Food's financial returns for the quarter, Lowe insists. "This is not about anything other than our beliefs that Eric Ober is the person to lead and direct the Food Network to the next level," he says.

Ober says he's eager to expand Food's programming focus—which has included several series produced at Food's New York studios—to cities across the country, perhaps with a "food across America" theme. He also wants to add specials and event-driven shows to help "drive viewer sampling" to the network.

Gruen says she plans to work as a consultant for projects involving programming, marketing and consumer insight for TV and new-media companies. She's also not ruled out the possibility of joining a media start-up.

—Donna Petrozzello

mittee, to a constituent. Bill Trevarthen, executive director of Michigan Government Television, had written Dingell to express his concern that awarding broadcasters full must-carry rights during the transition would bump programs like his off the air because of a lack of cable-system capacity. The FCC is considering a rulemaking to determine what the cable carriage rules will be during the transition. Staffers have said that the proceeding should be

completed by the first or second quarter next year.

The Ackerley Group will sell its ch. 35 Fox affiliate in Monterey/Salinas, Calif., KCBA(TV), and will buy KION(TV), the ch. 46 CBS station in the market. Prices were not disclosed, and Ackerley Co-President Denis Curley did not return telephone calls seeking comment. KION is being sold to Ackerley by Harron Television of Monterey, which bought the station in December 1994 for

\$8.2 million. KCBA's buyer is Seal Rock Broadcasting. Ackerley currently operates KION under a local marketing agreement and will enter into an LMA with Seal Rock for KCBA. owns an outdoor display company, among other interests.

The Justice Department says Chancellor Media Corp. can acquire California outdoor advertising firm Kunz & Co. for \$39.5 million if it sells more than \$5 million in outdoor assets. Chancellor

and Kunz are head-to-head competitors in some markets. Together they would have had a "virtual monopoly in some areas and more than 60% of the market in others," Justice said last Thursday in a news release. Chancellor must sell off billboards in Inyo, Kern and Kings counties, Calif., and Mojave County, Ariz. Chancellor, which is primarily a radio company, is acquiring billboards to provide its advertisers with additional advertising platforms.

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COMMITTED TO THE FIRST AMENDMENT AND THE FIFTH ESTATE

Digital: Dawning or dimming?

It's been three months since this page—acting out of concern that the transition to digital television would not be all that it might be—suggested that FCC Chairman William E. Kennard reconstitute the Advisory Committee on Advanced Television Service (the Wiley committee) to get all the players back on the same page. That suggestion met with far more opposition than support from the principal players involved—that is, the broadcast, cable, satellite and consumer electronics industries—and even we began to question our call.

Two things have transpired in the interval. First, this magazine, in association with two colleague publications within the Broadcasting & Cable Publishing Group, set out to produce a comprehensive report on the dawn of digital television: the result is the 60-page supplement bound into this issue. Our reporting on this project yielded one uncontested impression: The transition to digital is an enormous undertaking being accomplished almost miraculously by true pioneers. One of our sources likened it to the space race, saying, "This is our man on the moon." The result may not be as dramatic as that national initiative, but it will surely be among the great early accomplishments of the new millennium. Not one of the pioneers we interviewed appeared to be responding primarily to a profit motive, although almost all must answer to the bottom line. They were, for the most part, climbing this mountain because it was there.

Then, the NAB and the Association for Maximum Service Television wrote to Chairman Kennard last week with a suggestion that mirrored our editorial. Although they sought a different venue—an interindustry group chaired by Kennard or another commissioner—their concerns were similar to ours, and their solution was parallel.

Having thought things over again before NAB and MSTV weighed in, we were preparing to say in this editori-

al that the marketplace was working far better than we at first thought and that we were willing to trust that mechanism for a while longer. Say, six months. If, by then, the industries involved had failed to achieve reasonable standards of interoperability, we'd be tempted to call in the Marines (or Dick Wiley, whichever seemed best).

That's still how we feel. As Frank Stanton once put it: "You can't pull up the plant every 30 days to see if the roots are growing."

Decker Anstrom, president of the National Cable Television Association, sounded right on when he told us: "If I were to put my finger [on] a time to really begin to watch this move, it would be Christmas 1999." His is an insider's forecast, and a reasonable one, but it won't be met unless all elements of the industry are going at flank speed. Now's no time to rest on the oars—or to avoid them.

What price glory?

We recommend writer/producer David Kelley's remarks last week upon his induction into the BROADCASTING & CABLE Hall of Fame. The bulk of those remarks are reprinted on page 43.

Most of the speeches had something to recommend them, and more than one touched on responsibility. But Kelley's, with the engaging quality of his metaphor and the skill of its delivery, particularly struck us. His point, put better than we could, was that being able to take pride in how and what you do is as important as—or perhaps more important than—how much credit you get for it. He didn't suggest that winning (substitute ratings, money, awards or any of a host of other goals) is not important, only that it is not worth gaining at any price. Determining what that price should be—and taking authorship of it—is not always easy for television programmers under the pressures of stockholders and front offices and back ends, but it is necessary if television is to be more than a common carrier and if it wants to retain what freedoms it has.

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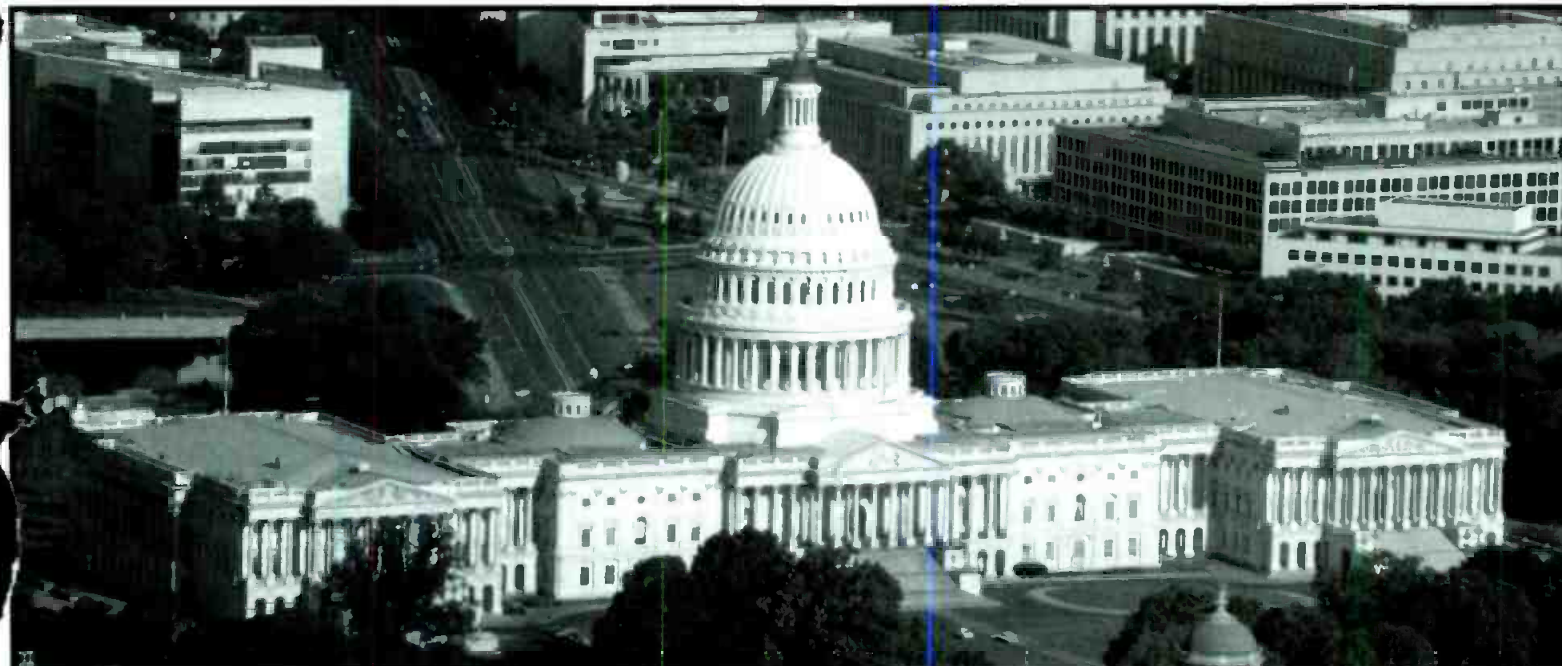
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