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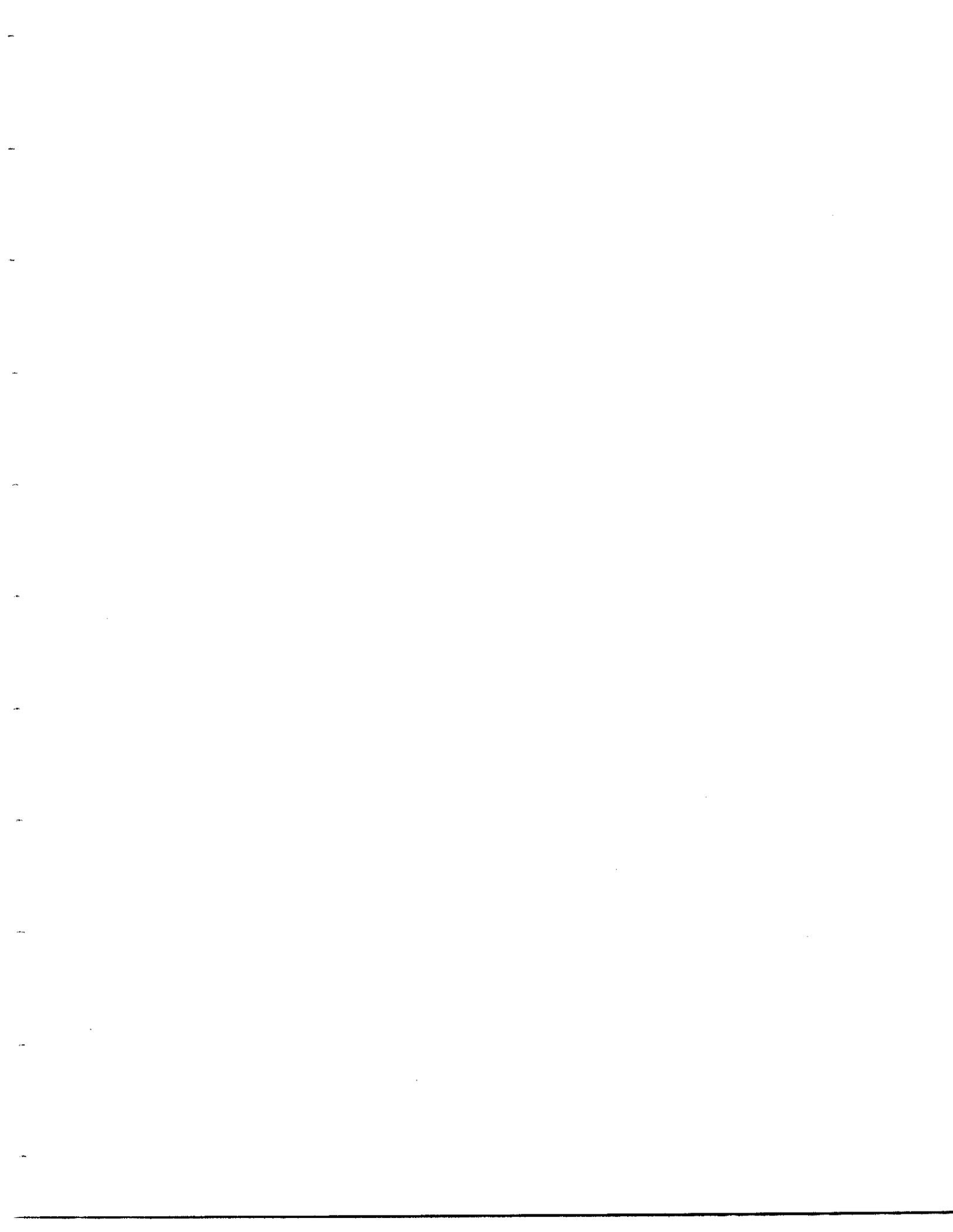
JUL 12 2002

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

**Ex Parte Submission -- Consolidated Application of EchoStar Communications Corporation, Hughes Electronics Corporation, and General Motors Corporation for Authority to Transfer of Control (CS Docket No. 01-348)**

**VOLUME II**

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PRESENTATION**

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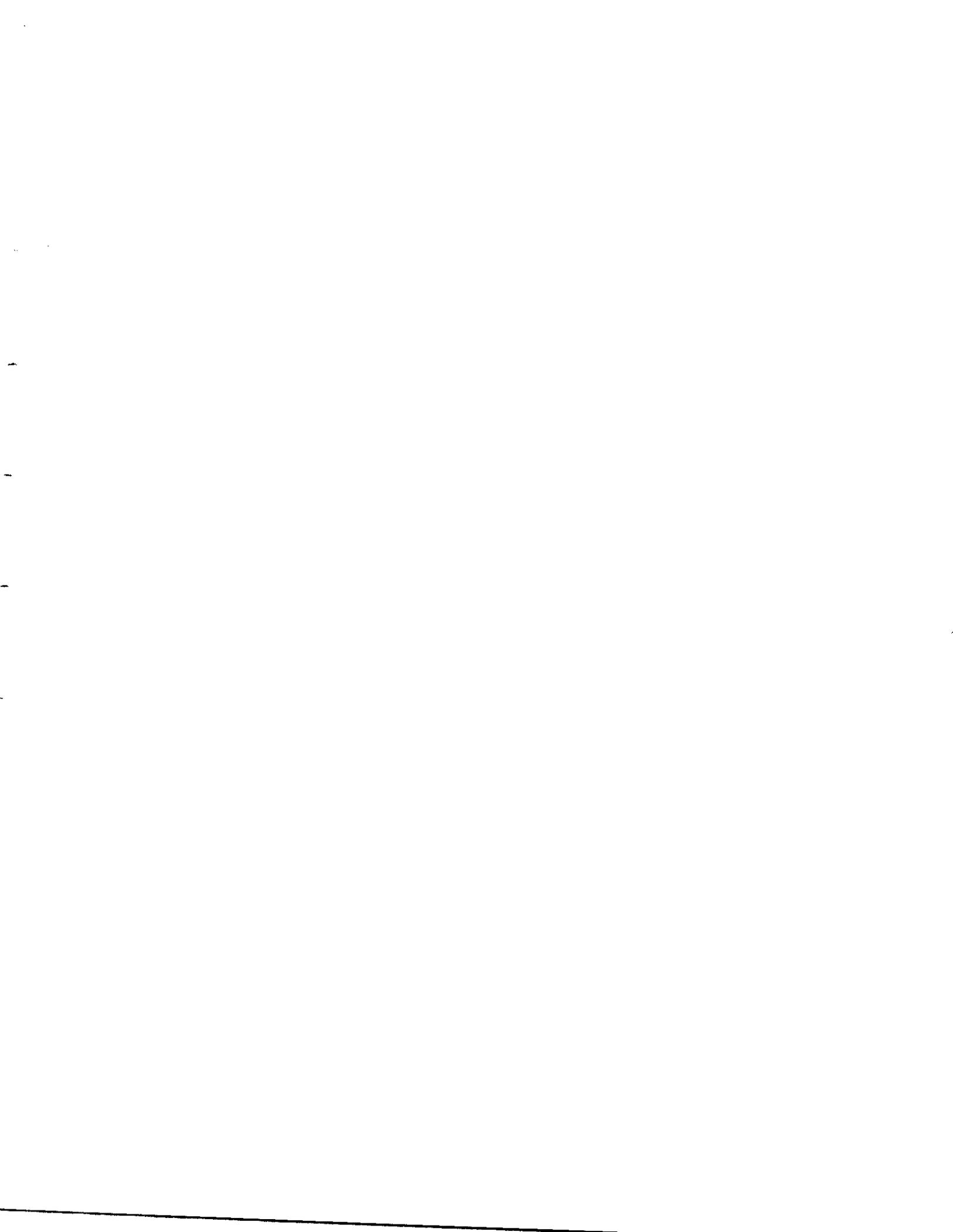
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PRESENTATION**

**PER SLIDE #16**

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MATERIALS ARE BEING  
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July 08, 2002

## INDUSTRY STATISTICS

Home > **Industry Statistics**[Send Page To a Friend](#)
[Top 25 Cable Systems](#) | [Top 25 MSOs](#) | [Top 20 Cable Program Networks](#)  
**State Data**


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Industry Statistics	
Basic Cable Households (February, 2002) <sup>1</sup>	73,147,600
US Television Households (February, 2002) <sup>1</sup>	105,444,330
Cable Penetration of TV Households (February, 2002) <sup>1</sup>	69.4%
Homes Passed by Cable (December, 2001) <sup>6</sup>	98,600,000
Homes Passed as a Percent of TV Households (December, 2001) <sup>6</sup>	96.7%
Basic Cable/Homes Passed (December 2001) <sup>2</sup>	69.9%
Cable Headends (February, 2002) <sup>1</sup>	10,613
Premium Cable Units <sup>6</sup>	51,610,000
Cable Systems <sup>3</sup>	9,947
Cable Employees (1999) <sup>4</sup>	130,953
Annual Cable Revenue (2001) <sup>6</sup>	\$48,150,000,000
Total Advertising Revenue (2001) <sup>6</sup>	\$14,455,000,000
Cable's Private Investment	
Cable Industry Construction/Upgrade Expenditures in 2001 <sup>6</sup>	\$14,290,000,000
Schools Served by <i>Cable in the Classroom</i> (December, 2001) <sup>7</sup>	81,654
Students Served by <i>Cable in the Classroom</i> , (December, 2001) <sup>7</sup>	43,676,577
Broadband Deployment	
Digital Cable Subscribers (December 31, 2001) <sup>5</sup>	15,200,000
Cable Modem Subscribers (December 31, 2001) <sup>5</sup>	7,200,000
Homes Passed by Cable Modem Service (December 31, 2001) <sup>5</sup>	70,000,000
Cable-Delivered Residential Telephone Subscribers (December 31, 2001) <sup>5</sup>	1,500,000
Value and Prices	

National Video Programming Services/Networks (December, 2001) <sup>4</sup>	<b>287</b>
Major Awards Won by Cable Programs in 2001 <sup>4</sup>	<b>40</b>
Average Monthly Price for Basic Cable (December, 2001) <sup>6</sup>	<b>\$31.58</b>
<b>Competition</b>	
Subscribers to Non-Cable Multichannel Video Program Distributors (MVPD) (December, 2001) <sup>5</sup>	<b>21.66 million</b>

<sup>1</sup>Nielsen Media Research

<sup>2</sup> Cable TV Financial Databook, 2000, p. 10

<sup>3</sup> Warren Communications News, Inc. *The Television & Cable Factbook*, Volume 69, 2001.

<sup>4</sup> Federal Communications Commission

<sup>5</sup> National Cable & Telecommunications Association

<sup>6</sup> Kagan World Media, a Media Central/Primedia Company

<sup>7</sup> Cable in the Classroom

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## ABOUT THE INDUSTRY

Home > About the Industry > Cable Operators > **Top 25 MSOs**

As of December 2001

Rank	MSO	Subscribers
1	AT&T Broadband (1)	13,560,000
2	Time Warner Cable (2)	12,798,000
3	Comcast Cable Communications (1)	8,471,100
4	Charter Communications	6,953,700
5	Cox Communications	6,237,900
6	Adelphia Communications	5,810,300
7	Cablevision Systems Corporation	3,008,000
8	Mediacom LLC	1,595,000
9	Insight Communications (3)	1,283,700
10	CableOne @	752,000
11	RCN Corporation	486,900
12	Classic Communications	331,000
13	SBC/WideOpenWest	312,600
14	Service Electric	301,000
15	Tele-Media Corporation	250,900
16	Northland Communications Corp. @)	232,900
17	Armstrong Group of Companies	208,000
18	Midcontinent Media, Inc.	206,600
19	Susquehanna Cable	194,900
20	Pencor Services (e)(4)	163,200
21	Millennium Digital Media @	160,600
22	Buckeye Cable Systems (5)	157,300
23	U.S. Cable Corporation	151,900
24	General Communications	132,000
25	Galaxy Telecom (e)	120,400

**Source:** Kagan World Media, a Media Central/Primedia Company. Data from *Cable TV Investor*. Reprinted with permission.

Notes: Unless otherwise noted, counts include owned and managed subscribers; @ Counts include recent sale or acquisition; e = estimate; \*\* Owned in part by AT&T Broadband; (1)AT&T Broadband merging with Comcast. Announced 12/19/01; (2) Time Warner Cable's sub counts include TWE-A/N-7 mil. subs; TWE/Non-TWEAN-4.1 mil. subs; TWI-1.7 mil subs; (3)Insight Ohio is consolidated into the results of Insight Communications; (4)Pencor Services is a subsidiary of Blue Ridge Communications; (5) Buckeye CableSystem is a subsidiary of Block Communications, Inc.

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### Ratings: Network Primetime Ratings

Here are the number of viewers (in the millions) that the networks averaged per hour in prime time for the week ending June 30th, 2002.

Network	Last week	Season to date
CBS	8.30	11.76
NBC	6.91	12.83
ABC	6.21	9.18
FOX	5.42	8.70
UPN	2.60	4.11
WB	2.06	3.60

Based on numbers provided by Nielsen Media Services and several broadcast networks.

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 A complete guide to both daytime and primetime soaps.  
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 Beyond the news and reviews, this weblog is a concise, sometimes snide look at the world of television and the media. [---](#)

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**Satellite TV Subscriber Counts**

The latest numbers on the satellite TV business, nationally, state-by-state and worldwide, as well as by zip code.

**National DTH Counts**

April 2001 - April 2002

	C-Band	DIRECTV	PRIMESTAR	ECHOSTAR	TOTAL
Apr-01	1,058,385	9,737,000	N/A	5,845,000	16,640,385
May-01	1,025,238	9,787,000	N/A	5,995,000	16,807,238
Jun-01	1,000,074	9,827,000	N/A	6,070,000	16,897,074
Jul-01	975,103	9,887,000	N/A	6,170,000	17,032,103
Aug-01	936,076	9,947,000	N/A	6,270,000	17,153,076
Sep-01	919,782	10,007,000	N/A	6,430,000	17,356,782
Oct-01	893,882	10,078,000	N/A	6,550,000	17,521,882
Nov-01	870,971	10,148,000	N/A	6,665,000	17,683,971
Dec-01	842,483	10,218,000	N/A	6,830,000	17,890,483
Jan-02	786,149	10,350,000	N/A	6,965,000	18,101,149
Feb-02	769,467	10,400,000	N/A	7,100,000	18,269,467
Mar-02	752,942	10,560,000	N/A	7,225,000	18,537,942
Apr-02	732,942	10,645,000	N/A	7,315,000	18,692,942

Please note, numbers reflect company data, analyst numbers and SkyREPORT research. For notes on these subscriber counts, [click here](#).

**Worldwide DTH Counts**

The top 20 satellite platforms on the planet.

**State-by-State DTH, Cable and TV Households Numbers**

Updated quarterly, get the latest on multichannel subscriber counts. Get a series of reports at a special price.

**U.S. DTH Subscribers - by ZIP Code**

Effective Competition Tracking Reports help cable companies keep tab on the number of satellite TV subscribers in areas served by their operation..

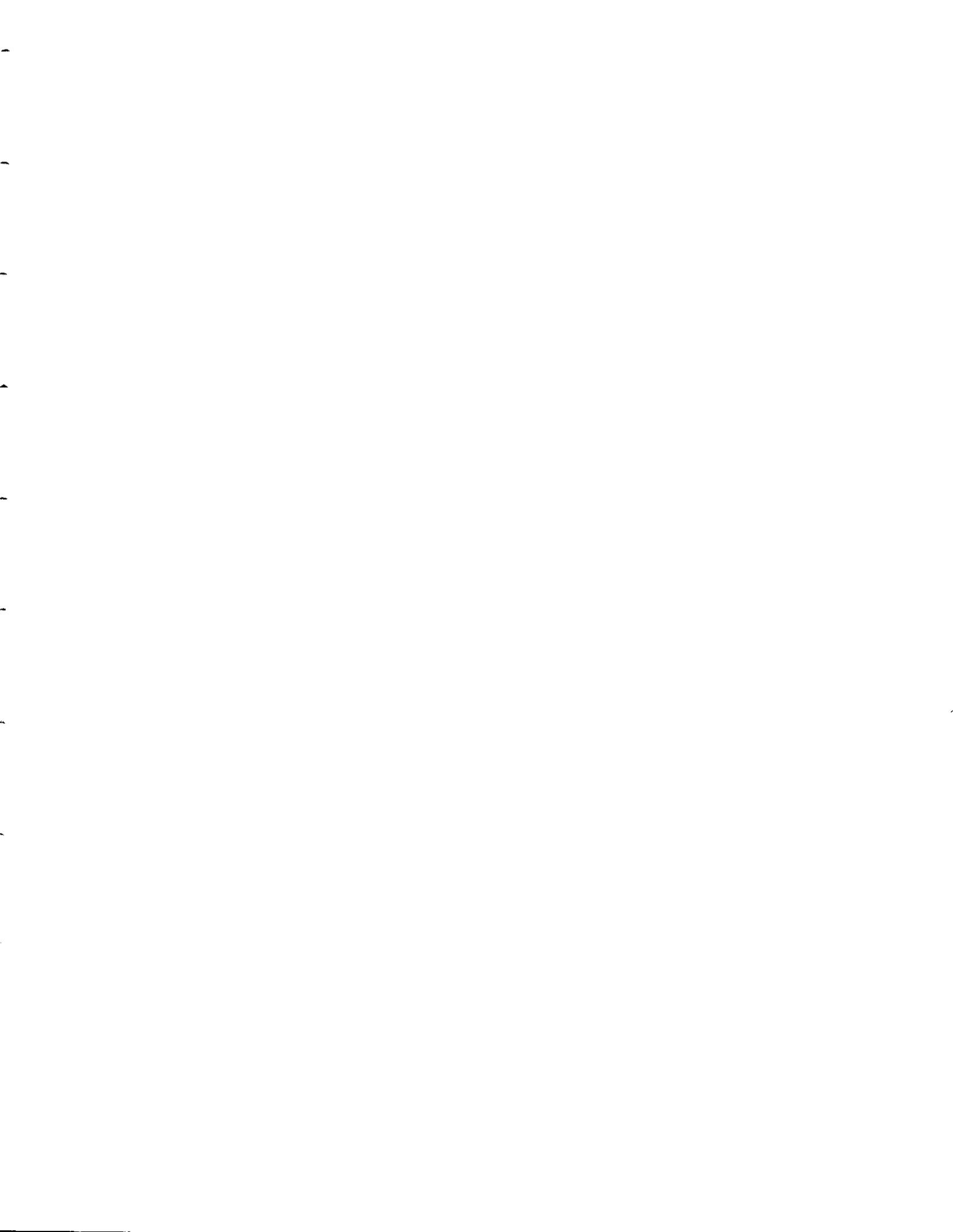
**National DTH Counts: Notes on the Data:**

PrimeStar went dark on September 30, 2000. PrimeStar had not released numbers since March 1999. All PrimeStar numbers after March 1999 are internal estimates or are estimates courtesy of Armand Musey at Banc of

**America Securities.**

As of January 2000 **DISH** does not regularly release subscriber counts. **DISH 2000-2001 numbers are internal and analyst estimates.** Based on new subscriber counts provided by DISH public relations, SkyTRENDS has revised the DISH subscriber counts for February and March 2001.

As of July 2000 **DirecTV** only reports its subscriber numbers on a quarterly basis. Current DirecTV numbers are internal and analyst estimates. In early June, DirecTV and parent Hughes revised guidance for DirecTV's net subscriber acquisitions for the second quarter .



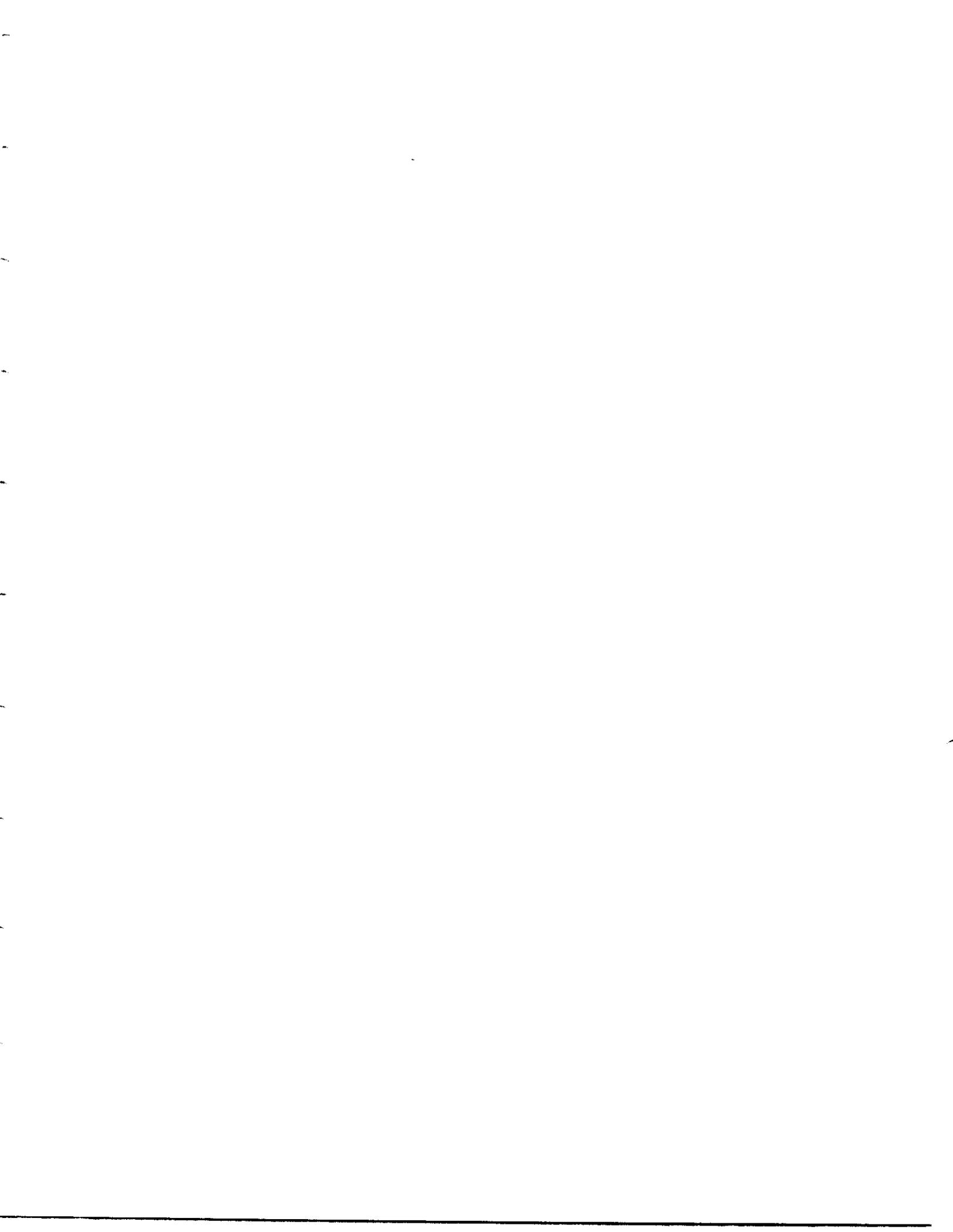
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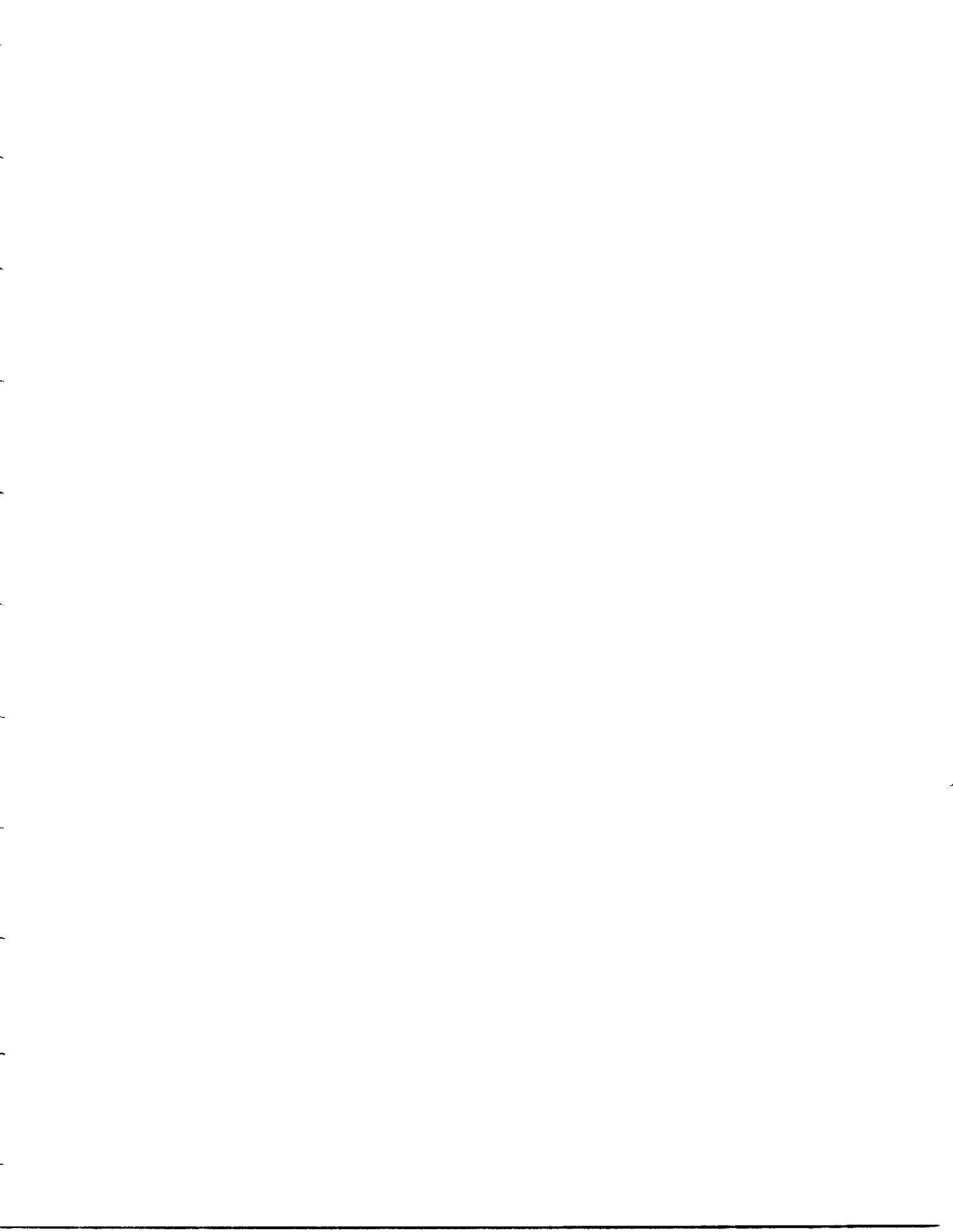


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**PRESS ROOM - NEWS**Home > Press Room - News > **Press Releases****For Immediate Release April 04, 2001****Contact:**

**TESTIMONY OF ROBERT SACHS, PRESIDENT & CEO  
NATIONAL CABLE TELEVISION ASSOCIATION  
ON CABLE AND VIDEO: COMPETITIVE CHOICES**

before the

**SUBCOMMITTEE ON ANTITRUST,  
BUSINESS RIGHTS, AND COMPETITION**

**COMMITTEE ON THE JUDICIARY  
UNITED STATES SENATE  
WASHINGTON, D.C.**

**APRIL 4, 2001**

**1. INTRODUCTION**

Mr. Chairman, members of the Subcommittee, my name is Robert Sachs and I am President and CEO of the National Cable Television Association. NCTA represents cable companies serving more than 90 percent of the nation's 69 million cable customers and more than 200 cable program networks. Thank you for providing us with this opportunity to testify before your subcommittee. In my testimony today, I will describe the state of competition in the multichannel video market and highlight what cable operators are doing to provide consumers with new products and services over advanced broadband facilities.

Five years ago, Congress passed the landmark Telecommunications Act of 1996. The goals of this Act were to: (1) bring competition to telecommunications and video; (2) expand consumer choice; (3) encourage investment in new technologies; and (4) speed the introduction of advanced services, including digital television. Some have argued that the Act is not working - especially when one considers the lack of widespread competition in local residential telephone markets. But we should not let slow progress in local exchange competition eclipse the fact that the Act has successfully spawned competition in the multichannel video market. As cable companies complete system upgrades across the country, consumers are realizing benefits in the form of digital cable, cable modems, and cable telephone service. As I will describe more fully, cable faces real competition in every one of these businesses.

Before 1996, cable operators faced video competition primarily from over-the-air television, C-band satellite receivers, video rentals, and movie theaters. Direct broadcast satellite (DBS) competition has changed that forever. Being digital from the start, and having the advantage of substantially greater channel capacity, DBS spurred cable operators to replace hundreds of thousands of miles of coaxial cable with fiber optics so that they too could offer consumers hundreds of channels of digital video and audio services. In responding to vigorous competition from DBS, cable operators have made enormous investments in not just plant but computers, billing systems, personnel, and training - resulting in

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significant improvements in the quality of service we provide to our customers.

**Market Share of Multichannel Video Program Distributors (MVPDs)  
February 2001**

MVPD	Subscribers (in Millions)	Percent of MVPD Market
DBS	15.34	17.40
C-Band	1.12	1.30
MMDS	0.70	0.80
SMATV	1.50	1.70
Local Telephone Companies	0.43	0.49
Broadband Competitors	0.66	0.75
Total Non-Cable	19.75	22.44
Cable	68.28	77.56
Total Multichannel Subscribers	88.03	100.00

Source: NCTA Research Department estimate based on data from A. C. Nielsen, Paul Kagan Associates, Cable World, SkyREPORT, and public reports of individual companies.

**2. COMPETITION IN THE VIDEO MARKET IS WELL ESTABLISHED AND GROWING STEADILY**

**A. Nearly 20 Million Consumers Now Subscribe to Cable's Competitors**

Today, consumers can choose from a variety of multichannel video providers, including DBS, alternative broadband providers like RCN, phone companies, and utilities. As a result of this competition, nearly 20 million consumers - more than 22 percent of subscription television customers - now obtain multichannel video programming from some company other than their local cable operator. In contrast, five years after passage of the 1996 Act, the regional Bell companies still control 97 percent of all residential telephone lines.

**B. DBS in Particular Has Become a Competitive Substitute for Cable**

With the passage of the Satellite Home Viewer Improvement Act (SHVIA) in November 1999, DBS companies can now retransmit local broadcast signals into their market of origin ("local-into-local"). As of December 2000, DirecTV and EchoStar made available local TV signals to over 61 million television households in 41 markets. When combined with their ability to offer hundreds of channels of digital video and CD quality sound, DBS companies compete vigorously with cable. Just ask Drew Carey.

The total number of DBS subscribers jumped from 10.7 million to 15.3 million between February 2000 and February 2001 - a 43 percent annual growth rate. DirecTV now has more subscribers (9.8 million) than all but two cable operators - AT&T and AOL Time Warner - making it the third largest multichannel video provider in the U.S. The number two DBS provider, EchoStar, has more customers than all but five cable companies.

**C. Total Dish Subscribership (C-Band and DBS) Now Exceeds 15 Percent in 38 States.**

According to SkyREPORT, Direct-to-Home (DTH) subscribers (all

dish customers, including DBS and C-Band) grew from 13.44 million to 16.45 million between February 2000 and February 2001, an increase of 22 percent (versus 1 percent for cable). In 38 states, DTH satellite subscribership now exceeds 15 percent of all television homes. As of January 2001, DTH penetration exceeded 20 percent in 28 states, 25 percent in 11 states, 30 percent in 4 states, and 40 percent in 1 state. For example, DTH penetration in Ohio is over 15 percent, in Wisconsin over 20 percent, in Utah almost 25 percent, and in Vermont more than 40 percent. Today, most consumers have the choice of two DBS providers in addition to cable, and some have other multichannel video choices as well.

**States With Direct-To-Home (DTH) Dish Penetration of Fifteen Percent or More (January 2001)**

STATE	% OF TVHH w/DTH
Vermont	40.63
Montana	38.39
Wyoming	33.16
Mississippi	30.76
North Dakota	28.42
Arkansas	28.42
Idaho	27.91
North Carolina	26.71
Kentucky	26.38
West Virginia	25.39
Missouri	25.27
South Dakota	24.46
South Carolina	24.42
Utah	24.00
New Mexico	23.83
Texas	23.64
Indiana	23.51
Tennessee	23.02
Alabama	23.01
Oklahoma	22.43
Maine	22.33
Virginia	22.10
Iowa	21.88
Georgia	21.78
Colorado	20.88
Wisconsin	20.68
Nebraska	20.62
Oregon	20.03
Arizona	19.82
Kansas	19.80

Minnesota	19.04
Michigan	17.78
Louisiana	17.10
Florida	16.79
Washington	16.42
New Hampshire	15.32
Ohio	15.27
Nevada	15.26

Source: SkyTRENDS SkyMAP January 1, 2001;  
<http://www.skyreport.com/>

D. **DBS is Not the Only Competitor to Cable**

The ability to sell telephone, high speed Internet access, and an expanded number of video programming channels over a single broadband facility (or in conjunction with wireless or satellite providers) is providing new incentives for facilities-based broadband competition. Companies like RCN, Knology, WideOpenWest, Altrio, Carolina Broadband, Everest Connection, Grande Communications, and Western Integrated Networks have obtained franchises to provide consumers with competitive broadband services. Although relatively new, and despite recent difficulties in the capital markets, these companies have raised billions of dollars to construct alternative broadband facilities in various areas across the country.

As utilities face a newly deregulated and competitive marketplace, they - like other telecommunications companies - have incentives to offer and package additional services over their facilities. Consequently, utilities like Sigecom in Indiana and Seren Innovations in California are joining the new class of broadband overbuilders in offering multichannel video programming services to consumers.

Incumbent local exchange carriers are also adding video programming to their product line-ups. For example, Qwest has introduced a means of delivering video programming to telephone subscribers in the metropolitan Phoenix area over existing fiber-optic and residential copper-wire telephone facilities. The new technology - VDSL (very high speed digital subscriber line) - is similar to the DSL service used by the telephone companies to provide high speed Internet service.

3. **CABLE OPERATORS ARE UPGRADING THEIR SYSTEMS AND COMPETING WITH OTHER PROVIDERS TO BRING CONSUMERS NEW BROADBAND SERVICES**

Cable companies have responded to competition in the video market by aggressively upgrading their facilities and launching new services. Since passage of the Telecommunications Act of 1996, the cable industry has invested \$42 billion to deploy broadband plant in order to offer a wide array of advanced services, including digital video, digital music, high speed access to the Internet, and telephony. These upgrades involve rebuilding more than a million miles of cable plant. At year-end 2000, they were approximately 75 percent complete. As the 1996 Act "turned five" in February 2001, cable added its 10 millionth digital video customer, 4 millionth high-speed data customer, and 1 millionth residential cable telephone customer.

A. **Digital Video**

Among the new options that cable customers have are digital

video services. Digital video provides increased channel capacity through compression of multiple video signals in the same 6MHz slot previously occupied by a single analog channel. As a result, customers are able to receive dozens of new programming services from cable operators. Digital video also offers crystal-clear video images, CD-quality sound, on-screen menus, interactive program guides, search capabilities, and expanded parental controls.

Cable program networks have already launched some 60 new digital channels, offering consumers additional choice and further program diversity. Examples include the *Biography Channel* and *History Channel International* (from A&E); *Science, Civilization, and Kids* (from Discovery); *Noggin, Nick Too, and Nickelodeon Games & Sports* (from Nickelodeon); and *style*. (from E!). There are six new Hispanic channels from Liberty Cañales, new music channels from MTV and BET, and separate channels targeting Indian, Italian, Arabic, Filipino, French, South Asian and Chinese viewers from *The International Channel*. There are also many new premium offerings from HBO (*HBO Family, ActionMAX, and ThrillerMAX*), Showtime (*Showtime Extreme, Showtime Beyond*) and Starz! Encore (*Starz! Family, Cinema, Movies for the Soul, and Adventure Zone*).

Consumers are responding by signing up for digital tiers in record numbers. Cable operators started 2000 with just under five million digital video subscribers but doubled that number to 10 million by March 2001. A survey released in March 2000 by the Cable and Telecommunications Association for Marketing (CTAM) showed positive customer response to their upgraded, digital cable offerings: of nearly 2,600 consumers polled, 95 percent expressed satisfaction with their service.

With millions of digital set-tops now deployed in cable networks, and thousands more installed every week, cable operators are beginning to look beyond simple broadcast services toward new, interactive services that meet the needs of individual customers. One service that many operators are aggressively pursuing is video-on-demand (VOD, which includes "subscription video-on-demand"). This 'personalized' television service allows customers to watch new movie releases or favorite TV programs, with real-time control of such features as pause, fast-forward, and rewind.

#### **B. Cable Modems: High Speed Access to the Internet**

Cable's upgraded broadband facilities also enable consumers to access any website of their choice at speeds 50 to 100 times faster than standard dial-up services. In addition, cable modem service is "always-on": there is no waiting for a connection to the network or the Web. Customers can download information instantaneously with cable modems, which can be purchased at retail stores or leased from a cable operator. The industry ended last year with 3.7 million customers - more than double its 1999 total of 1.6 million. By March 2001, the number of cable modem subscribers exceeded 4 million.

Cable's entry into high speed data services has also benefited consumers by prompting a strong competitive response from incumbent telecommunications companies. For example, cable's deployment of cable modems has led local telephone companies to offer digital subscriber line (DSL) service, a broadband data technology that has been available for over a decade. When there was no competition from cable, companies like NYNEX and Bell Atlantic (now Verizon) chose to sell more expensive T-1 and ISDN lines to consumers. However, as soon as cable offered broadband access to the Internet, local exchange carriers took DSL off the shelf and began selling it aggressively to millions of households across the nation. By year-end 2000, DSL subscribership reached the two million mark. In addition, companies such as Worldcom and

Sprint provide broadband fixed wireless service, while satellite operators have begun to offer two-way broadband service.

#### C. Cable Telephony

The local residential telephone market has proven to be most resistant to the introduction of competition. Despite strong incentives provided by the Telecommunications Act of 1996, the vision of CLECs purchasing unbundled network elements and reselling local loops has not materialized as planned. However, with upgraded digital broadband facilities, cable operators are well positioned to offer facilities-based competition to local telephone companies.

Cable telephony provides numerous enhanced services, including voice mail, caller ID, and call forwarding. AT&T Broadband, Cox Cable, and Cablevision are today offering such services at rates 10-50 percent below those charged by incumbent telephone providers. For example, Cox communications offers its 200,000 residential phone customers a first line at 10 percent below the prevailing Bell rate; additional lines at up to 50 percent discounts; and feature packages such as call waiting at 30-75 percent discounts.

Cable operators started the year 2000 with 200,000 residential telephone customers and ended it with 850,000. They added a record 280,000 new residential telephone subscribers during the fourth quarter of 2000, and currently serve more than 1 million telephone customers. In addition, cable companies such as Cox, Adelphia Business Solutions, and Cablevision Lightpath are providing more than two million telephone lines to business customers.

Although still a new business, telephony is a key component of cable's business strategy for the future. This includes both switched voice service and Internet protocol (IP) telephony over broadband networks. Cable companies like Charter, Comcast, AOL Time Warner, and others are already field-testing IP telephony. Just as the first five years of the Act have seen video, wireless, and Internet competition flourish, I believe the next five will see Congress' vision of local phone competition finally realized.

#### 4. PROGRAMMING OWNERSHIP

Today there are 224 national cable networks, compared with 76 in 1989. At the same time that cable is expanding its service offerings, vertical integration in the cable industry has declined from 53 percent in 1989 to 35 percent in 2000. This percentage will drop even further when AT&T completes its plans to divest Liberty Media.

In contrast, major companies like Disney, General Electric, Viacom, and News Corp (who respectively own the ABC, NBC, CBS and Fox networks), are increasing their ownership of cable networks. Each of the major commercial broadcast TV networks today is owned by a media company that has financial interests in 10 to 20 cable networks. Some are nationally distributed channels like CNBC, while others are regional channels like Fox Sports Net. Recently, Viacom (the owner of CBS) completed the acquisition of Black Entertainment Television, adding to its array of popular cable networks, which already includes Showtime, MTV, and Nickelodeon.

#### **BROADCAST NETWORK INVESTMENTS IN CABLE NETWORKS**

##### **WALT DISNEY/ABC**

- The Disney Channel
- SoapNet
- Toon Disney

**Partial Ownership:**

- ESPN
- ESPN2
- ESPNNews
- ESPN Classic
- Lifetime Television
- Lifetime Movie Network
- E! Entertainment Television
- A&E Television
- The History Channel
- The Biography Channel
- The History Channel International

**NEWS CORP./FOX/FOX ENTERTAINMENT**

- Fox News
- Fox Sports Americas
- Fox Sports World
- fX<
- fXM: Movies on Fox
- The Health Network
- Fox Sports (regional networks): Southwest, West, West 2, Pittsburgh, Rocky Mountain, Northwest, Utah, Midwest, Arizona, Detroit, North

**Partial Ownership:**

- National Geographic
- TV Guide
- Fox Family
- Outdoor Life
- Speedvision
- Golf Channel
- Fox Sports (additional regional sports networks)

**Viacom/CBS/UPN**

- BET Holdings: BET, BET Action Pay-Per-View, BET on Jazz, BET Gospel
- The Box
- MTV
- Nickelodeon/Nick at Nite
- TV Land
- VH1
- TNN: The National Network
- Showtime
- The Movie Channel
- Flix
- The Suite (digital networks): Noggin, Nickelodeon GAS, Nick Too, M2, MTV X, MTV S, VH1 Country, VHI Smooth

**Partial Ownership:**

- Comedy Central
- Sundance Channel

**GENERAL ELECTRIC/NBC**

- CNBC

**Partial Ownership:**

- MSNBC
- A&E Television
- The History Channel
- The Biography Channel
- The History Channel International

- AMC
- Bravo
- Independent Film Channel
- MuchMusic
- WE: Women's Entertainment
- Valuevision
- Fox Sports (regional networks): Chicago, Bay Area, Florida, New England, New York, Ohio, Madison Square Garden Network

**5. CABLE PRICES**

Despite escalating programming costs (especially higher sports rights fees) and billions spent on system upgrades, cable prices have remained relatively stable on a per-channel basis. For example, the Federal Communications Commission found that cable rates stayed unchanged in the year 2000 on a cost-per-channel basis (Report on Cable Industry Prices, FCC 01-49, MM Docket No. 92-266, released February 14, 2001). According to the same report, during the 12-month period ending July 1, 2000, average monthly prices for basic service tiers (BST), cable programming service tiers (CPST), and equipment increased by 5.8 percent. This represents a very slight increase (from 5.2 percent) for the year ending July 1, 1999 - during which CPST prices were subject to FCC regulation from July 1, 1998, to March 31, 1999.

Industry critics may seize on the fact that average monthly cable prices increased 5.8 percent compared to the inflation rate of 3.7 percent during the 12-month period ending July 1, 2000. But their criticism fails to take into account the fact that cable subscribers also received an average of three additional channels of BST and/or CPST programming. As cable systems are upgraded and new satellite programming services are launched, cable operators have added new channels that consumers want. Year-to-year comparisons which fail to consider the increased number of channels that operators provide to customers therefore create a misleading picture. In fact, data from the FCC and General Accounting Office show that over time, the price per channel of cable's video services has declined since 1986 when adjusted for inflation:

**Price Per Cable Channel, 1986 - 2000**

	12/1/86	4/1/91	7/31/97	7/31/00
<b>Nominal Price per Channel</b>	\$0.44	\$0.53	\$0.63	\$0.66
<b>Price Per Channel Adjusted for Inflation (in 2000 dollars)</b>	\$0.69	\$0.68	\$0.68	\$0.66

Source: GAO Survey of Cable Television Rates and Services, July 1991; FCC Reports on Cable Industry Prices, released 12-15-97 and 2-14-01; Bureau of Labor Statistics, CPI-U.

This drop in real per-channel cable prices has occurred even though programming costs have skyrocketed since 1986. For example, between 1996 and 2000, the cable industry spent over \$36 billion on basic and premium programming - roughly 75 percent more than the \$20.6 billion it spent during the previous five years. Cable customers today are receiving more channels and better value for their dollar than ever before.

**CABLE SYSTEMS' PROGRAMMING EXPENDITURES:1986-2000**

Year	Expenditures (in Billions)
------	----------------------------

1986	\$2.030
1987	\$2.289
1988	\$2.599
1989	\$2.918
1990	\$3.195
1991	\$3.463
1992	\$3.811
1993	\$4.000
1994	\$4.370
1995	\$4.963
1996	\$5.656
1997	\$6.413
1998	\$7.466
1999	\$8.000
2000	\$8.882

Source: NCTA Research Department estimate, based on data from Paul Kagan Associates, Inc. and the U.S. Copyright Office.

**6. CONCLUSION**

Over the last five years, there has been rapid and unabated growth of competition in the video market. The job is not yet done, but the convergence of video, voice, and data services in the digital broadband marketplace will only accelerate this trend. Cable will continue to be a leader in providing consumers with choice - not only in video services, but also in high speed Internet services and telephony. At the same time, consumers will be able to choose from among multiple vendors when making their purchases. In this highly competitive business environment, companies that succeed will be those who offer consumers the best quality, value, and service. While it is not possible to forecast precisely which companies will be most successful, one thing that can be said with certainty is that American consumers will be the ultimate winners of this competition.

Thank you again for this opportunity to present our industry's views. I would be happy to answer the Subcommittee's questions.

[archives]

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**HDTV Magazine Third Anniversary Special Edition**

by

**Dale Cripps**

Dear Readers,

This anniversary edition is as much for the H/DTV professionals as the owners of HDTV. It is a mix of ideas from those who need to understand the consumer and for consumers who want to understand the professionals. Interleaved between comments from the professionals are recent 'consumer speak' comments from you, our readers. I hope you enjoy this production as much as I did in putting it together.

Dale Cripps, Publisher

-----CONSUMER SPEAK-----

"I honestly had no intention of buying an HDTV receiver when I walked into Circuit City a few months ago. As far as I knew, HDTV was just another one of those technological marvels that was coming 'some day' - like pocket videophones, 3-D movies-on-demand, and computers that don't crash in the middle of an important project for no reason whatsoever. I was wrong."

-- Lee Aronsohn

-----CONSUMER SPEAK-----

November 16, 2001, marked the third anniversary of the launch of high-definition television in the United States. Three years ago industry and government leaders met in the Ronald Reagan Conference Center in Washington, D.C. to symbolically pass the baton from the engineering side to the forces of commercialization.

Interdependent industries and their government counterparts helped each other dispel nervousness over the cost of the transition and the time it would take for it to find a cultural mooring.

Despite three years of mostly regrettable retail demonstrations, a deepening

recession, and a deadly global war, H/DTV continues to move forward as a major multi-billion dollar business. Not all agree that this transition is right for broadcasters, maybe right for cable and DBS. Because it is a difficult business proposition excitement for it is usually reserved for the principal beneficiaries - the public. The rest moan under the financial distress this step in quality has placed upon their bottom lines.

I asked industry leaders from around the nation to give us an assessment of the H/DTV business as it stands today and posed these two questions:

- 1. While H/DTV certainly has a strong core group the lingering question in a post September 11 world is: will HDTV continue to grow in all ways or can/will it suffer in part or in whole from the present economic/political climate?
- 2. What is most urgently needed, if anything, to make the transition work for this nation?

==--==CONSUMER SPEAK==--==

"Being sixty years old and retired, my wife and I purchased a widescreen Panasonic HDTV. We just love it. The HD picture and sound are out-of-this world. Sports are our pastime, so we look forward to upcoming events on HDNet."

-- Arnold Trisko

==--==CONSUMER SPEAK==--==

Gary Shapiro, President and CEO of the Consumer Electronics Association offered his comments:

DTV Reflections and Realities  
By  
Gary Shapiro, President, CEA

In its first three years on the market DTV has built a solid foundation fortified by tremendous progress in the last 12 months. Not only have prices dropped by more than 40% since 1998, but one million DTV products were sold in 2001, a milestone that has marked lift-off from the new-product launch pad for generations of consumer electronics products. From the early days of black-and-white and then color TV, to more recent introductions like Direct Broadcast Satellite (DBS) and DVD, passing the million units per year sales mark set these products on their way to becoming household staples.

TV manufacturers have led and are still leading the DTV charge, today offering more than 300 models of DTV products (up from 200 models just one year ago) including integrated sets, digital monitors and set-top receivers at affordable prices. More than half of all projection sets sold last year were digital models, another indication of consumers recognition of HDTV's value as the price gap between digital and analog narrows.

Programming will continue to be a key to DTV adoption in the coming years. The

Federal Communications Commission's (FCC) May 2002 mandate for all commercial stations in the U.S. to begin broadcasting on their digital channels is fast approaching. While progress on this front has been slow, it is likely that more than half the stations, reaching more than 95 percent of the nation's households, will meet that deadline. This means that, despite enormous challenges, the majority of broadcasters, like the TV manufacturers, will have done their part to make the digital transition a reality.

On the content delivery front, satellite is leading the way. DBS delivery of HDTV continued to grow in 2001 on both DirecTV and Dish Network including feature films and sports event. Broadcast networks stepped up the pace as well in 2001 with significant strides in their digital offerings, so that by year-end the CBS and ABC primetime schedules were predominantly HDTV. Visionary entrepreneurs like Paul Allen and Mark Cuban, who saw the potential of other technologies before most, have also taken a lead in DTV - Allen with a hi-def cable channel (ASCN) in Oregon and Cuban with HDNet from Dallas on DirecTV. These and other signs point toward 2002 as being the year that DTV takes firm hold in millions of American homes.

Perhaps the starkest reality at this stage of the transition is the critical need for cable carriage. 2002 must be the year that cable operators across the country step up to the plate and allow access to the growing roster of digital HDTV programs for the two-thirds of Americans who receive their television through cable. Pioneers like Cablevision in New York, Comcast in Philadelphia, Action Sports in Oregon, and the few others that deliver HDTV to their subscribers simply cannot carry an entire industry through this transition.

Despite the challenges that remain on the road to DTV, we remain optimistic - proud of manufacturers' lead in the digital transition to date and bullish about DTV going forward. We expect unit sales to double to more than two million, with a value of \$3.5 billion. And as the inventory of HDTV programs increases, we expect the percentage of DTV receivers and integrated sets to grow quickly as well. The record of success thus far is impressive by any standard and the growth curve continues to reinforce what we've said all along - that digital broadcast represents the future for American television and that when you show it, the American public will embrace it.

-----CONSUMER SPEAK-----

"The difference from 8 track tapes to CDs is the same for regular television to HDTV. Need I say more?"

-- J. Mallatt

-----CONSUMER SPEAK-----

Joel Brinkley is the Pulitzer prize-winning journalist from the New York Times - the man who chronicled the last year of the DTV standard setting work in his book 'Defining Vision'. He responded to our questions with his list of improvements the industry must make if it is to flourish.

- Resolution of the interconnect issue that still does not allow DTVs to connect to digital cable boxes. I first wrote about this issue three years ago, and the problems have only grown knottier. The FCC has threatened for more than a year to step in, but now those threats ring hollow.
- Manufacturers have to insist that their retailers better display high-definition sets. In most stores, customers are shown DVDs or worse. Nothing they see convinces them (the public) that HD is worth having.
- The cost of receivers has to come down. Three years out, you still have to pay at least \$550 for a digital receiver - on top of the high price of the TV. Not everyone wants DirecTV service with their DTV. Basic digital receivers should be available for a nominal cost. Without that, the current situation - fewer than 20 percent of DTV buyers also buy receivers - will continue to prevail.
- HD programming has now reached a threshold level, but there has to be a way for most cable subscribers to view HBO, Showtime, HDNet and other high-definition offerings on cable. To own a digital TV and know that this programming is being transmitted is frustrating when you have no way to receive it - unless you are willing to scrap your cable installation and spend a lot of money and effort to install EchoStar or DirecTV.

-----CONSUMER SPEAK-----

"Gratefully, HD technology has recognized our needs and has given us the best. High Definition is here! Buy it! I did . . . and my 81 year old eyes appreciate the purchase."

-- W. Jack Doyle

-----CONSUMER SPEAK-----

National Association of Broadcasters Technology Vice President, Lynn Claudy of the National Association of Broadcasters (NAB) in Washington, DC , tells a story he wishes a child should understand and makes a Christmas list.

After Three Years, Understanding DTV Ought To Be Child's Play - But It Isn't! by  
Lynn Claudy  
Sr. Vice President, Science and Technology  
NAB, Washington

The FCC began requiring the first television stations to be on-the-air with digital transmissions over three years ago. Now, 217 stations in 75 markets are transmitting digital signals, with those markets covering over 70% of U.S. households. There are lots of DTV sets available at retail outlets, in a variety of price ranges and with diverse sets of features.

The DTV transition is definitely happening. But somehow, all is not well in DTV Land. Some important issues haven't been settled. The parties are deadlocked;

government intervention to break the logjam is, at best, uncertain. Many consumers are confused, i.e., hesitant to spend money on DTV. There won't be as many DTV sets sold this holiday season as there would be otherwise. DTV issues have become extremely complex, understandable only to the sophisticated combatants in the debate. To succeed, the DTV marketplace needs to be so clearly defined that it would be easily understandable to the average child. In the spirit of the coming holiday season, below is a Christmas DTV List for Children - or call it DTV Goals for Consumers. The brief explanation in parentheses outlines the work going on within the industry and between industry and government. Can the goals be realized? On some of these, don't hold your breath for a solution.

#### A Christmas DTV List for Children

Make the definition of a television set something that every child can understand. A television receiver should be a consumer device that, at a minimum, receives and displays programs from over-the-air free local television stations, regardless as to whether they are transmitted in analog or digital format. The All-Channel Receiver Act of the early 1960's, which required all television sets to include UHF tuners, is the appropriate model for the government to now require that all television sets should include digital as well as analog tuners. It wouldn't be that expensive, either, if mandated for all sets on a reasonable phase-in schedule. (Status: this issue is in the hands of government to render a decision.)

Make indoor DTV reception better and make portable and mobile reception devices for television signals practical. Television stations should have the flexibility to trade off higher robustness for reduced data rate, in order to make services available to devices in more rugged receiving conditions, when appropriate. This doesn't endanger HDTV - it just adds to the palette of service offerings and strengthens the viability of DTV service. (Status: ATSC is in the middle of a program to enhance its DTV Standard to make this possible - completion possible in the middle of next year.)

The television-related definitions of 'ghosts' and 'snow' should be eliminated from the working vocabulary of children. When everybody has replaced their analog televisions with digital television sets, there won't be any more reason to suffer the obnoxious impairments that plague analog reception. (Status: current law states that analog service will continue until DTV set penetration is 85%. Solve the DTV set penetration problem and analog services will go happily away.)

Make sure digital television sets can hook up to cable systems and get all the digital broadcast programs as well as cable programs. The lack of cable interoperability with DTV broadcast signals makes absolutely no sense, from a consumer point of view. The cable and consumer electronics manufacturers have been butting heads for years, with not enough success to solve the problem in the marketplace - it's time for the government to pick up the slack. (Status: Lots of talk, little action, sore fingers from pointing them so much.)

Make new digital television sets with capabilities that can access multimedia and data delivery services. Even though broadcast is inherently a one-way service, there is lots of opportunity for Web-like services and interactivity with data delivered and stored in the set. (Status: the ATSC's first multimedia standard (DASE) has recently been completed but DASE-2, which will support a return path by phone line or other means may be needed for manufacturers - and consumers - to get really interested.)

Make all the programs that are transmitted from digital television stations special in some way so that people will want to buy new television sets. Hooking up the television station's analog NTSC program to its digital transmission system doesn't generate much consumer excitement. Consumers need more HDTV, more multicasting, more data broadcasting, more enhanced services, more new stuff! (Status: With CBS and ABC making major commitments on primetime HDTV, high profile HDTV programs from NBC and pioneering efforts from PBS, HDTV content is plentiful, and multicasting ideas are starting to gel into real programs, but more high value content is needed. More content will always be needed.)

Make sure all local broadcast signals are available on local cable systems. With 70% of Americans getting their local broadcast programs via cable, and cable capacity growing by leaps and bounds, and current law requiring cable systems to carry local analog broadcasts, this shouldn't be an issue. Without cable carriage, the DTV transition will probably never be completed. (Status: This is the subject of a current FCC proceeding. If you'd like to pour through some of the thousands of pages of comments on this issue, go to the FCC website ([www.fcc.gov](http://www.fcc.gov)) and check out CS Docket 98-120.)

Make large flat screen HDTV displays affordable. How about 50" diagonal flat screen HDTV displays (with a DTV tuner) for under \$1,000? Who wouldn't bet they'd sell like hot cakes? (Status: The Big Breakthrough is always 5 years away and has been for 10 years.)

Santa would probably say that this Christmas List is a little much to expect for this year, but if he could work on it starting December 26 and tick off the items by next Christmas... 2002 could be a Merry Christmas indeed.

Tell your family and friends to have a High Definition Holiday!

-----CONSUMER SPEAK-----

"Even though my 52" projection HDTV cost more than my first car, I still feel it was worth every penny. I love it because even though there are very few shows to watch in HD I still get excited for each one as it seems better than the last."

-- Gary Linde

-----CONSUMER SPEAK-----

### **HDTV Developer**

Mr. Glenn Reitmeier is a key engineer with the David Sarnoff Research Center in Princeton, N.J., and one of the brilliant architects of the ATSC standard. He informs us in his response below that other commercial beginnings were not so rosy in their first years either, and certainly no cheaper than DTV in its nascent period. Like many he declares that cable needs to pony up to the bar.

**Glenn Reitmeier:** This year also marks the 50th anniversary of the invention of color television! I recently took a look at the history of color television adoption -

and H/DTV is actually doing extremely well against that historical benchmark.

Here's some perspective: the NTSC color standard was established in 1953, and in 1954, a new color television was roughly the cost of a new Chevrolet, and there was a scarcity of color programming.

It took 13 years (1966) until NBC became the first 'all-color' network. By then the cost of a color receiver was over \$2500 in 1999 equivalent dollars (source: Forrester Research). It then took over ten years of steady content increases and receiver cost reduction to drive consumer penetration above 75%. Dale, you certainly know the story of content availability and receiver prices & sales for HDTV - but while all of us 'champions of HDTV' want to see the adoption go as fast as possible, compare it against a historical perspective - we're way ahead of where NTSC was in 1958 (standard established + 5 years)!

To directly respond to the two questions that you posed:

- HDTV will surely continue to grow, although that growth can't help but be slowed temporarily by the current economic climate. (we have to be realistic)
- I believe that the most urgently needed stimulus for growth is direct cable carriage of H/DTV signals. Cable is the dominant form of television signal delivery today, and cable-ready sets have set consumer expectations for convenient availability of content. Cable carriage of ATSC signals that provides consumers with the quality of HDTV and the same convenient F-connector availability that they enjoy with analog television will be a tremendous driver for adoption!

-----CONSUMER SPEAK-----

"Clarity beyond comprehension, beyond description, beyond belief! Resolution so fine that your visual senses are at first, confused and unable to register your observations. Travel to any part of this world and beyond to witness scenes so real that your brain is telling you that you are there in person. No limitations, no restrictions, only endless High Definition programming possibilities, makes HDTV my family's window to the world and beyond!"

-- Sam Davis

-----CONSUMER SPEAK-----

### **Manufacturer**

Mr. Robert Perry is Vice President, Mitsubishi, a leading producer of HDTV projectors. He thinks things are going well and suggests that the killer app for DTV is no less than television itself - high-definition television, of course.

**Robert Perry:** While the pundits would like bad news, there is little to find. Consumers visit stores to buy TV's, and once they see HDTV, they are hooked. While the tragic events of 9/11 occupy the attention of all Americans, they

continue to seek information and entertainment from the most powerful medium ever created - television.

And broadcasters now clearly see their future - the future of television is television. Datacasting, multi-channel and other concepts have fallen by the way - consumers love HDTV, and can't get enough of it. Given a choice between a highly rated show in analog resolution, and a lesser-rated show in HD, evidence is mounting that consumers will watch the HD show.

Our transition is well in hand. NAB estimates over 90% of all US households will be able to receive a broadcast digital signal by April 2002. Large screen HD displays have dropped below 1997 analog display retail price points. Multiple digital receivers abound, both integrated and set-top-box versions. And cable is now seeing the light, taking the opportunity to deliver better television to consumers, while aggressively competing with DBS, using HDTV as a strategy.

Of course, we need to stay the course and continue to resolve the issues which confront us - both copy protection and increasing cable carriage are our key focus for the future. And we must continue to recognize that consumers 'Fair Use' rights should not be eroded in this digital transition.

HDTV is living up to it's billing - people are thrilled with the performance, and they want more. Digital broadcasts allow digital interconnections of home theater products, which, when accompanied by software systems such as HAVi, bring the power of sophisticated products into the hands of technically intimidated consumers.

We live in an extraordinary time, where the promise of HDTV is contrasted with the sorrow and national focus of terrorism - and the job at hand. Many of us have spent time reflecting on our lives, our good fortune to be Americans, and communing with our families and friends, all in front of our HDTVs.

-----CONSUMER SPEAK-----

"HDTV is all that it was advertised to be and more; a fully engaged 16: 9 widescreen image that rivals any photographic media available. After four decades of looking through the 4:3 tunnel I feel like someone has opened the door and let me look outside at the full vista of God's creation."

-- Bob C.

-----CONSUMER SPEAK-----

## **Cable**

What's this problem with cable? "Nothing" claims the National Cable Telecommunications Association's Mark Smith.

He spoke to us yesterday from his Washington, DC office. "It is in cable's interest to deliver HDTV," he said repeatedly. But, before his arguments and comments are fleshed out in our interview, Mr. Jim Chiddix, President, Interactive Personal Video for AOL Time Warner in New York sends us this update about their cable MSO's HDTV involvement:

### **AOL Time Warner**

"Dale - It's important to look beyond the political rhetoric surrounding HDTV. Some cable companies (like AOL Time Warner's cable division, which serves 20% of the country) have been active launching HDTV. We have between 10k and 20k HD boxes installed in homes of customers with HD displays, and carry much of the available programming from HBO, Showtime, and local broadcasters. We do not charge extra for the HD boxes.

We have at least 100k more HD digital set-top boxes on order. We're trying to move the chicken/egg cycle ahead; cable's a great distribution medium for HD. Folks are buying HD displays; programmers are producing compelling content (much of HBO's HD service is scanned at HD, not just upconverted), and companies like Time Warner Cable are making it easy for folks to get HDTV without buying expensive receivers."

====-CONSUMER SPEAK-====

"I was around during the color television revolution. I remember the resistance that so many people had to the conversion, but as soon as a friend purchased one and they were able to see an actual program in color, they were hooked. The same scenario exists for HDTV. This difference between standard definition television and high definition television is every bit as remarkable as the difference between black and white TV and color TV."

-- Ron Kornegay

====-CONSUMER SPEAK-====

**Cable** Continuing talk with Mark Smith, National Cable Telecommunications Association:

This is a rather far ranging discussion seeking answers to Gary Shapiro's call for cable to come to the HDTV table. Unquestionably there is more to the issue than meets the eye and we can only hope to, in the words of President George W. Bush, smoke them out and get them on the run - ideas I mean.

**HDTV Magazine:** What is going on now with cable and HDTV?

**Mark Smith:** All of the major MSO have some form of HDTV deals. Time-Warner is definitely leading the way. Cox, AT&T, etc. Comcast did a big deal in Philadelphia not long ago where 1.3 million homes are set to get HDTV signals.

There has been a mischaracterization on how the cable industry feels about high-definition. First of all, the cable industry embraces it. You see that with HBO, Showtime, MSG, and Discovery Channel (who have been acquiring HD programming). It is definitely a part of their strategy. The cable industry has always been waiting for HDTV because it is an advanced service we can offer to our customers. Now that you have EchoStar and DirecTV getting into the HDTV game, it is incumbent for us to get into the game. Our best customers are attracted to those services. It is in our interest. The cable industry has been at the cutting edge of programming for the last ten years. This is something that is right up our alley.

Our issues have been over government mandates - being forced to do things. We are taking a look at the deals that are happening and we are very encouraged. We think it demonstrates that the marketplace and consumer demand are the right accelerators of the transition.

**HDTV Magazine:** How so? What kind of demand? What could the CE, broadcast, and program providers do to further the transition to HDTV in a market driven way without your carriage coming first?

**Mark Smith:** First is content. If you actually have the products it takes care of a lot of the other issues.

**HDTV Magazine:** So, if tonight you had available to cable the premiere showing of 'Harry Potter' in HDTV this would be something to wake up the MSOs?

**Mark Smith:** Yes, that would do it. We have made great strides with the compatibility with the CE companies. We feel good about that. There are still challenges with the copyright issues. We are, quite frankly, a bit in middle on that one. On one hand we are sensitive to the content people. On the other we are sensitive to our consumer demand where it is nice to be able to copy it. The MPAAs are working on that one.

I think from the broadcasters it would be nice if we can come up to tiering solutions. That way works best for us - to put it on our digital tiers.

One challenge is that it is only available to 70 million households. Only 20% of our customer base has taken digital since we launched. We are encouraged by that, but we think it would be a lot better if you not-only get more and better programming choices, but you are going to get a high-definition tier as well.

**HDTV Magazine:** How does that tier function? How does the consumer acquire that tier?

**Mark Smith:** That is a market by market thing, but generally something like what Comcast is doing. They have a monthly charge (about \$10/month) and you get all the high-def programming plus you get a 'side car box' that is able to put the HD signal through the TV (converts from QUAM to 8-VSB). If we can create demand for it then we can gain economies of scale so we can integrate this (HD) technology into all of our boxes. Right now it cost a lot of money for these high-def boxes.

**HDTV Magazine:** So you are not providing those boxes to the average digital tier subscriber due to the cost of the 'side car'? What about the consumer picking up

this box in a cable-ready set?

**Mark Smith:** There is a peripheral, but related subject - the retail availability of set top boxes. The Holy Grail is that there won't be a set top. The Holy Grail is that all of this technology will be integrated into the television set so the consumer just plugs the wire into the cable on the back of the television and you are able, through the cable system, to download middleware, which would then control the access of what you have ordered.

**HDTV Magazine:** Is this a JavaScript-like thing?

**Mark Smith:** Yes, very similar. We have the specs and standard. We are ready to go. The struggle we find ourselves in is that CEA doesn't like our specs. There are limitations built into this item called OCAP. There are things in OCAP, such as copy protection, and it also has the ability to restrict outside theft of the network without them paying for it. It is just not as simple as a telephone. You are dealing with content - intellectual property and interactively.

Our central dispute with CEA right now is this: Who is going to primarily profit from the infrastructure? Is it going to be the people who built it, or those who facilitate a connection to it? We have to work out the business terms of that arrangement.

If I am a cable operator who has just spent \$400 million to upgrade my system and have all kinds of interactivity and send over it high-def, an electronic program guide, and have a virtual PVR, etc. I am not going to do that if someone can just go up and connect to it and sell all of those services themselves.

**HDTV Magazine:** How is that done?

**Mark Smith:** Say you build in some kind of interactivity service that is in the TV set that leverages the broadband connection (cable) to get to the Internet (for example). We were the ones who built that broadband connection and invested in it.

The simple example is the EPG. You could put that in the TV set and you make a deal with a broadcaster to have something embedded which will go over the cable. Once it reaches the TV we will get the information and do all of the EPGs (in the set) along with other things.

We have contracts with those people who do the EPGs. What value can we offer those companies if someone can just hook up and usurp their services? The CE guys throw at us ugly words like 'gatekeeper' and 'monopolist', which has been quite disappointing. We have gone out with outstretched hands here and they have been basically slapped away. It is an unfortunate by product. War is but one tool of diplomacy. You try for some regulatory action and some market solution happens.

Right now there IS digital compatibility. You can send HDTV signals through a cable plant and they can be received. It just is not the way they (CEA) want it to happen. They say it has not happened. But more to the point it, has not happened the way they want it to. They just don't like the terms, so they are not doing it. Hopefully, we are moving forward on that.

**HDTV Magazine:** What would suggest to you that you are moving forward?

**Mark Smith:** We have some informal round tables - pow-wows at the FCC - where the head of the cable bureau and Chairman Powell can tell us "we are going to sit at the table and hammer this out." Also Billy Tauzin (R-LA) of the House Commerce Committee is having a get-together on the 28th of this month. That is encouraging. That provides a forum. A lot of this has to happen in private. Unfortunately, what is happening with people on (public) panels is just more hyperbole. It is just not helpful.

When we look at it in a macro sense it is in our interest to have a resolution to these issues. It is in our interest to have the consumer electronics folks as our partners. We would love to have people in retail outlets selling our service for us. We would love to be able to take these set tops and all of these other equipment issues off of our books. Remember, we have to front our costs and manage inventory. We don't want to do that. We are not into selling equipment. We are into selling services.

**HDTV Magazine:** That is very interesting, for as you are aware a lot of people have accused the cable business of simply being greedy by engaging in the equipment sales business. Many say that has been your motivating factor in discouraging cable-ready TV sets.

**Mark Smith:** It doesn't make any sense. We lose money on the boxes. Yes, we get depreciation and we get to do mark-ups, etc., What people don't take into account is the cost of managing these boxes - not only the up-front cost, but the cost of getting them into the field, and then getting them out of the field. This is an incredible expense and it is not something we like doing. It was a necessary evil of the business before because of the different proprietary systems.

Another point of slight frustration for us is that our industry has undergone a remarkable transformation in the last five years. We have gone from a provider of an analog video service to being able to do high-speed Internet, telephony, and digital video. It is astounding how far it has come in five years.

But it is different than the phone system, which was the same (technology) everywhere. Here we are dealing with a whole bunch of different technologies. We have spent fifty billion dollars since 1996 - with set top systems up to Open Cable and Open modems and other things. We are sorry it is not happening as fast as the consumer electronics industry would like it, and on the terms they want it to happen. But we WANT to work with them because we find them better as a partner than as an adversary. Now our challenge is to find ways to be partners rather than to be adversaries. The characterizations you just mentioned don't help.

**HDTV Magazine:** Who is the source of those characterizations?

**Mark Smith:** Well, it's CEA. They are very open. If you read their letters to the FCC you will see. I think their strategy right now is to hammer us as hard as they can to weaken us in the eyes of regulators so they can get advantageous business deals. What Chairman Powell has said is that he is open to solutions and not finger pointing, especially in the post 9/11 era.

The only reason I know this is because I know our VP of technology and our general counsel, who are both at wits end. Every time something comes up (from CEA) they just shrug their shoulders asking, "what do we do?"

**HDTV Magazine:** What steps can you take now to demonstrate to CEA your interest in resolving these issues and becoming a good partner?

**Mark Smith:** We took one step and they just hammered us by saying we did it so we could perpetuate our 'monopoly'. About a month ago we launched - and we were very open about it - a transitory step on retail set top box availability. We said the operators will support the set tops at the retail channels. You have to know which set top box for which markets. We came up with a buy back initiative that if you (the consumer) moved and it didn't work there, we would buy it back on a depreciated basis. We are very open about this being a transitional step. What we were trying to do is offer a gesture, set the table, start the relationship between the cable industry and the retailers. That is what we did, and we got hammered. They (CEA) went off on us. It didn't work very well, Both Chairman Powell and the Cable bureau at FCC said that we made an interesting step. "This is what we want."

What gets to us most is that people try to make us do things. They characterize us as 'gatekeepers', 'monopolist', and 'Satan'. It is very difficult to do things when you must constantly defend yourself.

I know why this occurs. We are the Holy Grail. We have the best infrastructure. We have the consumer relationships. We have a proven track record in transmitting programming. But it is very difficult when you have the broadcasters going to the Government saying "make them carry our signals, make them do this and that." Then we have CEA saying, "make them do this and that."

But let me say that there has not been one time where we have failed to negotiate a HDTV carriage deal when asked. But a lot of the TV folks don't have the content yet to make a deal, so they put all of their energy behind the scenes at the FCC saying we need to reserve shelf space for a product that we have yet to develop.

**HDTV Magazine:** CBS is carrying quite a bit of HDTV. Do they get carriage deals where ever they ask?

**Mark Smith:** Yes, CBS O & Os (owner operated) stations have deals with nearly every major cable operator.

**HDTV Magazine:** Are those deals activated and with the hardware needed?

**Mark Smith:** Yes, in New York I know they are. In Houston they are, and, perhaps, in Florida. The beauty of those deals is they are predicated on the operator's ability. What they say is, "hey, guys, we will carry your signal when we complete our upgrades to 750 Mhz and we have ten percent digital penetration. Then it works economically for us and then it will work economically for you."

I don't know all of the specific deals. But this is how I have heard that it works. The O & Os are fine. It is the station groups who are not transmitting anything nor have anything with which to enter negotiations with us. So, they go to the FCC instead.

**HDTV Magazine:** So, you are saying that when a station comes to you and says, hey, we have four hours a night of HDTV to ship out, the receptivity of the cable company is going to be very high?

**Mark Smith:** Yes! We are no longer vertically integrated with the exception of AOL Time Warner. They have been the most aggressive in signing up these deals. For the most part cable operators are agnostic. As long as someone is using their service they don't care if it is CNN or CBS.

**HDTV Magazine:** Here is how it was explained to me a year ago from one on the CE side. "The cable people don't want us to make the cable box inside of the TV because they foresee changes that can come faster to an outboard box (can change them out easily) rather than embedded in a TV where people will be reluctant to change them out so quickly. So, discourage their embedding of cable-readiness and keep pushing boxes." Is there any truth in this?

**Mark Smith:** It doesn't make sense. Our primary concern is having our investment unfairly usurped. That is the concern we are trying to address. The consumer electronics' concern is 'how to maximize' the money they can make off of our infrastructure. That is business, and what they are there for.

**HDTV Magazine:** You are saying that your infrastructure should be reserved for use by the cable company or one they license use to?

**Mark Smith:** The consumer electronics guys got a taste of it (network relationship) with DBS (they get an override on all subscriptions). They got an annuity off of each dish sold. They now want that arrangement with the cable guys. It is their job to leverage what they do as much as they can. God bless them for it.

**HDTV Magazine:** If you were an arbitrator between these two industries, what would you suggest as a solution?

**Mark Smith:** GOOD QUESTION!!! But it's the ongoing one. How do we split the pie?

**HDTV Magazine:** O.K., how would you do it?

**Mark Smith:** Here is what I don't understand. They don't get an annuity from a CD player, but they make money off the CD player. I think I would argue, o.k., you are going to make money off the TV. You are going to make money off hooking it up to OTA, DBS, and Cable. But you are getting into after-market service businesses, which is something you need (an individual company or industry wide) to negotiate with a cable operator with a compelling reason as to why. The retailer may hold the key in negotiating how both cable and TV can make money from cable's pipe. There has to be something in it for the operator. They (CE) see us now as a utility (the pipe) that is there for them, and not there for us. Just make the case that what you want is good for the cable operator.

What CE is saying - that we want to hold on to these boxes - just doesn't make any sense. I think as a cable industry we may have to go to them and say "This is what is in it for you to sell these boxes." Right now the only thing we can say to them is, "Well, you get your retail mark-ups and opportunity to sell extended warranties. That has been your business for everything else you do."

**HDTV Magazine:** What is step 1 to a reconciliation?

**Mark Smith:** Ease up on the rhetoric. I was reading on the train yesterday a

document from an Ex Parte meeting of the FCC - a 40 page response from CEA. They ripped us to shreds on issues I still have no idea what they were talking about. Go to the FCC web site and read it yourself.

So, first step is to ease up on the attack. Transition from the attack posture to the negotiating posture. When we put out an outstretched hand don't slap it away. When they do, then we are in the defense and protectionist mode - not a cooperation mode. When someone is hitting you, you cover your face.

Here is an idea for the next step after the first one. Do a deal CE with one of the cable companies. Test pilot it to see if the Open Cable and the CableLabs specs...I mean, they are saying now that spec is not good enough.

These are, of course, rather external ideas for we here deal in public policy. NCTA would not facilitate something like this for it is a marketplace function. We can encourage something and say that it is a good idea. It's just an idea off the top of my head.

**HDTV Magazine:** Finally, as you know from reading the complaints leveled against you, the CE people claim that you are the bottleneck to HDTV. You have 70% of the TV-viewing market and by holding back you hold back this same 70%. In those places where OTA is available they think you should be carrying HDTV, and if you are not, that is proof of the bottleneck.

**Mark Smith:** We can't carry what the stations don't have. If they have it and we don't carry it, broadcasting has its own infrastructure to send it and the consumer can receive it by antenna. What is the bottleneck? They put up a lot of round antennas on their roof.

=====CONSUMER SPEAK=====

"My home theater and HD programming has made staying at home far more pleasant than it would be otherwise. What a great age we live in!"

-- Don B.

=====CONSUMER SPEAK=====

**Premium Programmer**

Bob Zitter is Senior Vice President Technology Operations, Home Box Office and heads up their HDTV operations. What did they expect and is the roll out to their liking? He responds to our anniversary questions...

Mr. Zitter: When HBO began our HDTV service we anticipated a slow adoption of the technology. We're pleased that we've been able to offer more than 60% of our film titles in true HDTV (and naturally upconvert the balance).

HDTV growth has been enhanced by the increased amount of programming offered to consumers by others in addition to that on HBO. Also, the continuing reduction in HDTV receiver prices and the progress that has been made with interface standards will, I believe, further the penetration of HDTV in the US.

-----CONSUMER SPEAK-----

"HDTV represents the ultimate achievement for the American consumer in viewing entertainment. This nation has always led the world in innovation whether it be Apollo 11, where it was said it couldn't be done, or the in the introduction of the Compact Disc. I, as an American consumer, wish to be part of a ground breaking medium that allows people to see the world around us as it has never been witnessed before - HDTV!

To be part of this ground-breaking event has brought excitement to me unlike anything I have yet experienced. HDTV is breathtaking and visually stunning! Adjectives I have heard are: " WOW," "INCREDIBLE," and "DAMM! IS THIS FOR REAL?"

-- Robbie Benson

-----CONSUMER SPEAK-----

## **National Television Network**

### **CBS**

What are the national TV networks saying and doing about HDTV in this post 9/11 era? CBS has still a commanding lead over the other networks in HDTV programming for the last three years as most of their prime time is now converted and transmitted in 1080i, as is their daily CBS soap, 'The Young and The Restless'.

Martin Franks is the vice-president who engineered much of CBS's activity in HDTV through his securing of sponsorships that cover the added production/transmission costs for the HDTV format. He admits to a certain pessimism he held earlier about the DTV transition when he testified last March before Congress. "I am much more encouraged that we are getting closer to solving copy protection and cable compatibility now. All of those things will ultimately help on the programming side."

Franks casts a wary eye towards the '900 lb gorilla' - the economy. "Advertising-dependent businesses have all taken a large hit since 9/11."

So, how is HDTV doing for CBS? We contacted Mr. Franks in his New York office for his '3rd Anniversary' views.

**HDTV Magazine:** How are things for your HDTV initiative now?

**Martin Franks:** What gave an enormous boost to all of us (working on HDTV) was when ABC came in (with HDTV programming). We didn't look quite so much like the lone wolf anymore. It has been enormously helpful to have the House Commerce Committee get re-interested. (They will hold new closed door hearings on the 28th of this month.) It has been enormously helpful to have FCC Chairman, Michael Powell, appoint a DTV task force.

**HDTV Magazine:** Were serious losses sustained by CBS in NYC from the 9/11 event?

**Martin Franks:** New York is obviously an important market. But, you know, we are still on in lots of other markets. The impact of 9/11 on HDTV is much more related to what it did to the economy as to what it did to any technical infrastructure in New York.

**HDTV Magazine:** Do you have means for taking the consumer 'pulse' with respect to their acquisition of HDTV receivers?

**Martin Franks:** In addition to staying in touch with Gary Shapiro at CEA, which I do regularly, we have our partnerships with Mitsubishi, Zenith, Panasonic, RCA, Samsung, and Sears. Being close to them means that a great deal of anecdotal information comes to us about how pleased they are with the results the partnership (with CBS) is bringing to them. I am guardedly optimistic (about consumer take-up) except for the economy. As a result (of the economy) we must contemplate budget reductions in a number of areas - not just in HDTV. It's a tough business at the moment for all of the advertiser-supported media.

**HDTV Magazine:** Tough times can foster innovative ideas, perhaps even different business models. Do you see any different business models that are related to the DTV transition?

**Martin Franks:** I have not seen a different business model yet. What we are doing is making enormous progress in continuing to drive (HDTV) production costs down.

**HDTV Magazine:** Have you reached an equivalency in HD production costs to that of NTSC production?

**Martin Franks:** Not quite. It is closer and closer. I think our next big challenge is modifying the notion that a true artist must continue to produce on film. That is an on-going challenge for all of us. I keep waiting for the new 'Star Wars' movie to come out. It was widely publicized that Lucasfilms used 24p HDTV for capturing that entire production. If it was good enough for George Lucas, maybe it will be good enough for the next sitcom. Our sports guys deserve enormous credit for innovations in making the one production truck work. If we can get a super slow motion machine made - and we are closer and closer - you know if we knock another thousand dollars per hour off the cost of a prime time show, that is great. If we knock a couple hundred thousand dollars off the cost of producing a football game, that would be (very) great too.

**HDTV Magazine:** Do you have a concern that the DTV transition could collapse.

**Martin Franks:** I don't think that will happen - not a collapse. The economy we have is the same as it is for the set manufacturers. But I am not sure that we are

going to hear, "O.K., HDTV has failed and we are going back to 4:3 SDTV." There may be a little less sports programming for awhile.

-----CONSUMER SPEAK-----

"Once you show your friends, they are flabbergasted, humbled and envious. They love it, just like you do. They want to come over and watch TV. They're hooked. They NEED it like you do. But that's OK, because you know exactly how they feel, and you're more than happy to share."

-- Doug S.

-----CONSUMER SPEAK-----

## **National Television Network**

### **ABC**

ABC's network president, Alex Wallau talks to us from his home in California. ABC is the relative newcomer to HDTV broadcasting . Wallau, came up the ranks through the sports and news divisions (among other things he produced twelve years of Monday Night Football for you Howard Cossel fans). He knows that stepping up to HDTV is not the shortest road to profits but believes that in television you must put your best foot forward or suffer consequences.

**HDTV Magazine:** How do you feel about where we are today in DTV? Are getting your money's worth?

**Alex Wallau:** The investment we have made is a long term play. It is not something we are going to make any money on immediately. The reason you invest in the best picture and sound is because part of what your identity as a network is, is being the highest quality. You cannot afford to be second rate. Even though the installed base (of HDTV receivers) is not there to take advantage of it yet. We just hope the time was right to step up. It has been done, unfortunately, during one of the most difficult times we have faced in recent years. It does take resources, and those resources are not viewed by a lot of people. If you take a long term view it is the right thing to do.

Our results have been mixed in terms of quality. Some of the (filmed program) transfers have been very good while others have been very disappointing.

**HDTV Magazine:** Are these start-up problems?

**Alex Wallau:** In all cases they are start-up problems. It is not a matter of cutting cost. We are spending the money. It is just that the producers and directors don't know this medium yet. They are learning as they go. You can go into one of these post production houses and the blacks are compressed so much you think that it is a mistake. Then you learn that was what the producer has asked them to do. It

is just that they (producers and directors) don't understand HDTV and what it is supposed to look like. It is an educational process. We are frustrated a little bit that it hasn't come quicker, but it will come. I think some of the pictures are fantastic now. They are all improving as we go, but they can be even better, and we are working very hard to get there.

A lot of the consumer complaints we heard came from the local transmission. We are working very hard with the (local) engineers, who have a lot to do, and they don't feel there are a lot of people watching HDTV, so they don't spend as much time on optimizing the transmission. That is an issue especially with audio. It has always been an issue. They want to protect their transmitters. We are trying to do the most sophisticated kind of surround sound transmission we can. Sometimes those two things are in conflict.

**HDTV Magazine:** Do you think that with time, and enthusiasts that will come when the markets start to build larger, that these issues will disappear?

**Alex Wallau:** Julie Barnathon (a legendary ABC network head of engineering until his passing a few years back) used to say that we will do better pictures and sound when people make decisions on what they watch based upon the quality of the picture and sound. Unfortunately, there is a lot of truth in that.

**HDTV Magazine:** Interestingly enough, a lot of people have said to us that they are now choosing channels based now on the quality of sound and picture.

**Alex Wallau:** It is a matter of how you proportion your time to address these things that are driving the viewership. The leap of faith we (and others) have taken in delivering HDTV is an investment which says there is a future in that business and a belief that the day will come.

**HDTV Magazine:** Is there anything that can re-fortify your beliefs? Are there any actions which can be taken as an industry together - program providers, signal providers, manufacturers and retailers - that will give new strength to your faith?

**Alex Wallau:** I have enough trouble trying to run our own business without telling others how to run theirs. I don't sit with frustration saying, "If only those so and sos would wake up and do blank then all problems will be solved." I think everyone is making rational decisions on why and how they get involved, and some of them are baby steps. Then, you take a leap. Then you take some more baby steps, and then another leap. Everyone is trying to figure out how we best navigate these uncharted waters. I don't know what the ultimate end even looks like.

I believe we are going to be backed into an HDTV world because of how much sense it makes as a production medium. I can tell you that in two or three years all of our series programs are going to be produced in HDTV. That will not be true for news and sports because there is just too much of that. But when you are shooting everything on one lot it is only going to be HDTV produced, and not because they wanted to broadcast in HDTV, but because it's a better way to produce television shows. It is more efficient and more cost-effective. That is the most interesting thing, and the one which is going to be the biggest driver of adoption.

**HDTV Magazine:** Does that reduced production cost and/or better efficiency translate into a reduced licensing fees you must pay for the programs to ABC?

**Alex Wallau:** Absolutely!

-----CONSUMER SPEAK-----

"Before purchasing my HDTV, my friends and I would have TV parties at any one of our houses. We would sometimes watch sports programs, sometimes movies, occasionally something a little more educational. After getting my HDTV and having the first TV party with it, we no longer have the parties anywhere else except my house. We can all be entranced, watching something like, 'Band of Brothers' in HDTV and we are all silent, watching intently, and then it happens...out of the blue...while we are all intently engrossed in the story...someone will say, "God that picture is amazing," and not even realize they said it!"

-- Trent

-----CONSUMER SPEAK-----

### **The ATSC**

For the last several years Mark Richer served as executive director of the ATSC. Well-known and respected from his previous duties at PBS, Richer will assume the role of acting Chairman and soon the presidency of the newly reorganized ATSC. Former Chairman Robert Graves is forming another entity out from the ATSC members (though not exclusively) with the mission to popularize and market the ATSC standard in other regions of the world. Mark Richer offers his candid and upbeat views for our third anniversary edition.

**HDTV Magazine:** What does this 3rd anniversary of this roll-out mean to you and the members of the ATSC?

**Mark Richer:** In the last few months a growing sense of optimism has arisen about over-the-air digital television. That is the first thing. We are starting to see more programming and more great consumer products with much lower prices. There is, of course, a lot of standards work going on. All efforts are complimentary to the core standard. The worry about making a major change is gone (there was a controversy over the modulation standard that has been referenced in HDTV Magazine). That is comforting for the consumer and all those who have to invest in the business. Everyone needs to know that standards are stable and that there is a great consensus to use the standard. This is especially true for over-the-air broadcasting where as cable or satellite may adopt closed systems. If you want free over-the-air broadcasting with consumers buying at the stores then industry-wide agreements on standards are critical. We have accomplished that.

One thing that has been missing is excitement from most of the broadcasters. There has not been enough excitement in the industry about it. It has been seen as nothing but a burden. But broadcasting cannot be the only industry that wants to stay analog. There is no future in analog. Whatever the problems are with digital, the one thing broadcasters have to remember is that there is absolutely no future in analog. You can't be an LP record in a CD world. You can't even be a

VHS cassette in a DVD world. So, broadcasters need to seize the opportunity. We are starting to see that with more exciting programming and services coming on the air.

There are still a bunch of issues which need to be resolved, but that only comes by people pushing forward.

**HDTV Magazine:** What are those problems listed 1 through n?

**Mark Richer:** It's hard to say there is a number one. I will combine a bunch together, but they ultimately end-up in communicating to the consumer that there is a real benefit in acquiring digital television receivers because there are compelling services that are available. You may have to put up an antenna on your roof, but, on the other hand, people are doing that for satellite (reception) all the time.

The (DTV promotion) project that the CEA and NAB are doing is 'right on'. What CBS, Samsung and Sears are doing is also right. You don't sell products without marketing.

**HDTV Magazine:** Isn't outstanding salesmanship the missing ingredient so far?

**Mark Richer:** It is both marketing and salesmanship. We need to see better retailing. Manufacturers are putting out better and better products all the time. I am very impressed as I use these new products and see just how good they are in all ways. The bigger stores struggle to explain to the consumer what it is all about, but the specialty stores do better.

-----CONSUMER SPEAK-----

"I find myself watching shows broadcast in HDTV over other broadcasts because of the quality of those shows. I am quickly becoming an 'HDTV Snob' and refusing to watch the grainy, fuzzy, off-color images that even digital TV broadcasts in contrast to the superior quality of HDTV."

-- Becky Hooper

-----CONSUMER SPEAK-----

### **Consultant**

Dr. John Abel

Not all think that the broadcasting business is, or should be, the key driver for HDTV. For ten years Dr. John Abel served as the executive vice president for the National Association of Broadcasters in Washington, DC, and before that as department head of communications for Michigan State. During his tenure at NAB he participated in one capacity or another in most committee work related to standardization work on advanced television (as H/DTV was then known). He coined the terms data casting and multimedia broadcasting and has sought to solve that puzzle in the DTV transition.

We asked him,

**HDTV Magazine:** How do you assess the DTV transition at this stage?

**Dr. John Abel:** On the terrestrial broadcasting side it is painfully slow, disappointing, and not really progressing...maybe misguided, and perhaps, just short of depressing. There is nothing to get very excited about.

**HDTV Magazine:** Do you see the 'D' word - disaster?

**Dr. John Abel:** I don't think it is that, at least not yet. But there is nothing there that excites the consumer about it, really. There is nothing that excites the broadcasters, really. There is nothing there that excites the regulator about it. It is not something that the new business investment community is looking upon positively as something for broadcasters, the consumers, or the consumer electronics industry. No new business are being spawned from it, for the moment at least. I am not smart enough to know if that is a permanent state of affairs or one of these temporary states which we have been through before.

**HDTV Magazine:** Are we in one of those Pollyannaish illusions where some people like it enough to whip up some flame, but not enough substance in it to ignite the world?

**Dr. John Abel:** I don't know if I can say that it has been spiraling downward but it has been trending downward almost from the first year. I don't think anyone has seen any positive signs or trends to the positive side on the uptick. It is somewhat personally disappointing to me. I can get into a funk if I think about it too much. I just don't see much there. I see too many of the same positions that were there before it was launched as well as since it has been launched that are still unresolved - must carry, copy protection, cable-ready. There is a lot of finger pointing by the consumer electronics industry and they're pointing back to the broadcasters. I mean, there is nothing new there. There is no new targets or no new business. There is no excitement. I think it is too early to pin it down as a disaster, but I don't see much happening. As far as the economy and the war, they are not helping. I don't see anything in there that is beneficial. I have heard, for instance, that these DTV channels can be used for data because they can be encrypted and supplying other channels of communications which are broadband for security purposes - both business and national. I think those are grasping at straws. I think the real disappointing thing is that there is no focus what is the business and then how can I get the consumer excited about these new services, whatever they are - DTV, HDTV, data, interactive. There is no attempt to look at the consumer side of this. There is still a big focus on the transmission side. There is no receiver strategy. There is no consortium of broadcasters coming to say "we would like to have this kind of receiver built because it would enable this kind of services for the consumers."

**HDTV Magazine:** Well, some have said that surprise, surprise, the business to be in is television. That is the killer app more than all of these other things.

**Dr. John Abel:** The problem with that is that we have television already. If there is anything that has been pointed out here since September 11th is that television does a pretty good job as it is.

**HDTV Magazine:** John, couldn't you say the same thing about an old IBM Electric typewriter. It typed a hell of a letter but look where we are now with a 1200 Mhz word processor?

**Dr. John Abel:** I suppose that is possible. What really stunned me the other day when contemplating competing industries who have made a business out of digital, like DBS, they just had a totally different focus on this. They controlled the consumer experience. They focused on the consumer while thinking of new things they could offer. If you say television, let's go with multichannel television. That is what has made cable and DBS what they are. If DBS had been launched as an analog service it would have no more than a dozen channels. It would not be a business today - hooted off the stage. Maybe DTV will be multichannels. Ok, let's do that. What is the benefit of more of the same television with one element only - quality. I don't see the consumer asking for that. Again, the consumer seems to be going to where they get even lower quality video on the Web. They want more services when they can get them.

**HDTV Magazine:** Are we in cycles here where one day we seek gluttony and the next a gourmet? There is no one condition which satisfies the world forever.

**Dr. John Abel:** Television is going to be with us a long, long time. TV broadcasters do a pretty good job of it. Cable does too as well as DBS. Broadcasters have a unique franchise but it is very difficult to make this transition. They don't see any benefit in doing it. DBS saw digital as the means for getting more channels into a fixed number of transponders to be competitive with cable. Cable stepped into digital so they could get more channels on. Cable companies are going to support analog cable for a long long time.

**HDTV Magazine:** The NCTA is telling me that it is in cable's best interest to hurry HDTV along. Time Warner is ordering 100,000 HDTV boxes.

**Dr. John Abel:** I think when still at the NAB I said that HDTV would first be launched by cable and satellite.

**HDTV Magazine:** You responded to a question I asked you many years ago about just that. Then you said that it would be better for some service other than broadcasting to pioneer it. Broadcasting, you said, was strong enough to come in later and seek the new HDTV receivers when there were enough in the marketplace to make a business.

**Dr. John Abel:** I don't think that broadcasting is going to be the big Kahuna in building out HDTV.

**HDTV Magazine:** I think others now in CE are coming to this point of view looking at both cable and DBS for more Mark Cubans.

**Dr. John Abel:** Yes.

**HDTV Magazine:** One thing puzzled me about the roll out of DBS. The box has been made rather simply. There is virtually no interactive feature other than program guide and simple ordering of movies. If digital data is such a wonderful use of our terrestrial spectrum why not the same from satellite? What difference does it make if a digital signal comes from a stick or a transponder? Why didn't satellite companies see this wonderful new opportunity and enable it? If there is a business to be made out of it why haven't the digital powerhouses already done

so?

**Dr. John Abel:** To some extent EchoStar has. They have the EchoStar data-network. They use some of their capacity for data service, though not much for consumers. That is right. But all of them are looking at data service, if for nothing else than non-real time television, if you will, or data that goes into a box for storage. I think this is still evolving. Terrestrial broadcasters may not be a player in the DTV arena because they don't see anything beneficial in it.

Jim Chiddix is right. Digital cost them (Time Warner Cable) some money, but it makes them some money. But for terrestrial broadcasters it has just been a headache and not much else.

====CONSUMER SPEAK====

"If you are capable financially and logistically to receive HDTV signals you are absolutely crazy to sit back any longer. I have been watching HDTV on ABC, CBS, and NBC for 2 weeks now and I am on Cape Cod, which is 60+ miles away from the transmitting towers. The pictures are just amazing. I still cannot believe it when I see them. It is so realistic and clear my one year old was actually trying to reach into the TV set the other night while 'Toy Story' was on."

-- John A.

====CONSUMER SPEAK====

Dennis Wharton is the Communications vice president for the NAB He reminds us that Gary Shapiro has said it (the DTV transition) is marathon, not a sprint. We talked to Dennis yesterday.

**HDTV Magazine:** What has worried analyst is that you (the broadcasting business) make it only half way, i.e., you become straddled by a half-hearted effort between two technically divergent methods of reaching 100% of your audience and, thus, forever burdened with two power bills for distribution instead of one. There could be seen a condition where you can neither go backwards nor forwards but lay straddled on the fence suffering economic pain for years. Is there any threat from that?

**Dennis Wharton:** I don't think any station wants that. There are cynics who might laugh at our statement that we want this to go as quickly as possible. But we REALLY DO want that (haste) because of the power bills. We are hoping that the FCC and Congress are finally invested in this topic (enough to make new rules). I think there are signs that this (current) FCC is interested. Rep. Billy Tauzin (R-LA) has had a roundtable discussion with the industry. There is another one coming up on November 28th. No press is invited to these closed meetings and the Congressman can say, "Hey, guys, what can we do here to move this thing forward?" Government holds the feet to the fire. It doesn't even have to be legislation (fire). That, in our view, however, would help.

**HDTV Magazine:** How does Congress's placing the industry's collective feet to

the fire make or cause consumers to go down and buy a new DTV receiver?

**Dennis Wharton:** If the consumer had confidence that there was interoperability and sets worked, they took a DTV set home, they plugged it into a cable, and it actually worked, I think that would give a lot of confidence. I think if they knew they could get local broadcast stations in digital if they actually buy a DTV set, that too would help.

**HDTV Magazine:** Do you think there is enough consumer awareness that even if those conditions were met there would still be a more rapid crossing - more sprint than marathon?

**Dennis Wharton:** Not overnight. NAB and CEA are unveiling a market plan that we think will help spur the transition a bit.

**Publisher's Note:** Unless I am misinformed, the CEA/NAB promotional campaign for DTV will NOT be for HDTV! Why? Not every member of the NAB believes that HDTV is the right service for their newly assigned digital airspace. Some have legitimate and valuable options which could be damaged if HDTV was promoted as the KEY in the DTV transition. Some broadcasters do not think that promoting of HDTV is even a good idea. One could, for instance, partition the 19.34 Mb/s stream of bits into five (or more) separate lower performing channels where each one is delivering a very low cost ethnic program targeted to the ethnic mix in one's service area. Advertisers pay very handsomely for such targeting ability. In this unique scenario the DTV conversion can pay for itself, even though it has zip to do with HDTV. It could be a lost opportunity for these scenarios if the local markets were to become confounded by conflicting information coming from an authority no less credible to our diverse populace than the local TV station coupled with its trade association, and that of the TV set makers.

-----CONSUMER SPEAK-----

"When my husband first tried to talk me into buying a television with HDTV capability, I thought he was crazy. Actually, I thought he was crazy before that, but after he dragged me to a local showroom, I was forced to concede he had a point. We immediately purchased a new (HD) television. Now whenever we select a program to watch we always check to see if it's available in HDTV."

-- Nancy MacLean

-----CONSUMER SPEAK-----

**Editorial:**

Having the entire population of our nation move to something new and untried requires leadership of the highest order. It requires the making of attractions that we want to sell (it's entertainment!) so compelling and appealing that any market rejection of it is simply out of the question to all but the legally blind, deaf, or completely impoverished.

If we do not elevate the H/DTV movement through unity of purpose to the delivering of something that is irresistible we will pay a painful price later. We need to go out now and sell the entire nation on the virtues and values of HDTV (and secondarily all its derivatives). HDTV is the proven centerpiece, please, or we have to hide the real centerpiece in order to feature whatever sub-set is thought to be one day popular. It's my opinion that such a tactic will not work if universal acceptance of DTV is the goal for our broadcast community, as I understand it should be, and is government mandated to be.

Just turning a nation's attention to higher quality is a major feat in and of itself - one which only can give us years of fresh economic growth to look forward to. Selling program guides, e-coupons, data, still more multichannel low-def programming with an interactive twist, is feeding the fragmentation machine. I have never found a real or imagined negative coming from promoting well-programmed HDTV other than its expense. That seems to be its only flaw (who would not have HDTV if it were free?). According to no less a spokesperson than Jack Valenti, it is the level of demand (want) that insures the willingness to pay the appropriate price. Can that be better illustrated than the new \$500 tickets being sold by the producers of the Broadway hit 'The Producer'? All success is in the appeal - in the attraction. HDTV lays the basic foundation for that appeal. Add programming to move the soul and you have the catalyst mixed and ready for a smashing success. With all stops pulled out on the art of salesmanship (that unique power to move a person or crowd from "huh?" to "YES!!") we will finish this transition without any searing pain. That certainly should be the goal.

Why tolerate more useless DTV scenarios that have neither a social benefit to them, nor an economic pay off? The strategy of SELLING quality has worked so far for DTV, though not yet enough. The selling of data and lower quality multiplex services has no track record in the DTV terrestrial roll out. If we are to enter a new post 9/11 era, as everyone has said we must, then let me propose that it take a different direction to the one we are abandoning. I opt for raising my personal standards of life in this new direction. We want some sunshine back in our lives after this dark cloud.

Happy Anniversary! Three years old and already making it on our own!

**Note:** NBC was not ready to comment on our anniversary questions since Peter Smith, their chief spokesperson, was on holiday. FOX did not respond to our calls, or answer our questions.

-----CONSUMER SPEAK-----

"In closing I would like to address the providers of HDTV transmission and equipment. My message is simple: If you build something this good - they will come !!"

-- John A.

"HDTV is a revolution of gigantic proportions that we all should and need to embrace If not only to keep America in the forefront of growth and technology,

but to also enhance the lives of every American on a daily basis. TV has and will continue to be the most effective machine in delivering news, educational material, and entertainment throughout world. Therefore, it is time for TVs to receive an upgrade, and boy is the move from standard definition to high definition an upgrade! I encourage anyone who hasn't seen an HDTV broadcast to visit their local audio/visual retailer and experience it for themselves. It was an eye-opening experience for me, and I wager it will be the same for you. GO HDTV!!!"

-- Chris Bui

==CONSUMER SPEAK==

Well, there you have it. The consumers and the professionals should better understand each other now, and while there are still hurdles ahead, it should be evident that one of the biggest - knowing the product is desirable at the price it can be sold - is not one of them.

THAT'S ALL FOLKS!

Dale Cripps, Publisher, HDTV Magazine

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