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# COMPETITION AND CONVERGENCE

## HEARING

BEFORE THE

## COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

MARCH 30, 2006

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED NINTH CONGRESS

SECOND SESSION

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# COMPETITION AND CONVERGENCE

**TUESDAY MARCH 30, 2006**

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U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
*Washington, DC.*

The Committee met, pursuant to notice, at 2:32 p.m. in room SH–216, Hart Senate Office Building, Hon. Ted Stevens, Chairman of the Committee, presiding.

## OPENING STATEMENT OF HON. TED STEVENS, U.S. SENATOR FROM ALASKA

The CHAIRMAN. Over the course of our series of 14 hearings, our Committee has heard from the wireless, wireline, competitive, cable, Internet, satellite and content industries as well as consumer groups and academic groups on a wide range of communications issues.

Today, we want to discuss the phenomenon of convergence and how it is changing the competitive landscape in today's market. Cell phone companies, Bells, CLECs, cable companies and satellite providers are capable of providing the same or similar services. Our Committee wants to look at what that means for each of these industry segments and their consumers.

Already, consumers are clamoring for a quadruple play of local, long distance, video, and data service on a single platform.

Soon, consumers will be able to reach their video recording devices from their cell phones to either watch or record TV programs while on the move.

These technological changes will impact how regulations are applied. Certainly, we have all heard about the importance of setting a level playing field as phone providers move into the video marketplace. Currently, the same bundles are often regulated differently depending on the platform that delivers it.

It is our hope that as we level the playing field, we will seek the most deregulatory approach possible consistent with the public interest.

Going forward, it will be necessary to ensure that regulations are flexible to readily allow for the innovation that consumers demand.

Convergence and other forces are also contributing to the mergers we have seen in the communications marketplace. Wireless, wireline, and cable have all seen significant transactions in the last couple of years with the combination of Sprint-Nextel, Verizon-MCI, SBC–AT&T, AT&T-BellSouth, and the Comcast-Time Warner-Adelphia deal.

With respect to the wireline mergers, one concern that has been raised is not just the impact for residential users but the impact on the business market. The special access lines that provide high capacity access to businesses are largely controlled by the Bells, but are crucial to competing in the business market. This is one area where intermodal competition may not be enough. We plan to schedule a hearing on mergers in the future, so we can examine all of them in some detail.

This is the last communications hearing scheduled prior to that mark-up of our "Communications Package." I have appreciated the participation of all you here at the table and I look forward to your testimony here. I don't know when we'll be able to look at the intermodal competition subject, but we will do our best to do so before we ask the Committee to report the bill. Our Co-Chairman, sir?

**STATEMENT OF HON. DANIEL K. INOUYE,**
**U.S. SENATOR FROM HAWAII**

Senator INOUYE. I thank you very much. While transformation of the communications services in our country is encouraging and bringing new benefits to consumers, as the Chairman indicated I think it's important that this Committee keep a close watch on the state of competition in the communications marketplace.

As the Chairman noted, the proposed AT&T-BellSouth merger would certainly alter the communications landscape in this country, and is likely to trigger additional transactions. Whether or not such transactions or consolidation would improve competition remains to be seen. Given the enormous impact of this merger, I would like to see the Committee examine it specifically.

Nonetheless, convergence is creating a new generation of communication service providers and a new set of options for consumers. In many respects, this is what we had envisioned when we drafted the 1996 Telecommunications Act. The law was premised on convergence. Cable companies would offer phone services, phone companies would offer cable services and, both would offer data services. With the explosion of satellite video services and wireless technologies, the options have expanded even further.

In addition to this competition between different types of network operators, the rapid evolution of the Internet and the steady growth of broadband technology has also resulted in new, non-network communications service providers like Vonage, Microsoft, and Google, who are beginning to offer consumers new ways of transmitting information and communicating with each other.

But while convergence promises great benefits, we should similarly recognize that it is performance, not promise that matters. Despite the development of alternative broadband platforms, cable and phone platforms are clearly the dominant players in this market controlling 98.7 percent of today's broadband market.

We need to be mindful that the most important type of competition is the competition that occurs in a consumer's backyard. In too many parts of the country, Americans still lack a real choice of competitive broadband alternatives. As the marketplace changes, we need to be sure that rural areas and tribal communities that currently lack services do not fall even further behind. We have

heard promises in the past that competition would lead to service in these communities only to see those promises go unfulfilled.

We also need to be sure that broadband network operators play fair and do not use their control over physical infrastructure to disadvantage their competitors.

We often forget that it was not a "hands-off" government policy that gave birth to the Internet. Instead, it was nurtured by principles of openness and nondiscrimination that have been part of the Communications Act since 1934 and that have prevented network operators from seizing proprietary control of its operation. As a result, this hearing allows us to get beyond the sounds bites and dig a little deeper to determine what statutory changes will ensure that communications policy continues to promote vigorous competition in all communications markets.

I look forward to today's discussion and hope that our witnesses can shed some light on these challenging questions. I thank you very much sir.

The CHAIRMAN. I thank you, Senator. Senator DeMint.

**STATEMENT OF HON. JIM DEMINT,**
**U.S. SENATOR FROM SOUTH CAROLINA**

Senator DEMINT. Thank you Mr. Chairman, and Co-Chairman Inouye, for holding this very important hearing on the impact of convergence on competition in the communication marketplace. We're looking at the telecommunications industry at a time in history when the industry is undergoing tremendous change due to the rapid introduction of new technologies. We must decide how to regulate not just one, but multiple new and highly interrelated communication technologies. We need to recognize that there's been a paradigm shift in technology which has created new problems and opportunities related to the regulation of our telecommunications industries and their products.

The computer chip, advances in transmission technology and the digitization of content have fundamentally altered the marketplace. These innovations have attracted new entrants, and greatly increased competition. Although we are in a new world, the old paradigm that views telecommunications through a monopoly lens is preventing us from doing what needs to be done to reform communications policy. These old paradigm filters are preventing many people from seeing the technological changes leading to service substitution was revolutionized the industry.

This communication paradigm shift is more dramatic, fast paced and technologically daunting than almost anything we've experienced in the past. Massive change is happening simultaneously on multiple fronts, making decisions involving communication regulations difficult, if not impossible when viewed through the existing monopoly lenses to which we are accustomed.

Mr. Chairman, I believe, and I am firmly convinced that there is no practical way for Congress to anticipate future changes in this industry and to effectively regulate the industry. I hope that the distinguished panel today will help us here in Congress understand the new paradigm and how to develop a new regulatory structure that protects the consumer without presuming that we can manage your business. And I thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much. We're honored to have the series of witnesses, as I've said have been here before. We can just go down the table in the way you're lined up if that's agreeable. The first witness would be Kyle McSlarrow, President and Chief Executive Officer of the National Cable and Telecommunications Association, Washington, D.C. Glad to have you back, Kyle.

**STATEMENT OF KYLE MCSLARROW, PRESIDENT/CEO, NATIONAL CABLE AND TELECOMMUNICATIONS ASSOCIATION**

Mr. MCSLARROW. Mr. Chairman, thank you very much. First let me congratulate all of you and your staff for what's been a pretty intense road here the last couple of months. I have only testified at a few of the hearings but you have been at all of them. And I think an enormous amount of work has gone on and it's to your credit. And it's necessary. I think we all agree this is the time to take a fresh look at the 1996 Telecommunications Act.

Because we've talked about video in the past, just for the purposes of my opening statement I'm just going to confine some observations to the voice competition market, and start with this point. Competitive voice services cannot survive without physical interconnection to the Bell-controlled public switch telephone network, the PSTN.

There is Mr. Chairman, very simply nothing like the public switch telephone network in the video or data worlds.

The PSTN was built by a regulated monopoly which had access to captive rate-payers and guaranteed rates of return on its investments. For many years, the PSTN was the only voice network in the country and had no competition from other local or long distance telephone service providers. Interconnection to other domestic phone networks was not an issue. That changed in 1984 when under the terms of an antitrust consent decree, the original AT&T divested its local telephone networks and kept control of long distance operations. The consent decree created seven separate different regional telephone networks, and suddenly issues like interconnection became important. The significance of interconnection only increased as local competitors joined long distance providers in the telecommunications marketplace.

Unlike the PSTN, cable did not develop as a regulated monopoly, and alternative video distributors like satellite did not need interconnection in order to provide services to our customers. And the Internet is a "network of networks" that is distributed rather than centralized. So voice is different in that sense.

The 1996 Telecommunications Act addressed the central challenge and it provided interconnection rights to competitive local exchange carriers (CLECs) so they could exchange traffic with the Bells on an economic basis, without glitches or delays, in order to promote local voice competition.

Ten years after Congress enacted interconnection rules, the Bells still own the only ubiquitous phone network—serving more than 85 percent of the local residential and small business market.

So today, with the beginnings of facility based and non-facilities based IP-enabled voice services, we have a real opportunity for increased competition in voice competition. Congress, we would urge, should ensure that the rights to interconnection, collocation, and

numbering guaranteed in the 1996 Act are available to all competing voice providers regardless of the technology used. Facilities-based IP-enabled voice providers should have the right to interconnect with the PSTN directly—like a traditional CLEC—or indirectly through arrangements with a CLEC if they choose.

And we would urge you to make clear that the right is not technology-dependent and that digital voice is not relegated to second-class status. We think right now the time to act is with the bill that you are moving forward. As you have all noted in your opening statements we're talking about convergence, we're talking about providers who are offering all these services together.

So even as we look at video, we should be thinking very clearly about the voice competitive market place. Thank you Mr. Chairman.

[The prepared statement of Mr. McSlarrow follows:]

PREPARED STATEMENT OF KYLE MCSLARROW, PRESIDENT/CEO, NATIONAL CABLE AND TELECOMMUNICATIONS ASSOCIATION

**I. Introduction**

Good afternoon, Mr. Chairman, Senator Inouye, and Members of the Committee. My name is Kyle McSlarrow and I serve as the President and Chief Executive Officer of the National Cable & Telecommunications Association. NCTA is the principal trade association for the U.S. cable industry, representing cable operators serving more than 90 percent of the Nation's cable television households and more than 200 cable program networks. The cable industry is the Nation's largest broadband provider of high speed Internet access after investing $100 billion over ten years to build a two-way interactive network with fiber optic technology. Cable companies also provide state-of-the-art digital telephone service to millions of American consumers.

Thank you for inviting me today to comment on the state of competition and convergence in the telecommunications industry. In response to a growing number of competitors and the deregulatory environment created by the 1996 Telecommunications Act, cable operators invested over $100 billion of private risk capital to embark on a nationwide upgrade of their facilities. They did so without any government subsidies, programs, or guarantees that they would get a return on their investment. As a result, cable companies now provide consumers with a wide variety of advanced services, including digital video, High Definition Television (HDTV), high-speed Internet access, and telephone service—both traditional circuit-switched voice service and digital telephony using Voice over Internet Protocol (VoIP).[1] In each of these markets, cable faces vigorous competition from several different service providers.

*With regard to our core business, the video marketplace is more competitive than ever before.* Fifteen years ago, cable commanded 95 percent of the multichannel television market. Today, because of fierce competition from Direct Broadcast Satellite (DBS) and other broadband video providers, cable's market share has fallen to 68.3 percent of multichannel video households according to November 2005 statistics from Kagan. As the FCC noted just a few weeks ago, "almost all consumers have the choice between over-the-air broadcast television, a cable service, and at least two DBS providers" as well as "emerging technologies, such as digital broadcast spectrum, fiber to the home, or video over the Internet."[2] And now the Regional Bell Operating Companies (RBOCs) are entering the fray, bringing with them annual revenues of $153 billion—more than twice those of the entire cable operator industry.

*New service providers are deploying new video technologies every day, including Internet-based services, cell phone providers, wireless computer manufacturers, and consumer electronics suppliers.* For example, companies like USDTV have created an over-the-air digital video service (featuring dozens of DVD quality broadcast and cable program networks) using spectrum leased from local broadcasters. Similarly, consumers now have access to video through their wireless phones, IPODs, and laptops and can customize their viewing experience at home and on the road. For example, on March 15, 2006, AOL and Warner Studios announced the launch of *In2TV*, an Internet-based broadband television service which allows consumers to select from among 30 different television series and program their own on-demand

TV channel.[3] Similarly, Verizon Wireless's *V-Cast* video service, which is "available to more than 148 million people in 181 major metropolitan areas and is expanding coast to coast," allows customers to use their cell phones to "watch broadband-quality movie trailers, sports highlights, news and video on demand," play games, and listen to music.[4] Using Digital Video Recorders for cable and broadcast sources or Internet-based video technologies like *Akimbo* and *Slingbox,* Americans today can: (1) watch television at home "real time" or "time shift" a variety of programs for later viewing; (2) "space shift" programming on a home network to view it on another device in another room; or (3) "sling" it to the Internet for viewing on a laptop in a hotel room or conference center anywhere in the world that has a connection to the Internet. Consumers are the beneficiaries of this highly competitive landscape, where they now have a growing number of choices of advanced services from several different providers.

*With regard to new services, cable pioneered residential high-speed Internet access.* At a time when telephone companies left DSL technology sitting on the shelf so they could sell customers extra lines for faxes and dial-up access to the Internet, cable introduced broadband Internet access at speeds 50–100 times those of dial-up. After upgrading their one-way analog facilities to interactive digital platforms, cable operators now offer broadband access to 109 million households and serve 25.4 million of them—a penetration rate of more than 23 percent.

*Using its new broadband facilities, cable also entered the telephone market, providing consumers with their first-facilities based alternative to the local telephone companies which have dominated the voice market for almost a hundred years.* Cable currently provides traditional circuit-switched analog telephone service and VoIP-based digital telephone service to more than 5.5 million customers, offering these and millions more consumers a "triple play" of video, data, and voice services and the benefits of "one-stop shopping" with their local cable company.

*The introduction of interactive broadband services by cable operators has prompted a competitive response from other industries.* Telephone and DBS companies, for example, initially joined forces to offer their own packages of video, voice, and data services. DBS obtained exclusive sports programming such as NFL's Sunday Ticket and increased the number of channels they offered and the types of service available, including HDTV. The phone companies took their DSL technology off the shelf and deployed it to compete with cable modems; DSL now serves about 17 million customers. Today, Verizon and AT&T are investing billions of dollars to enter the video marketplace around the country.

The bottom line is that these are all signs of a competitive marketplace: several different providers of a wide array of services vie with each other for customers, each trying to differentiate themselves with unique offerings while trying to match those of their competitors.

**II. Convergence in the Competitive Marketplace**

The cable industry supports reviewing and updating the Telecommunications Act of 1996 and further reducing unnecessary economic regulation. We favor a level playing field where like services are treated alike and necessary social obligations (such as the Universal Service Fund, CALEA, E–911, Equal Employment Opportunity, nondiscrimination, privacy rules, and access for the disabled) apply equally to all providers. We are opposed to attempts by one industry to secure legislation that would have the government pick winners and losers or that favors one technology over another.

Although there is already vigorous competition in the video marketplace, the prospect of major new competitors with the resources of the Bell Operating Companies should be beneficial to consumers—as long as competition is governed by marketplace forces and is not artificially skewed by rules and regulations that give some competitors an unfair advantage over others. The marketplace—not government regulation—will impel all competitors to innovate in the packaging and pricing of new services to maximize value to consumers.

Moreover, in taking a fresh look at the Telecommunications Act of 1996, the video marketplace is only one piece of a larger puzzle that should be addressed by this Committee in its entirety. Perhaps the bigger challenge is how best to increase voice competition at a time when incumbent telephone companies (ILECs, including the RBOCs) still control 85 percent of the residential and small business markets, and more importantly, the public switched telephone network. In an era of rising telephone rates, $1.50 directory assistance calls, and burgeoning "regulatory cost recovery fees" on our phone bills, legislation to promote competition should include all markets, especially the voice market. As this Committee moves forward with the drafting of a bill this spring, I would encourage it to also focus on the problem of interconnection so that incumbent telephone companies cannot lock out alternative

voice service providers—including cable, broadband overbuilders, and wireless companies.

*Interconnection*

Competitive voice services cannot survive without physical interconnection to the Bell-controlled public switched telephone network (PSTN) at reasonable rates. Interconnection is necessary to reach customers on the Bells' lines, and these customers constitute the vast majority of wireline users in the United States.

There is, very simply, nothing quite like the public switched telephone network in the video or data worlds. The PSTN was built by a regulated monopoly which had access to captive rate-payers and guaranteed rates of return on its investments. For many years, the PSTN was the only voice network in the country and had no competition from other local or long distance telephone service providers. Interconnection to other domestic phone networks was not an issue, and the PSTN even provided all of the equipment that consumers were allowed to attach to the network. That changed in 1984 when under the terms of an antitrust consent decree, the original AT&T divested its local telephone networks and kept control of long distance operations. The consent decree created seven separate different regional telephone networks, and suddenly interconnection of separate networks and independently-owned telecommunications equipment became important. The significance of interconnection only increased as local competitors joined long distance providers in the telecommunications marketplace.

Unlike the PSTN, cable did not develop as a regulated monopoly, and alternative video distributors used different technologies like microwave relays and direct broadcast satellite. DBS operators did not need to interconnect with cable systems in order to compete, and the "network of networks" architecture of the Internet is distributed rather than centralized. However, as long as the PSTN maintains its unique position for voice services, the Bell companies who control it will have a correspondingly unique incentive and ability to frustrate competition by impeding interconnection with other voice providers, regardless of whether those providers use IP or some other technology.

The 1996 Telecommunications Act addressed the central challenge posed by the PSTN by providing interconnection rights to competitive local exchange carriers (CLECs) so they could exchange traffic with the Bells on an economic basis, without glitches or delays, in order to promote local voice competition.

Despite their claims that the phone market is "competitive," ten years after Congress enacted interconnection rules, the Bells still own the only ubiquitous phone network—serving more than 85 percent of the local residential and small business market. And they still serve as the "hub" to which all other carriers must connect in order to reach each others' customers.

With IP-enabled voice services providing a real opportunity for increased competition in the voice market, Congress must ensure that the rights to interconnection, collocation, and numbering guaranteed in the 1996 Act are available to all competing voice providers on a technology neutral basis. Facilities-based IP-enabled voice providers should have the right to interconnect with the PSTN *directly*—like a traditional CLEC—or *indirectly* through arrangements with a CLEC that already has an interconnection agreement with an incumbent local exchange carrier. Congress must make clear that the right to interconnection is not technology-dependent and that digital voice is not relegated to second-class status. Limiting interconnection and related rights to providers of voice services using traditional technology will, perversely, penalize the introduction of new technology and ensure the Bells retain their continuing dominance in the voice market.

The time to act to ensure voice competition is now. Some states and incumbent telcos have already sought to limit interconnection rights to providers using traditional voice technology. Indeed, the files are replete with examples of the Bells stalling on any number of reasonable interconnection requests from even traditional competitors.

The Bells' consolidation makes the need for interconnection protections even more urgent. When the two largest CLECs in the market (AT&T and MCI) merged with the two largest Bells (SBC and Verizon), the most experienced and well-funded negotiators of interconnection agreements were removed from the competitive voice market. The AT&T/BellSouth merger would only solidify the Bells' monopoly market power and make it more difficult for competitors to get a fair shake in interconnection negotiations.

## III. Cable Has Invested $100 Billion to Meet the Challenges of a Fast-Changing and Fiercely Competitive Video Marketplace

Cable is one of the great American success stories. Born in the foothills of Pennsylvania and Wyoming around 1950, cable started as a relay service for broadcast television in areas that had trouble receiving over-the-air signals. At that time, American television consisted of two networks: NBC and CBS (followed by ABC in 1954 and National Education Television—later PBS—in 1966). Over the past 50 years, cable operators and programmers have revolutionized American television. There are now over 530 national cable programming networks which bring diversity, choice, and quality programming to American consumers.[5] Similarly, cable operators transformed one-way analog distribution systems into high speed broadband platforms that currently provide interactive digital services, including video, high definition television, high speed Internet access, and digital telephony. *Cable entrepreneurs did all of this with private risk capital, not government funds.*

With an investment of $100 billion since 1996, cable operators have replaced coaxial cable with fiber optic technology and installed new digital equipment in homes and system headends. The fruits of cable's investment in a two-way broadband network are evident in the number of advanced services offered on virtually every cable system today.[6]

*Cable is Leading the Way to the Digital Transition*

*The cable industry continues to aggressively roll out and market high definition television service to the majority of American households, with a growing array of programming choices.* As of September 2005, 96 million U.S. television households were passed by at least one cable system offering HDTV service, which represents all of the top 100 designated market areas (DMAs). Of all 210 DMAs, a total of 198 markets were served by at least one cable system that offers high definition programming. Local cable systems also were carrying the digital signal of 681 broadcast stations, a six-fold increase from January 2003, when cable began rolling out HDTV with carriage of 92 such stations.

Cable customers are already enjoying a full complement of digital programming and advanced information services independently of the broadcasters' conversion to digital. Today, over 40 percent of U.S. cable customers (approximately 28 million) subscribe to digital cable services, which include a diverse array of program networks and music channels. Digital cable also gives subscribers the ability to block access to programming they believe is inappropriate for their children. All of cable's digital services can be enjoyed by consumers with analog TV sets who use digital set-top boxes that convert digital signals to analog. Cable companies are also deploying innovative interactive video services, along with Internet and digital telephone services.

Cable customers with HDTV sets have even more options and can receive 23 HD cable programming networks.[7] Cable operators are also voluntarily carrying the digital channels of a substantial number of over-the-air broadcast stations in addition to those stations' analog signals—either through retransmission consent agreements with individual commercial stations[8] or under a recent carriage agreement with public television stations. In particular:

- As of September 2005, cable operators were carrying commercial broadcasters' multicast programming in over 100 markets, including all of the top 10 markets and numerous small-to-midsized markets across the country. In Washington D.C., Comcast is carrying WJLA's local Weather Now channel (ABC) and WRC's Weather Plus channel (NBC), as well as WETA's Prime, Kids, and Plus channels (PBS).
- In January 2005, NCTA and the Association of Public Television Stations (APTS) entered into an agreement that ensures that local public television stations' digital programming—including multicast channels—is carried on cable systems serving the vast majority of cable customers across the Nation. In April 2005, public television stations serving markets comprising over 80 percent of U.S. TV households and MSOs representing over 80 percent of cable subscribers ratified the agreement, and MSOs are adding digital PTV stations to their channel lineups across the country.

*Significantly, cable's contractual carriage agreement with public television stations was reached through private negotiations—not Federal legislation or FCC regulations.*

The vast majority of cable customers have analog television sets, and most of those sets—as in over-the-air households—are not equipped with digital set-top boxes. Today, cable operators provide the *analog* signals of virtually all local television stations, which can be viewed by all customers—those with and without dig-

ital boxes, and those with and without digital television sets. Operators also provide the *digital* signals of some, but not all, broadcast stations—especially those that provide compelling digital programming that is likely to enhance the value of cable service for the growing number of customers with high definition sets.

*Cable's Video-on-Demand and Digital Video Recorders Put Customers in the Driver's Seat*

As cable operators upgrade their systems with digital and two-way capabilities, they are offering more sophisticated interactive services. Such services are increasingly putting the control of media directly into the hands of consumers—allowing them to watch what they want, when they want.

With video-on-demand, consumers have virtually thousands of viewing options at their disposal. For instance, in March 2005, Comcast announced that digital cable customers viewed more than 100 million ON DEMAND programs, three times the number of ON DEMAND programs viewed in March 2004, and a 40 percent increase from the fourth quarter of 2004.[9] Comcast has expanded its library of on-demand programming to approximately 2,000 hours and recently signed a deal with Sony to provide a total lineup of about 100 movies a month from the Sony pictures and MGM libraries.[10] Comcast aims to boost its library to 10,000 hours in 2006.[11]

The cable industry has a distinct advantage in the video-on-demand marketplace. According to one analyst, "VoD is another arrow in the quiver of cable companies to retain existing customers and keep them from defecting to satellite."[12] Kagan Research estimates that at the end of 2005, 23.9 million U.S. households had access to VoD from their local cable provider and that number is likely to increase to 45.6 million by 2009.[13] Analysts expect VoD revenues to approach $1 billion this year and nearly $6 billion by 2013.[14]

Cable companies have accelerated deployment of digital video recorders (DVRs), which enable customers to capture video programming onto a hard drive in the set-top box and pause, fast forward, and manage other functions and applications. Cablevision, Comcast, Cox, and Time Warner Cable all widely deploy DVRs.

At the end of 2005, 4.5 million digital cable customers used a DVR service, an increase of 150 percent from 1.8 million customers at the end of 2004.[15] The direct-to-home satellite industry once commanded a sizable lead in DVR users, with 3.6 million customers at year-end 2004, but analysts expect the cable industry to aggressively grow its share of the market.[16] Kagan predicts 20 million cable DVR households by 2009, while DBS providers will have 14.5 million.[17]

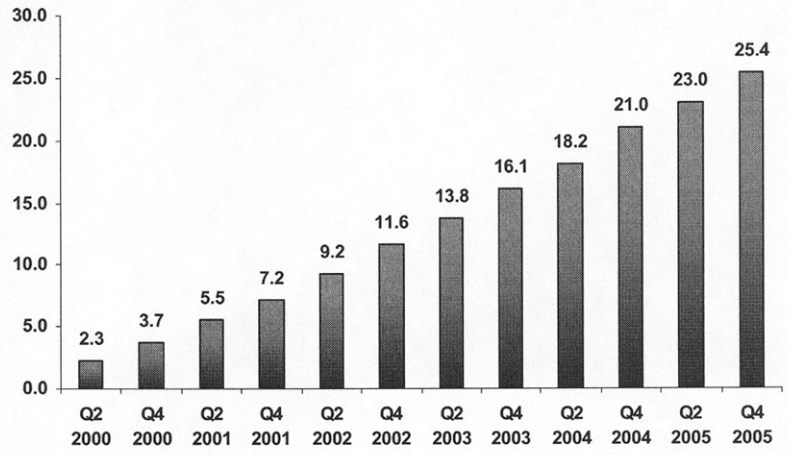
*Cable is Competing on Speed and Value in the High-Speed Data Services Tug-of-War*

*Cable's leadership in creating and developing the market for affordable residential high-speed Internet access has led to a profusion of competitive offerings.* That leadership spurred the Regional Bell Operating Companies (RBOCs) in recent years to aggressively deploy digital subscriber line (DSL) service (which they had developed years earlier but kept on the shelf in order to sell customers second and third phone lines for fax machines and dial-up access to the Internet). The cable industry is now facing competition not only from DSL providers but also wireless, satellite, and broadband over power line providers.

Overall, the market for broadband continues to expand. High-speed lines serving residential and small business subscribers increased by 36 percent during 2004 to 35.3 million lines.[18] Leichtman Research Group estimates that by the end of 2005, the number of broadband homes surpassed 40 million.[19]

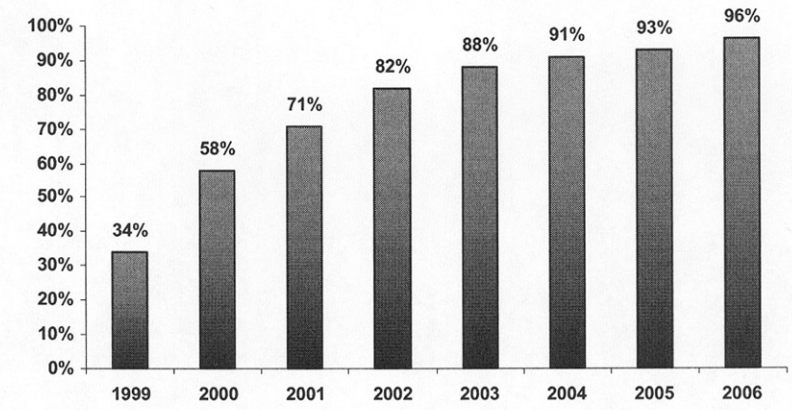
By the end of the fourth quarter of 2005, cable's high-speed Internet service had attracted 25.4 million customers (see Chart 1). More than one-quarter of all cable households today subscribe to cable's high-speed data service, and among those cable households with Internet access, nearly 30 percent are cable modem customers. Cable's broadband services will be available to more than 117 million homes, or 96 percent of U.S. households passed by cable, by year-end 2006 (see Chart 2).

**Chart 1**
**Cable Modem Customers: 2000-2005 (in millions)**




Source: NCTA estimates based on company data

**Chart 2**
**Cable Broadband Availability as a Percentage of Homes Passed by Cable 1999-2006**



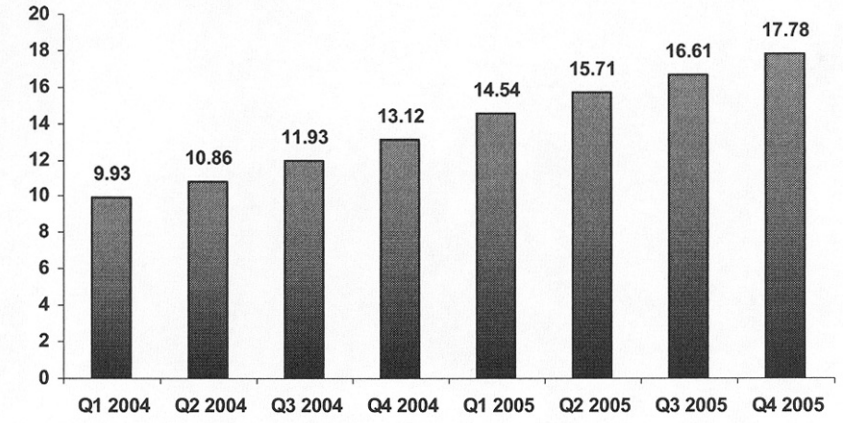

Source: "Cable/Satellite: Trend Tracker 3Q05," Morgan Stanley Equity Research, October 21, 2005.

The high-speed Internet access market is far from saturated. For 2004, the FCC reported a 30 percent increase in cable modem connections, from 16.4 to 21.3 million lines, affirming similar estimates from the private sector.[20] Data from Leichtman Research Group reveal that total cable modem customers of the top ten multiple system operators grew 28 percent in 2004, from 15.3 to 19.6 million.[21] Morgan Stanley reported a 28 percent increase in cable modem customers last year, from

15.0 to 19.2 million; it is forecasting annual customer growth rates of 22 percent for 2005 and 18 percent for 2006.[22]

Phone companies remain formidable broadband competitors with their DSL offerings. Though cable continues to have the largest installed base—25.4 million lines—compared to the Bells' nearly 16.4 million DSL lines, the phone carriers have been adding new lines at a furious rate. According to the FCC, advanced higher-speed DSL lines—defined as 200 Kbps for both upstream and downstream—increased 88 percent during 2004, compared to 36 percent for advanced cable lines.[23] An NCTA snapshot of second quarter data for 2004 and 2005 reveals Bell DSL net additions grew 40 percent, while cable modem subscriptions grew 25 percent.[24] The RBOCs together have been adding about one million DSL subscribers each quarter (see Chart 3).

**Chart 3**
**RBOC DSL Subscriber Growth: 2004-2005 (in millions)**




Source: "Cable/Satellite: Trend Tracker 3Q05," Morgan Stanley Equity Research, October 21, 2005.

Cable operators have responded to this competitive marketplace by offering consumers a bundled package of services, which has enabled them to attract new customers and retain existing subscribers. Cable has been promoting increased access speeds, superior content, and other online enhancements.

When cable modem service was introduced in 1999, the majority of customers experienced downstream access speeds up to 1.5 Mbps. Since 2001, multiple system operators have regularly boosted those speeds at no additional cost. Most operators are now offering 4 to 6 Mbps, with additional pricing plans for speeds in excess of 6 Mbps. The cable industry is also focusing on developing the commercial market for high-speed Internet access. For example, Cablevision is marketing 50 Mbps service (expandable to 100 Mbps) for commercial customers in Oyster Bay, New York.[25]

Boosting speeds has not posed any technical problems for operators and the process is neither cost nor labor-intensive. No additional consumer equipment is necessary to move from 1.5 Mbps to 3, 9, or 15 Mbps. Usually, just a simple software download to existing modems can upgrade the speed capabilities. With other enhancements, high speed Internet access could increase to 160 Mbps downstream and 60 Mbps upstream.

In addition to speed, cable operators are offering a variety of features (at no additional fee) that increase value. These features include integrated security suites, with anti-virus, anti-spyware and firewall protection; pop-up blocking and spam filtering; video e-mail; and specialized content from partners such as Major League Baseball, NASCAR, Disney, and Movielink.

Though a smaller subset of the broadband access market, alternative technologies including Broadband over Power Line (BPL), fixed wireless and satellite will continue to make inroads as a viable alternative to DSL and cable modems. BPL service allows the delivery of IP-based broadband using the communications capabilities of the Nation's power grid. According to the United Telecom Council, there are a

number of trials underway nationwide, and a small number of commercial deployments have been launched. Adding new momentum, three technology behemoths—Google, IBM, and Motorola—recently announced major investments or trials involving BPL. [26]

*Cable's Digital Telephony is Primed for Explosive Growth Resulting in Better Service Bundles and Additional Benefits for Consumers*

Nearly 4.5 million customers are taking telephone service from their local cable operator, both traditional circuit-switched telephone service and, increasingly, cable's new digital phone (VoIP) service. Some cable operators have offered traditional circuit-switched telephone service for years. More recently, many companies have launched IP-based services. Circuit-switched telephony subscribers may be transitioned to digital telephony in the years ahead. Meanwhile, the two largest providers of traditional phone service—Cox and Comcast—will continue to support their roughly three million circuit-switched telephone customers.

Kagan Research reported significant growth in cable's digital telephone subscribership for 2005. Between year-end 2004 and year-end 2005, the industry grew from 587,000 to 2.6 million customers, a growth rate of over 300 percent. [27] Kagan estimates the penetration rate for cable's VoIP services and, to a lesser extent circuit-switched telephony, will reach 18 percent of occupied U.S. households by the end of 2009, while 88 percent of homes passed by cable will be able to receive VoIP service the same year. [28] Morgan Stanley reported that 90 percent of telephone homes should be passed by digital telephone services by 2007.

Both Cablevision and Time Warner have established a strong beachhead in the digital phone marketplace, and Comcast is now in full deployment mode. Those operators, along with Charter, Insight, Bright House, and Bresnan are effectively competing against a range of independent VoIP providers, including Vonage, Packet8, and Lingo, as well as the RBOCs. During the fourth quarter, Time Warner continued its strong growth in new customers, adding 246,000 VoIP users. Cablevision, Comcast, and Charter added 548,300 combined customers during the same quarter.

VoIP is having a positive impact on the other two service offerings in cable's "triple play"—video and high speed data. Operators offering VoIP are experiencing lower churn rates for basic cable and increased growth in high-speed Internet subscribers. Cablevision, Cox, and Time Warner all exhibited faster growth rates—almost 20 percent—in their high-speed access businesses than those operators not offering voice service. [29]

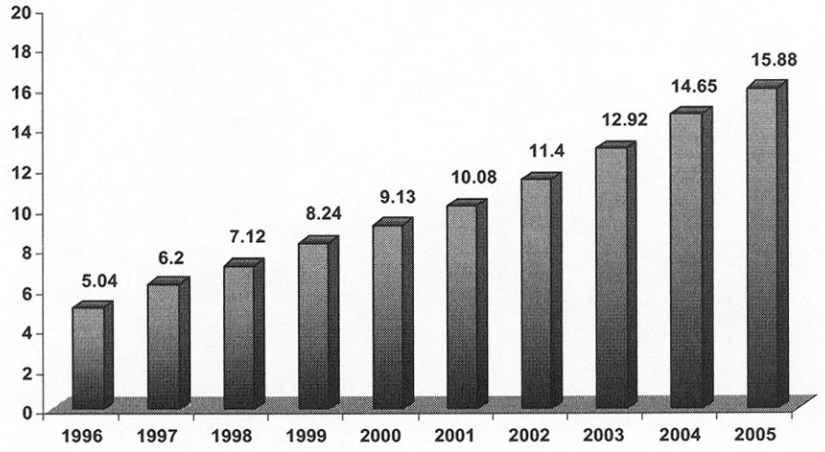
## IV. Cable Continues to Invest in Original, Compelling Programming to Win and Sustain Customers in a Highly Competitive Video Marketplace

With regard to video programming networks—including children's programming and locally-originated programming—the cable industry continues to invest in general interest and niche programming to attract customers.

*Programming Investment*

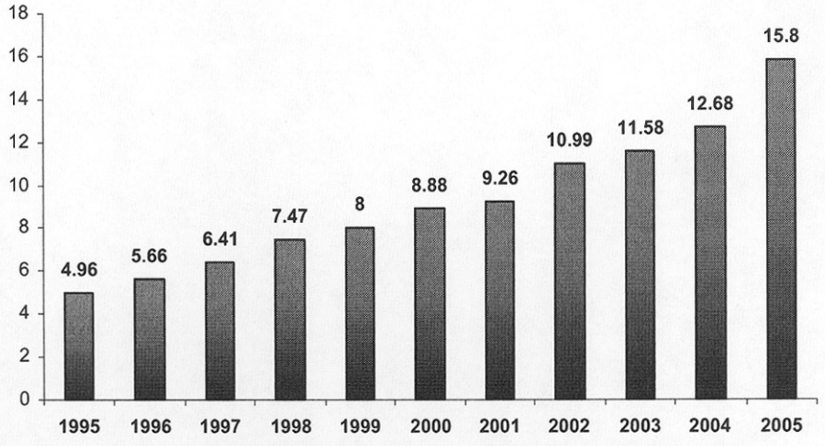
Cable's original, compelling, and high-quality content is the direct result of increased investments by both cable networks and operators. In 2005, cable networks invested more than $15.88 billion in producing new programming (see Chart 4), while cable operators invested $15.8 billion to purchase quality programming for customers (see Chart 5). As noted above, with the deployment of services such as VoD and digital video recorders (DVRs), viewers can watch their favorite programming at their convenience.

**Chart 4**
**Cable Networks' Programming Expenditures**
**1996-2005 (in billions of dollars)**




Source: Kagan Research, LLC.

**Chart 5**
**Cable Operators' Programming Expenditures:**
**1995-2005 (in billions)**




Source: NCTA estimate based on Kagan Research, LLC. and U.S. Copyright Office

*Programming Quality*

Cable is increasingly recognized as the premier outlet for high-quality, cutting-edge programming by television critics and viewers. For example, the 56th Annual Primetime Emmy Awards in September 2004 marked the first time that cable networks surpassed the broadcast networks in honors received, with 11 cable networks collectively garnering 50 awards compared to the broadcast networks' 37 awards.

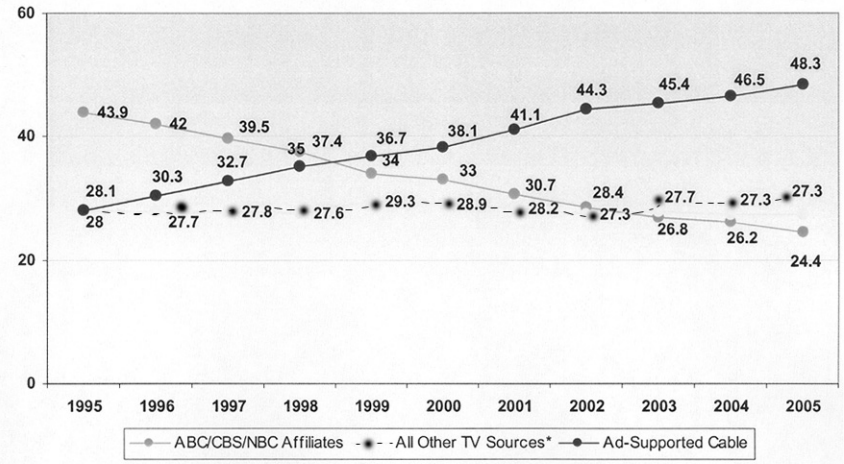
- In January 2005, FX, Showtime and HBO won Golden Globe Awards.
- In April 2005, cable organizations won 12 George Foster Peabody Awards out of 32 awards granted.
- HBO and ESPN each won five Sports Emmy Awards in April 2005, followed by ESPN2, NFL Network and TNT tied with one award each.

*Programming Viewership*

More viewers are tuning into cable's diverse offerings than ever before, even compared to the collective viewership of the major national commercial broadcast networks. For example, more than half of all primetime television viewers watched ad-supported cable networks during the official 2004/2005 TV season (September–May), the second consecutive time that cable has topped all national broadcast networks combined during an official season. Cable-plus households tuned in on a weekly basis to more than 35 hours of ad-supported cable programming versus an average of 26 hours per week for all commercial broadcast programming combined.

An analysis of Nielsen data by the Cabletelevision Advertising Bureau (CAB) shows that for the official 2004/2005 TV season, ad-supported cable networks outpaced the "Big 3" (ABC, CBS, NBC) broadcast networks on a total day basis by 23.9 share points—with cable posting a 48.3 share to broadcast's 24.4 (see Chart 6).[30]

**Chart 6**
**Viewing Shares Shift to Cable: 1995-2005 (Total Day Shares)**

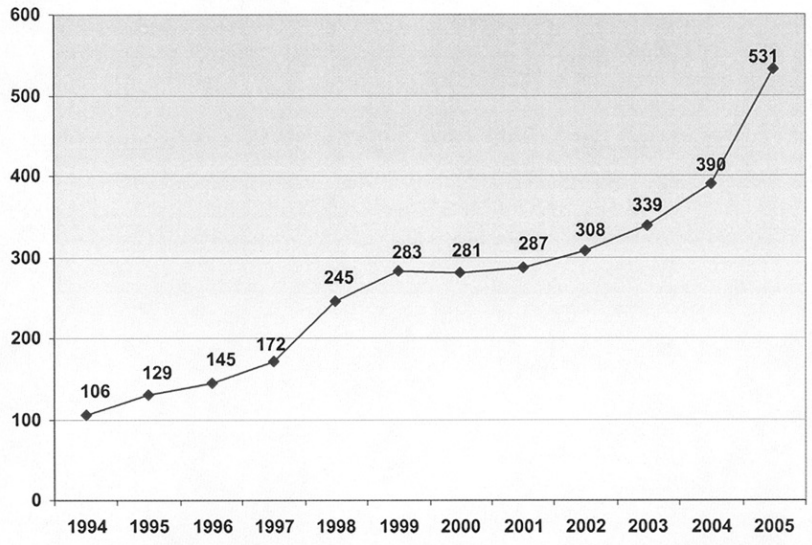



*All Other TV includes Independents, Pay Cable, FOX/WB/UPN/PAX Affiliates, PBS and all other cable.

Source: Cabletelevision Advertising Bureau, 2006 Cable TV Facts

*Programming Choice.* Cable's investments in new channel capacity have resulted in a growing number of cable networks. As the FCC reported on February 10, 2006, the number of national cable networks increased from 145 in 1996 to 531 by year-end 2005—growth of 266 percent in less than a decade (see Chart 7. Note however that vertical integration has fallen by half over the past decade—see Section VI.)

**Chart 7**
**National Video Programming Services: 1994-2005**




Source: 1994-2006 FCC Annual Reports on the Status of Video Competition

*Children's Programming*

Cable networks are continuing to provide many hours of quality programming suitable for children and the whole family. In addition to the positive viewing options that are provided, the industry has taken steps to help parents manage what their families watch. Free blocking technology is available, and programming networks have enhanced their on-screen ratings information.

Basic cable networks such as ABC Family, Animal Planet, Boomerang, Cartoon Network, Discovery Kids, Disney Channel, The Hallmark Channel, Nickelodeon, Nickelodeon GAS, Noggin/The N, and Toon Disney, as well as premium networks such as HBO Family, Showtime Family Zone, Starz Kids & Family, and Encore Wam continue to attract a growing audience share of children and families. Total day viewing by kids (ages 2–11) of advertising-supported cable networks increased from a 28.3 share in 1993/1994 to a 56.4 share during the 2004/2005 official TV season.

*Family Tiers*

Beginning in December 2005, several leading cable operators (including Comcast, Time Warner Cable, Cox, and Insight) announced that they would voluntarily offer family programming tiers. The program networks included on these tiers vary by company, but all feature primarily G-rated content suitable for family viewing. The tiers, which can be purchased with the broadcast basic tier, became available in early 2006, and additional MSOs are deploying family tiers this spring.

**V. Cable Faces Vigorous Competition in the Video Market**

In its 12th annual report to Congress on the state of competition in the video market, the Federal Communications Commission found that: [31]

> Competition in the delivery of video programming services has provided consumers with increased choice, better picture quality, and greater technological innovation . . . We find that almost all consumers have the choice between over-the-air broadcast television, a cable service, and at least two DBS providers.

Today, consumers can choose from a variety of multichannel video providers, including Direct Broadcast Satellite (DBS), alternative broadband providers like RCN/

Starpower, local telephone companies, and utilities. *As a result of this competition, 29.7 million consumers (more than one out of four video subscribers) now obtain multichannel video programming from some company other than their local cable operator (see Chart 8).*

Chart 8—Subscribers to Multichannel Video Program Distributors (MVPDs), November 30, 2005

| | Subscribers (in Millions) | Percent of Total MVPD Subscribers |
|---|---|---|
| DBS (high power satellite) | 27.20 | 28.97 |
| C-Band (low power satellite) | 0.20 | 0.21 |
| MMDS (microwave) | 0.10 | 0.11 |
| SMATV (private apt/condo) | 1.00 | 1.06 |
| Broadband Competitors | 1.20 | 1.28 |
| Non Cable MVPD | 29.70 | 31.63 |
| Cable | 64.20 | 68.30 |
| Total MVPD | 93.90 | 100.00 |

Sources: NCTA estimates based on data from Kagan Research LLC, *Kagan Media Money,* January 4, 2006 at 7; and Nielsen Media Research.

*Direct Broadcast Satellite*

DBS companies currently have more than 27 million customers compared with none 12 years ago. The two nationwide DBS providers now serve 29 percent of all multichannel video households and their penetration is 25 percent or greater in at least 25 states. DIRECTV (15.13 million customers) and EchoStar (12.04 million subscribers) are now larger than all of the cable companies in the United States except Comcast. Cable made significant gains in digital telephone and high-speed Internet customers in 2005, but its share of multichannel video customers has fallen well below 70 percent.

DBS operators continue to experience strong subscriber growth in virtually every market where they offer local channel service.[32] Indeed, DIRECTV and EchoStar report that their total number of subscribers increased from 24.85 million to 27.17 million between December 2004 and December 2005, an increase of 9 percent.[33] According to Strategy Analytics, "DBS has robbed cable of the slow-but-steady growth it enjoyed up until the late 1990s, but its broader impact has been to expand the total base of multichannel TV homes."[34]

The Government Accountability Office (GAO) stated in 2005 that "DBS penetration rates have been and remain highest in rural areas, but since 2001, DBS penetration has grown most rapidly in urban and suburban areas, where the penetration rates were originally low . . . In short, over the 2001 to 2004 time frame, the DBS penetration rate grew about 50 percent and 32 percent in urban and suburban areas, respectively, compared with a growth rate of 15 percent in rural areas."[35] As Chart 9 shows, DTH penetration of television households, as of November 2005, exceeded 30 percent in 9 states, 20 percent in 36 states, and 15 percent in 46 states.

Chart 9—States with Direct-To-Home (DTH) Dish Penetration of More than Fifteen Percent, November 2005

| State | Penetration Rate Percentage | State | Penetration Rate Percentage |
|---|---|---|---|
| Vermont | 42.73 | South Carolina | 25.38 |
| Montana | 38.03 | Oregon | 24.77 |
| Utah | 37.73 | Wisconsin | 24.61 |
| Idaho | 36.80 | Arizona | 24.42 |
| Wyoming | 35.56 | Illinois | 23.04 |
| Mississippi | 34.01 | North Dakota | 23.61 |
| Missouri | 33.94 | South Dakota | 23.51 |
| Arkansas | 32.50 | Maine | 23.07 |
| Georgia | 30.69 | Michigan | 23.00 |
| Colorado | 29.57 | Nebraska | 22.81 |
| New Mexico | 29.55 | Washington | 22.28 |
| Oklahoma | 29.44 | Kansas | 22.15 |

Chart 9—States with Direct-To-Home (DTH) Dish Penetration of More than Fifteen Percent, November 2005—Continued

| State | Penetration Rate Percentage | State | Penetration Rate Percentage |
|---|---|---|---|
| Alabama | 27.93 | Florida | 22.05 |
| Indiana | 27.84 | Alaska | 19.29 |
| Iowa | 27.31 | Delaware | 19.26 |
| California | 26.94 | Louisiana | 18.61 |
| Virginia | 26.71 | Maryland | 18.58 |
| Tennessee | 26.62 | Ohio | 18.54 |
| Kentucky | 26.45 | Nevada | 17.86 |
| West Virginia | 26.42 | New Hampshire | 17.30 |
| Texas | 26.33 | New York | 16.69 |
| North Carolina | 26.05 | Pennsylvania | 16.16 |
| Minnesota | 25.62 | New Jersey | 16.00 |

Source: The Bridge, November 1, 2005 *www.mbc-thebridge.com;* TV Household data from A.C. Nielsen.

Partly in response to the competition posed by DBS, cable invested more than $100 billion in new equipment and facilities between 1996 and 2006. These capital expenditures allowed cable to offer new digital services and digital tiers—including HDTV, interactive program guides, video-on-demand, personal video recorders, and CD quality, commercial-free music channels.

Cable's upgrades have provoked a competitive response from DBS, which is good for consumers. For example, DIRECTV's CEO Chase Carey acknowledges that many cable operators have improved their video service in recent years, "which is why we have to continue to improve."[36] In an effort to keep pace with cable's video-on-demand movie offerings, DIRECTV and EchoStar have stepped up marketing and promotion of their pay-per-view movie services.[37] In addition to EchoStar's stand-alone pay-per-view channels, the company's Dish on Demand service launched January 2005 with 30 titles downloaded to subscribers using the company's DISHPlayer Digital Video Recorder (DVR). DIRECTV has promoted its pay-per-view business with discounts on recent Hollywood releases. EchoStar is rolling out the first portable DVR device, called the Pocket-Dish, in an effort "to get a leg up in its battle with cable and satellite TV rivals."[38] It has also teamed up with Frontier, a telecommunications provider, to offer a bundled package of satellite television, Internet and telephone service in 24 states.[39] This is in addition to the joint marketing arrangements DIRECTV and EchoStar have with Bell companies.

*Broadband Service Providers and Municipal Overbuilders*

Although DIRECTV and EchoStar are cable's largest MVPD competitors at this time, cable operators continue to face competition from other facilities-based providers in major U.S. markets. Broadband service providers (BSPs)—which include independent, municipal, and CLEC overbuilders—are offering bundles of video, voice, and data services over a single network.[40] RCN, the largest BSP, has 371,000 cable subscribers and ranks as the twelfth largest MSO. It operates in major metropolitan areas, including San Francisco, Chicago, Boston, New York, and Washington, D.C. RCN's video, telephone, and high speed data service passes nearly 1.5 million homes.[41]

Wide Open West (WOW), the fourteenth largest MSO, serves an estimated 291,200 subscribers, and passes an estimated 1.4 million homes. Knology Holdings, the twenty-first largest MSO, reports 175,300 cable subscribers, and passes 783,000 subscribers. Grande Communications, the thirtieth largest MSO, provides cable service to 87,800 subscribers and passes more than 328,000 homes.[42]

Municipally-owned cable systems, in selected areas, also continue to compete with cable systems and other MVPDs. According to a survey by the American Public Power Association (APPA) of its members, conducted at the end of 2004, 102 municipally-owned utilities offered cable TV service.[43] The APPA survey also reported that 81 municipally-owned utilities were offering cable modem or DSL service, and 52 municipal utilities offered telephone service.[44]

*Mobile Video*

Digital video recorders and video-on-demand services have fueled consumer demand for watching TV shows *whenever* people like. The next goal for video providers is to offer consumers the ability to watch TV *wherever* they like. The market for video over cell phones is growing quickly and is being developed by major players—

including service providers like Verizon Wireless, Sprint, and Cingular as well as major technology companies like Qualcomm, Microsoft, and Nokia.

For example, Verizon Wireless rolled out *V Cast,* a service that offers video programming to cellular telephone users, in February 2005.[45] *V Cast* currently provides news updates, sports highlights, celebrity news, stock quotes and market information, weather, and games for $15 per month. Its television-like video, at high bit rates, allows customers to download music videos and other high quality content. It is also reportedly working on its own original, reality programming. Verizon asserts that its *V Cast* service is "available in 118 major metropolitan areas covering more than 148 million people."[46] Industry experts estimate that Verizon Wireless has signed up 500,000 customers since the service was launched early this year.[47]

Similarly, Sprint Corporation began broadcasting live video over its wireless phones in August 2004.[48] Sprint PCS customers can now see news, video clips, and other content real time over their cell phone. Sprint/Nextel has also announced that it will "offer 2–3 Mbps mobile broadband service to the top 100 U.S. markets at $20–$40 a month in 2008."[49] Qualcomm recently introduced its TV-cell phone service, MediaFlo.[50] In addition, MobiTV, a video service made available by Sprint and Cingular in the United States, now has 500,000 subscribers and an Emmy Award from the Academy of Television Arts and Sciences for its streaming TV broadcast service.[51]

The drive to deliver TV content to portable devices is picking up steam, as some providers prepare to launch Hollywood films and short format cinema in the near term.[52] HBO and Cingular Wireless recently entered a pact for wireless content distribution.[53] In addition to making the network's existing programming available, HBO may create new entertainment channels for the service.

Meanwhile, Sony's new portable PlayStation game device, known as PSP, is another mobile video play. It is capable of downloading TV shows and video information. It has been called "a plasma screen in your pocket."[54]

Although still a nascent business, some financial analysts on Wall Street are predicting the following about wireless video services:[55]

> The U.S. mobile video user base may balloon to more than 20 million by the end of 2007, up from less than 1 million today, says Albert Lin, an analyst at American Technology Research (ATR). Assuming each subscriber pays $5 a month for such services, that would translate to a $1.2 billion market. Worldwide, more than 250 million people are expected to be watching mobile video by 2010, generating some $27 billion in sales, vs. with $200 million today, according to market consultant ABI Research.

*Internet Video*

The video landscape is marked not only by intense rivalry among cable, satellite and telephone providers but also Internet-based video delivery systems. Consumers now have new ways to access video content—from digital cell phones and other portable devices to interactive websites to enhanced in-home consumer electronics and computer equipment with high definition DVD or streaming video-capability. Not surprisingly, Internet companies such as Yahoo! and Google have declared themselves to be media companies offering multiple services to compete with cable.

As one observer put it, the ethos of New TV can be captured in a single sweeping mantra: *anything you want to see, any time, on any device."* [56] Another stated it this way:

> It's the key battleground in what promises to be one of the most bruising—and important—global corporate fights in the next couple of years. Telephone giants, cable titans, computer companies and consumer electronics makers are all vying to provide the next generation of high-tech entertainment—a single network or gadget that lets you view photos, listen to music, record DVDs and tune into whatever TV programs you want to watch, whenever you feel like watching them.[57]

There is no denying that this proliferation of new delivery modes—the combination of digital communications and computers with entertainment and immediate access to worldwide information—is making all industry players compete more aggressively to stay in the game. As one media analyst recently said, "from an investment standpoint, I don't think we've ever before seen such a competitive landscape."[58]

The FCC has recognized that video provided over the Internet has grown and promises to become an increasingly strong participant in the video programming marketplace.[59] As broadband Internet offers broadcast-quality video, consumers are increasingly turning to Internet-based means of accessing video content, including

downloading movies and other high value video content traditionally available only through broadcast, cable, satellite or home video outlets. Libraries of video content, containing *thousands* of hours of video programming, are becoming available to consumers on a personalized, customized basis.

Internet companies are providing their own unique content or partnering with other established content providers and video distributors. New entrants, like Akimbo Systems, offer a mix of established TV programming and unique content via the Web. Akimbo charges $10 a month and offers about 1,600 programs, some for an extra fee. The company's chief executive predicts that Akimbo "will do what eBay has done for retailing."[60] Google, Yahoo! and Microsoft are developing video search engines to harness video content via their portal service.[61] Over the past year, Yahoo! predicted a one billion subscriber base for its multiple media services by decade's end.[62] BitTorrent, an Internet file-sharing method enables video enthusiasts to trade video files online. iFilm and other websites offer video clips to millions of customers. Wi-FiTV, a broadband website that features more than 200 TV channels from around the world, recently began service.

Program networks are enhancing their Internet presence to gain viewers and advertising dollars. These web "channels" contain specially made programming, short videos targeting niche interests, and repackaged TV content.[63] MTV Overdrive, a mix of news, live performances and on-demand music videos launched in April 2005. Networks such as Home & Garden Television, Food Network, CNN, Fox News Channel, and MSNBC are offering more video content on their sites. According to one analyst, Internet advertising is headed toward a 25 percent increase over the last year, to upwards of $8.8 billion in 2005.[64]

AOL saw a jump of 120 percent in its on-demand video streaming in 2004 and drew in five million viewers for its exclusive live coverage of the July 2, 2005, Live 8 concert.[65] ManiaTV.com, the interactive television website, had 1.6 million users in July alone.

As Internet companies and website operators grow their on-line video businesses, consumer electronics manufacturers are developing ways to exploit the World Wide Web via equipment. Toshiba and Matsushita, for example, offer digital TVs that allow users to download and store online video, along with DVD recording capability.[66] PC makers are developing new "media center" PCs that can play and record movies, television, and music accessed on-line. As described by PC magazine online, "there is going to be a big battle for dominance in people's living rooms. What we've seen is a mini-explosion of set top boxes for Internet television."[67] This flurry of announcements and deals in recent months shows that all players in the video marketplace are positioning themselves to compete in the IPTV arena.

*Broadcasting*

Broadcasters are still strong competitors to cable and other multichannel providers. The competition for viewers is manifested in the battle for advertising dollars. After a 10-year decline in viewers aged 18 to 49, the broadcast networks posted an increase in this key demographic for the 2004–2005 television season. It all came down to the big four broadcast networks' crop of breakout hit shows. Some network shows turned in performances "akin to the days before cable became a serious competitor."[68] This has boosted advertising commitments for the coming year on all broadcast networks.

While the broadcast share of television viewing has declined in recent years as television viewers have increasingly opted for the multitude of choices available on cable, broadcast television remains a potent force. Broadcasting's share of the viewing day continues to exceed 40 percent.[69] Moreover, approximately 15 percent of television households do not subscribe to any multichannel service. These television households continue to find broadcast television alone or in combination with non-MVPD video sources (such as DVDs) to be their preferred means of receiving video programming—and a significant percentage of MVPD households include television sets that are not connected to multichannel service.

*Home Video*

DVDs, video cassettes, and laser discs continue to provide competitive alternatives to MVPD viewing options. There are approximately 47,000 DVD titles available for purchase or rental today, compared to 30,000 a year ago.[70] Consumers spent $24.5 billion renting or purchasing DVDs and VHS tapes last year, while generating $9.4 billion in domestic box office revenue.[71] In addition to theatrical releases, many highly popular previously broadcast television series are now available in DVD format, frequently accompanied by major advertising campaigns. Popular cable network shows are also available on DVD.

The growth in sales of DVD-formatted programming has been facilitated by gains in the sale of DVD hardware. U.S. consumers purchased 37 million DVD players in 2004, an eight percent increase over the previous year. During the first half of 2005, nearly 14 million DVD players were sold to consumers, more than a six percent increase over the same period last year. Household penetration is expected to reach 80 percent by year-end 2005, with over 45 percent of DVD owners having more than one player. When accounting for computers with DVD-ROM drives and DVD-enabled video game consoles, an estimated 79 million households currently have the capability to play DVD, approaching three-fourths of all U.S. TV households. [72]

With regard to DVD software, on-line provider Netflix recently teamed with retail giant Wal-Mart to offer their customers access to more than 40,000 titles of video programming. [73] Overall, consumers spent $15.5 billion in 2004 on DVD sales, an increase of 33 percent over 2003, while revenues from DVD rentals increased 26 percent over 2003, as consumers spent more than $5.7 billion. [74]

**VI. Vertical Integration**

Vertical integration in the cable industry has declined dramatically over the past decade. For example, in 1992, *half* of all cable program networks were vertically integrated with cable system operators. [75] Since 1992 the percentage of programming networks in which cable operators *collectively* have any ownership interest has dropped to 21.8 percent. *No single cable operator has a financial interest in more than seven percent of the more than 475 national program networks (counting each multiplexed pay-per-view network only once) identified in the FCC's Twelfth Annual report on competition in the video marketplace.* [76] Consequently, the vast majority of channels carried by any one cable operator—including Comcast, Time Warner, and every other member of NCTA—are not affiliated with that operator.

Even with over 530 national program networks, including several 24-hour all-news channels, the video marketplace is open to new independent networks. 90 cable channels have launched since January 2000 which are not affiliated with a cable operator, according to the FCC. This belies the complaints made by some critics that cable operators are refusing to carry independent programmers.

**VII. Telephone Company Entry Into Video**

Now that DBS has transformed the video marketplace so that virtually all television households have choice, it is easy to forget that only a decade ago, it was the large local telephone companies that were promising to provide a competitive alternative to cable—just as cable operators were promising to provide a new source of telephone service. Congress took those promises seriously and cleared a path for both the cable and telephone industries to enter each other's business. The 1996 Telecommunications Act *immediately* removed the statutory barrier for telco entry into video. [77] It also allowed cable to provide local exchange service, [78] assuming that cable operators met the regulations for providing competitive local exchange service.

The cable industry delivered on its promise to provide facilities-based competition to incumbent voice providers. By contrast, the telephone companies did *not* fulfill their promises to enter the video marketplace. Instead, they spent ten years focused on the long distance market and thwarting the efforts of their competitors—especially the CLECS—to provide local telephone service.

The telephone companies are now reviving plans to provide multichannel video programming services. [79] For example, AT&T/SBC is spending $4 billion over the next three years to install fiber optic cable to serve up to 18 million homes and plans to deliver television services using Internet protocol (IP) technology. [80] Verizon is spending $6 billion over five years to lay fiber directly to 16 million households in its service areas. [81]

**VIII. Conclusion**

As Congress drafts changes to the Telecommunications Act of 1996, we urge you to treat like services alike, preferably in a deregulatory environment. We will do the rest by raising private risk capital, investing in new technology, offering better customer service, creating innovative programming, and competing with other multichannel video providers in order to provide consumers with the best voice, video, and data services possible.

**ENDNOTES**

[1] Some cable operators are also beginning to add wireless telephone service to their bundle, as Time Warner did recently in its partnership with Sprint.

[2] Twelfth Annual Report on the Status of Competition in the Market for the Delivery of Video Programming, FCC 06–11 (released March 3, 2006) at paragraph 5.

[3] PCMag.com Productwire: In2TV.

[4] Verizon Wireless *Connect* magazine, Spring 2006 issue, pp. 2 and 10, and verizonwireless.com.

[5] *Twelfth Annual Report on the Status of Competition in the Market for the Delivery of Video Programming,* FCC 06–11 (released March 3, 2006), paragraph 21.

[6] In return for deregulation, the cable industry promised Congress and American consumers that it would provide: (1) facilities-based competition to the telephone companies, and (2) a new generation of advanced information and video services—both of which we have done.

[7] The networks include Cinemax HDTV, Comcast SportsNet HDTV, Discovery HD Theater, ESPN HD, ESPN2 HD, FSN HD, HBO HD, HDNet, HDNet Movies, INHD, INHD2, MSG Networks in HD, NBA TV, NFL Network HD, Outdoor Channel 2 HD, Showtime HD, Spice HD, STARZ! HDTV, The Movie Channel HD, TNT in HD, Universal HD, and YES–HD.

[8] As of September 30, 2005, cable operators voluntarily carried 681 digital broadcast signals—a 124 percent increase over the 304 stations carried in December 2003.

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[12] "VoD Squad Takes on Satellite TV," Chicago Sun-Times.com, May 31, 2005, (available at *http://www.suntimes.com/output/business/cst-fin-vod31.html*).

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[14] "Cable Talks, Wall Street Listens," Broadcasting & Cable, April 11, 2005, at 18.

[15] Kagan Research, LLC, "MSOs Fast-Forward DVR Purchases," *Broadband Technology,* May 12, 2005, at 1–2.

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[77] *See generally* Section 302 of the Telecommunications Act establishing new sections 651–653 of the Communications Act, 47 U.S.C. §§ 571–573.
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The CHAIRMAN. Thank you very much. I'll hold off questions. The next is Earl Comstock, President and Chief Executive Officer of COMPTEL, a stranger in our midst.

**STATEMENT OF EARL W. COMSTOCK, PRESIDENT/CEO, COMPTEL**

Mr. COMSTOCK. Yes indeed. Nice to be here, Mr. Chairman, and thank you all for having me here. Let me just comment for a minute and in one part agree, and another part disagree with the statements that Kyle just gave to you. A couple of observations. We're looking at the 1996 Act, and the first thing I would point out is that a lot of the 1996 Act did work. There's a lot of talk about reforming it, there's a lot of talk about gutting it, but we need to keep in mind that it did succeed in many areas. And I think it's worth the Committee's time to go back and look at those areas where it did succeed.

Cable is a good example of the success of the 1996 Act, because of provisions included in, the provisions that Mr. McSlarrow just referenced, having to do with interconnection and access to the telephone network. The 1996 Act succeeded and we now have broadband deployment to over 90 percent of the homes in this country. You often hear about the need for regulatory relief on the part of the Bells so that they can bring broadband to America. Well cable has already done that, and they did it through not regulatory relief, but through the threat of competition. Competition that this committee helped engender in the 1992 Cable Act, when they made program access provisions available. Program access provisions, that interestingly enough USTA is busy supporting over on the House side, and said are necessary for there to be video competition. You've got to have program access. Those rules came about from Congress in 1992, and in 1996, Congress followed up with interconnection. Where I would differ with Mr. McSlarrow's testimony is he talked about the telephone network being built as a regulated monopoly, which is absolutely true. But the cable network was also built as a regulated monopoly. And then eventually it was de-regulated when part of the 1996 Act removed rate regulation, which Congress had imposed in 1992, from the cable industry. Why? So that they could invest in their networks to bring digital cable to the country, which they've done, which is why cable

modem service today according to NCTA's own statistics is available to 90 percent of the homes that they pass. So broadband is available today. The reason you don't see greater broadband penetration, which is the purchasing of broadband services, is because the price is still too high.

America today pays more for broadband than any other developed country in the world. And the reason is because we don't have competition. There was a great article in the *Wall Street Journal* yesterday talking about how France has gone in and told their incumbent entity France Telecom that they must provide access to competitors on their network. As a result they're able to get 25 megabits at about $30 a month. That's far faster than anything we have today. And this is over the existing copper loops that France Telecom has. The cable industry in France isn't very well developed, so they don't have a cable alternative. But I think the idea that somehow cable built their network in a competitive environment and the telephone companies built theirs in a regulated environment is a complete myth.

Cable also got a protected environment in which to build their networks. And I think that's the point everybody needs to look at. Convergence is here, Mr. Chairman, and people are looking for the quadruple play. Voice, video, data and wireless. There's only one entity in the country today that has that capability over their own facilities. And that's the incumbent telephone companies. Why? Because they also own wireless licenses, cable doesn't have that advantage. So if competitors are going to be there, you need to give access to the incumbent networks that are there. Cable and telephone. And I'd just like to point out that it was Section 251 which allowed that kind of access, and lead to a lot of innovative services. DSL is one of those services which two COMPTEL companies, Earthlink and Covad offer. These two companies are bringing line powered voice to Americans, right now in three cities and they'll be rolling out in eight more soon. You can use your traditional telephone, it stays operational even if the power goes down, just like the traditional telephone network, but it's a broadband system. It's eight megabytes per second. That's over DSL and that's possible because of the 1996 Act.

The problem we have today is that the FCC has abandoned the 1996 Act. It's walked away from it on the false premise of facilities based competition. We're not going to build new ubiquitous networks in this country. And I think the Committee needs to take a hard look at the facts, and recognize that if you want the consumer competition, as I think Senator DeMint very rightly focused on, as did both of the Co-Chairman, you're going to have to give access to those facilities. That access is not going to come from market forces. It's going to come from a competitively neutral set of rules, and that's what we hope you'll take up as you draft your bill. Thank you very much.

[The prepared statement of Mr. Comstock follows:]

PREPARED STATEMENT OF EARL W. COMSTOCK, PRESIDENT/CEO, COMPTEL

Mr. Chairman and Members of the Committee, my name is Earl Comstock. I am the President and CEO of COMPTEL, the communications association of choice, which represents all types of competitive communications providers. COMPTEL has

more than 180 members and is celebrating its 25th year representing competitors in the communications marketplace.

The topic of today's hearing is competition and convergence, and COMPTEL members are on the cutting edge of providing converged communications services to both business and residential users. Our members brought local Internet access numbers, Digital Subscriber Line (DSL) and Voice over Internet Protocol (VoIP) services to small businesses and residential users long before the incumbent carriers would offer them, just as COMPTEL members brought competitive long distance offerings to businesses and consumers years before AT&T ever did. Likewise, COMPTEL members are at the forefront of offering competitive cable services through overbuilding and through use of Internet Protocol Television (IPTV). It is thanks to the innovation of competitors, and not incumbents, that consumers enjoy new, lower priced, and ever expanding service offerings.

When Congress enacted the Telecommunications Act of 1996 ten years ago, one of the primary goals of that Act was to bring about convergence—namely the offering of voice, video, and data services over a common transmission platform. While it has taken longer to reach that goal than many might have expected when the 1996 Act was adopted, this hearing today can attest to the fact that convergence has finally arrived. The Members of this Committee who helped craft the 1996 Act should be proud of this result, and should take credit where credit is due.

Notwithstanding the many myths that the Bell companies and cable lobbyists spread daily—for example that Congress was not aware of the Internet when the 1996 Act was adopted—the Act has worked as many of those who drafted it intended. For example, the cable industry has successfully used the cost based interconnection rules established in sections 251 and 252 to interconnect their cable networks with the telephone networks of the incumbent telephone companies to provide broadband Internet access and, more recently, local voice services using VoIP. Interestingly, the cable industry's ability to provide broadband Internet access and local voice service was made possible by upgrades the cable industry undertook starting in the early 1990s in order to meet the threat of competition that Congress helped create in 1992 through the enactment of program access rules that are still in effect today. Those rules allowed Direct Broadcast Satellite (DBS) operators to successfully offer a competitive alternative to cable, and Congress included specific provisions in the 1996 Act to further spur cable network upgrades by allowing the Bell companies into cable and by including interconnection requirements that cable needed to enable them to provide Internet access and voice services.

It was in response to FCC actions, court decisions, and rules adopted by Congress that made competition likely, rather than in response to regulatory relief, that cable made its investment. The threat of competition, and not regulatory relief, is what led cable to upgrade their networks so that roughly 90 percent of the homes in this country are passed by cable networks capable of providing cable modem service—a broadband service that is several times faster than the DSL service offered by the Bell companies today. Taking into consideration cable modem service availability, America ranks near the top globally in broadband *deployment*. Congress should carefully consider this successful prior precedent as it evaluates the present requests by the Bell companies for regulatory relief as a means of spurring further broadband deployment.

Where America lags behind many other countries is in broadband *penetration,* i.e., in the number of homes that subscribe to broadband service. Broadband *penetration* is largely a function of price. America today pays more per megabyte of transmission speed than most of our European or Asian trading partners. This high price will only be reduced by competition or government price regulation. COMPTEL believes that competition, rather than price regulation, is the preferable approach to reducing the price Americans pay for broadband services.

Unfortunately, the proposals before Congress today are not designed to spur competition. Instead, each of the proposals introduced so far in this Committee—S. 1504 and S. 2231—are roadmaps to disaster. They each would take huge strides toward reinstating the old Bell monopoly based on the mistaken assumption that facilities based competition is well established and growing. While it is true that cable facilities pass roughly 95 percent of American *homes,* those facilities reach less than 1 percent of businesses in the United States. Likewise, while many COMPTEL members have some of their own facilities to businesses and a few residential customers, COMPTEL members rely extensively on access to incumbent telephone company networks to reach most business and almost all residential customers. The same is true for wireless companies, some of whom are also COMPTEL members. Wireless companies link their cell towers to their mobile switching centers using wireline facilities—in most cases lines leased from the incumbent telephone companies under special access tariffs.

The truth is that there is only one entity in this country that has facilities reaching 100 percent of businesses and residences in any given area, and that entity is the incumbent local exchange carrier (ILEC).

In many areas of the country the ILEC is also a Regional Bell Operating Company that was formerly part of the Bell System monopoly. Particularly now, in light of the recent mergers, and the further proposed merger, involving former Bell entities, as well as the FCC Chairman's unilateral action last week to further deregulate Verizon, it is essential that the common carrier rules Congress reaffirmed and strengthened in the 1996 Act be put back in place. It is those rules, and not unregulated market forces, that have produced the competition that the Bells and their supporters point to as a justification for eliminating those very regulations. Without the rules, the competition that America sees today—competition that is not yet robust enough to drive down residential broadband prices to levels that will allow America to enjoy the same broadband penetration rates that consumers in other developed nations enjoy—will dry up and disappear, placing Americans at a serious competitive disadvantage in the global information economy.

The 1996 Act was forward-looking and competitively neutral. Unfortunately the FCC was not up to the task of following the roadmap that Congress provided it. Entrenched in its own precedent and captive to the industries it was supposed to regulate, the FCC has step by step demolished the pro-competitive, technology neutral framework that Congress constructed in 1996. Starting with Chairman Hundt's decision in 1996 not to tackle access charge reform so that the FCC could continue its policy of favoring Internet data services over voice services, followed by Chairman Kennard's decision to exempt the telecommunications component of Internet access services (and other information services) from contributing to Universal Service and Chairman Powell's decision not to treat the transmission component of cable modem service in the same common carrier fashion that the FCC had previously treated the transmission component of DSL based Internet access services, until finally Chairman Martin decided to reverse 25 years of prior precedent and treat common carrier transmission services bundled with an information service as entirely an unregulated service (as opposed to a regulated transmission service and an unregulated information service). With these actions the FCC has unraveled the core premise of the 1996 Act—namely that transmission services provided to the public would remain subject to common carrier regulation, regardless of the facilities used.

Despite Congress' clear instruction in the 1996 Act to regulate based on what service was being provided rather than the technology used or the historic box in which a company started, the FCC to this day insists on classifying services based on technology and history. If left unchecked, this misguided policy will result in the re-monopolization of business communications services in this country, and, at best, a duopoly in the provision of residential communications services.

In considering now how to approach communications law reform, it is imperative that the Congress act to undo the damage being done by the FCC's policies. Congress faces an historic choice as it moves forward with new legislation. Congress can choose to re-instate the historic legal framework that led to the incredible growth and success of the Internet—the choice most governments are following in the rest of the world—or it can chose to continue down the path the FCC has been following, a path that will lead to the creation of a cable duopoly or even a cable monopoly—depending on whether or not AT&T and Verizon are successful in eventually running the incumbent cable operators out of business.

The stakes couldn't be higher. Re-instating the rules that led to the success of the Internet will mean continued innovation, growth, and competition, which will keep America as a leader in the Information Age. Continuing down the path toward a cable duopoly will mean stagnation, higher prices, and the loss of our leadership position as innovators and entrepreneurs move overseas in search of countries that have rules that enable them to get their products and services on the Internet without having to go through the cable or telephone company gatekeepers.

The cable rules set forth in Title VI of the Communications Act are in fact the polar opposite of the Title II common carrier rules under which the Internet and competition evolved. The cable rules grant the operator of a cable network *exclusive* control over the content and services offered over that network, subject to only a few requirements to carry public, educational, and governmental channels and a limited amount of unaffiliated programming. Using those rules, over the past *thirty years* no major cable operator has voluntarily allowed any other company to purchase capacity on its network to offer content or services, even content or services that the cable operator itself is not yet offering. The former AT&T bought two cable networks, and still it could not get agreement from its fellow cable operators to allow AT&T to offer phone services, even though the other cable operators were not

then offering those services. Likewise, AOL bought a cable network, yet AOL was also unsuccessful in getting agreements with the other cable operators to allow AOL to offer competing cable modem service over their networks. Now Verizon and the new AT&T are both filing papers with the FCC suggesting that they intend to protect much of the capacity of their broadband networks from competitors by claiming those networks are cable networks subject to the exclusive cable rules.

The fundamental premise of the cable rules is that one person—the network operator—has the exclusive right to offer video programming to consumers over the cable network. The entire cable business model is predicated on rules that give network operators' control so that consumers are only able to access whatever package of video programming the network operator offers. Yet this business model is diametrically opposed to the Internet business model, which is predicated on common carrier rules that limit network operators' control so that consumers are able to access any content and services, including video content, which they choose. The two cannot co-exist, which is precisely why the cable companies, closely followed by the Bell companies, are working so hard at the FCC and in Congress to ensure that common carrier rules do not apply to their networks. In the aftermath of the FCC's recent decision to reverse its prior precedent and not apply common carrier rules to the transmission facilities underlying Internet access and other information services, Verizon and AT&T, like the cable operators before them, have both announced plans to limit the bandwidth available to consumers to speeds far less than what would be needed to access or provide independent packages of high quality video content.

The Bells are making their plea for video franchise relief based on the argument that consumers deserve greater competition in the video marketplace. They rightly point to the fact that cable rates have been going up roughly eight percent per year—several times the rate of inflation—ever since Congress enacted the 1996 Act. Yet the Bells do not propose getting rid of the cable rules that have led to these abuses. Instead, what the Bells have proposed is simply allowing them faster entry so that they can share in the profit taking at consumer expense. If Congress really wants to give consumers competition in the video marketplace, the far more effective remedy would be to apply basic common carrier rules to all network operators. That would provide consumers with the greatest level of choice, and the greatest level of price competition.

Eliminating the cable rules would also have other benefits. It would eliminate the messy debates that Congress, the FCC, and the courts all get dragged into over First Amendment rights, must-carry, and ala carte programming rules. While the only fair way to eliminate the cable rules is through a transition plan—after all, the cable industry legitimately relied on the existing rules—the time for such a plan is now. Particularly in light of the capacity that will eventually be freed up on cable networks with the analog to digital TV transition that Congress has slated for 2008, there is a short window of opportunity for Congress to enact a transition plan that could take advantage of that fact.

Establishing a transition plan to eliminate the cable rules and apply basic common carrier principles to all network operators is an ambitious undertaking, but it is what is needed for America to remain as a world leader in the Information Age. COMPTEL stands ready to work with this Committee to fashion such legislation. This legislation should adopt technology neutral requirements that apply to all companies that construct their networks over public rights of way, using public spectrum, or other public resources (for example numbering resources). These requirements should include the duty to provide non-discriminatory transmission service upon reasonable request, to interconnect their networks with other providers of transmission service on reasonable and non-discriminatory terms and conditions, and not to interfere with content and services transmitted over their networks. In addition, Universal Service obligations and benefits should apply to all such companies in a competitively neutral manner.

The legislation should also recognize the considerable barriers to entry faced by new network operators. New network operators must construct their networks in a competitive environment, without the benefit of an existing infrastructure and customer base. In addition, every customer the new network operator hopes to serve is already being served by at least one incumbent. As a result, the new network operator must win that customer from an established provider, a task far more difficult than signing up customers who have never been served.

In the alternative, if the Committee would prefer to leave in place the existing cable rules and build instead on the framework of the 1996 Act, COMPTEL urges the Committee to: (1) apply the cost-based interconnection and unbundled network element requirements of sections 251, 252, and 271 of the Act to both copper and fiber facilities; (2) require incumbent LECs to provide cost-based special access serv-

ices under sections 201 and 202 of the Act; (3) require all facility based providers of Internet access services (including cable operators) to offer the transmission component of such services to others on the same terms and conditions as it provides such transmission to itself; (4) treat cable operators as common carriers to the extent they provide transmission services; (5) strengthen the program access rules in Title VI of the Act by closing the terrestrial loophole and improving access to video programming by small providers (6) improve the language in section 224 regarding access to rights of way to ensure competitive neutrality and eliminate discriminatory practices by franchising authorities; (7) establish reciprocal compensation arrangements for the transport and termination of traffic between carriers; (8) modify Universal Service mechanisms so that all facilities based providers contribute in a competitively neutral manner and are eligible to receive Universal Service support in a competitively neutral fashion; and (9) prohibit cable operators and common carriers from interfering with or degrading content or services transmitted over their network, or from favoring their own content and services (other than video programming offered as a cable service) over other content and services.

Thank you for the opportunity to testify, and I would be happy to answer any questions.

The CHAIRMAN. Thank you. The next witness is Walter McCormick, President and Chief Executive Officer of USTelecom in Washington; you too are a stranger, yes sir.

**STATEMENT OF WALTER B. MCCORMICK, JR., PRESIDENT/ CHIEF EXECUTIVE OFFICER, UNITED STATES TELECOM ASSOCIATION (USTELECOM)**

Mr. MCCORMICK. Thank you, Mr. Chairman. Thank you, Senator Inouye. Thank you to the staff that's done so much work on these hearings. They're very timely. They've been very comprehensive. And as my two colleagues have stated, with regard to voice services, what a record of success since the 1996 Act. When we were here in 1996, it was my industry that provided voice telephone service. If the telephone rang, you would stand up and you would go to the corner of the room to answer it. Today you can have one of Kyle's cable phones, or one of Earl's Internet phones, or one of my wireline phones, or one of Steve's wireless phones. My guess is, probably almost everybody in this room is carrying a voice telephone in their pocket. And so the consumer now has the ability to choose the voice services they want from the companies that they trust. It's a record of success. Similarly, consumers can choose Internet access from cable modem, from DSL, from wireless access, satellite access, or from broadband over power line. It is a marketplace characterized by competition. And I think about this industry, this committee having established a regulatory model for this industry that was modeled on the Interstate Commerce Act. The Federal Communications Commission was modeled on the Interstate Commerce Commission. And late in the 20th Century, you said with regard to railroads, that if a consumer can choose between a truck and train, it's time for government to get out of the way and let's let those industries compete. And today when consumers can choose between wireline phones and cable phones, and Internet phones, and wireless phones, or DSL, or cable modem or satellite, Internet satellite, it's time for government to step back and get out of the way and let consumers get the products they want from the companies they choose. Nowhere is this more important than with regard to video. Cable began as a monopoly that offered video. Technology has made it possible for cable to now offer voice service. Similarly, we began by offering voice service and

technology has brought us to the place where we can now offer video. We believe that we should be free to offer video over our networks and to provide consumers with this choice. And we would suggest to you, Mr. Chairman, and to the Committee, that this is the one area where competition has not yet taken hold. The Chairman of the FCC has said that the price increases we're seeing in cable are contrary to the price decreases that we're seeing in every other area under his jurisdiction. So it's our hope, Mr. Chairman, that Congress will act this year to move forward with competition, video competition to cable, by letting us offer that service over our networks. And that Congress will do so in a comprehensive way, that as it addresses these issues, it will do so with an eye toward the appropriate role of government to guarantee the continuation of Universal Service, so that individuals—no matter where they live in this country—will have access to services—telecommunications services of comparable quality and price. That it will do so with an eye toward societal obligations like 911, access for individuals with disabilities, and the continuation of societal responsibilities related to customer privacy—consumer proprietary network information.

Again Mr. Chairman, thank you so much for holding these hearings, and we're honored to be a part of them.

[The prepared statement of Mr. McCormick follows:]

PREPARED STATEMENT OF WALTER B. MCCORMICK, JR., PRESIDENT/CHIEF EXECUTIVE OFFICER, UNITED STATES TELECOM ASSOCIATION (USTELECOM)

Mr. Chairman, Co-Chairman Inouye and Members of the Committee, I am Walter McCormick, President and Chief Executive Officer of the United States Telecom Association (USTelecom).

At the outset, let me thank you for conducting this comprehensive series of hearings. USTelecom and its members have been honored to testify on net neutrality, Universal Service, video franchising, municipal networks, and rural issues. As this impressive fact-gathering process draws to a close, it is only fitting that you bring it all together with convergence and competition—two words that capture perfectly the environment in which telecom firms now operate.

For a century our organization was known as the United States *Telephone* Association. But the word "telephone" is becoming less and less descriptive of the business models and competitive strategies of our 1,200 member companies. Whether it's AT&T or the Epic Touch Company in rural Kansas, companies are rapidly transforming. They are diversifying into high-speed Internet, wireless services, VoIP, and broadband television.

This is a significant change for these companies, some of which have been family-run *telephone* companies for a century or more. This diversification is the most far-reaching change in our industry today. It's sweeping the country, almost without regard to population density or geography.

Our companies are racing to change the way they operate, and they need Congress to embrace change as well. We urge you to use two tools when you think about the future of our communications laws—a fresh perspective and a clean sheet of paper.

When the 1934 Communications Act was written, providing phone service was an expensive undertaking. Congress acknowledged the existence of a monopoly and created the FCC and a body of laws to ensure quality service and reasonable rates.

When the 1984 Cable Act was passed, Congress again accepted a monopoly arrangement and again established government as the one to protect consumers.

Today, there are a variety of networks, and the barriers to entry in voice, video, and broadband are relatively low for all but your local telecom service provider. For Internet access, consumers are using: DSL, cable modem, satellite, wireless, and electric power lines. The range of video networks includes co-axial cable, satellites, wireless, and fiber-optic lines.

In fact, these days, it's not even necessary to build a network to compete in voice and video. Companies like Vonage, Skype, and Sun Rocket have millions of phone

customers. A variety of new websites allow anyone with an Internet connection to download movies, TV shows, or amateur video. Major sporting events are online now as well. In fact, you may recall the spate of media reports earlier this month regarding a possible drop in office productivity because employees could watch the NCAA basketball tournament on their computers.

Against this backdrop, the USTelecom board of directors met in November 2004 and unanimously adopted principles that we believe should serve as the foundation for updating our Nation's telecom laws. These principles call for Universal Service reform and for a new regulatory approach, an approach geared to the creation of a competitive, consumer-driven market for communication services.

As I alluded to a few moments ago, a serious concern of USTelecom is legacy regulation that either prevents competition or creates a competitive disadvantage for those who invest in networks. For instance, the marketing materials of Sun Rocket, the Internet phone company, say subscribers can avoid Universal Service charges. And, online video providers are winning customers and gaining market share every day—with no thought of having to apply for a local franchise agreement.

Competition has already arrived in voice communication. But it is only emerging in video. The most significant communications policy challenge of the 109th Congress is how to hasten the development of full and fair competition in video.

If you are fortunate enough to be a cable television provider, you have effectively operated as a monopoly for 20 years, albeit with some competition from satellite. In the 1996 Act, cable received authority to enter the telephone business—free from any legacy regulation, a position we did not oppose, since we believe consumers are better served—seeing more choice, innovation and lower prices—when companies are allowed to compete head-to-head in the marketplace. We hope that the cable industry will today urge the Committee to take this same free market approach of lowering barriers to entry for new video entrants as local telecom service providers try to enter the video business.

Based upon its recent actions, we expect that cable will argue against our entry into video. Why compete in a free and fair marketplace when you have such a lucrative business arrangement as the cable companies currently do? Their pricing power has enabled them to raise rates 86 percent from 1995 to 2004. That's a figure generated by the FCC.

When USTelecom called attention to these increases the cable industry responded by refusing to run our factual ads in the DC area and many other places around the country. In an awkward attempt to try and justify these soaring prices, the cable industry insisted that we take into account the rising number of channels. If you factor in additional channels, cable prices still have risen a whopping 57 percent from 1995 to 2004.

Whether you prefer to look at it as an 86 percent price increase or a 57 percent price increase, it's still a substantial number. And the cable companies fear new entry into video, because we are their most formidable competitor.

Time is money for consumers. Postponing franchise reform until the next session of Congress, that one year of delay, will cost consumers $8 billion. A two-year delay would cost Americans nearly $16 billion. This comes to about $75 per household per year. This figure has also been broken down on a state-by-state basis, and the numbers are substantial. One year of delay in franchise reform would cost:

- Alaska consumers $12 million;
- Hawaii consumers $31 million; and
- Montana consumers $22 million.

Consumers will pay a steep price for delay.

The GAO has studied trends in cable pricing and the effects of competition. It found that cable faces wireline competition in only 2 percent of its franchise areas. But wireline competition had an impact that satellite competition did not. The GAO found that prices were 15 percent lower where cable faced a wireline competitor.

Local franchising requirements impede our entry. They extend the period during which consumers will pay artificially high prices. Let me give you two examples:

- Ben Lomand Telephone Cooperative in McMinnville, Tennessee, has upgraded its network, and has the capacity to offer video service to approximately 60 percent of its 42,000 customers. However, in order to offer video, it must apply for and receive 25 different franchise agreements, some of which are required for areas in which it serves just 100–200 customers. After 18 months of trying, the company has received only 15 franchises.
- In the case of Verizon, one year after engaging in franchise negotiations with 95 local franchising authorities, only 10 have granted franchises and 85 remain in negotiation. Typically, the process takes 18 to 24 months.

Technology has created vigorous competition in voice and broadband. Unleashing the forces of competition and convergence in the video sphere will require a little help from Congress.

Consumers want a simpler life. They want one communications provider who can package their voice, video, and Internet into one bundle. And consumers want lower bills.

USTelecom members all across the country are hustling to give consumers what they want. We realize we cannot rely on old business models and old practices. The digital age has changed everything for our industry. Unfortunately, the benefits of this change will be halted or delayed for millions of consumers unless Congress removes legacy regulations adopted in a different era and takes action to update our communication laws.

The CHAIRMAN. Thank you. Our next witness is Steve Largent, President and Chief Executive Officer of CTIA, The Wireless Association of America, Washington, D.C. Another stranger in our midst. You guys have been here so often, I probably should be just able to use your names, but I can't because of that tube that's behind you.

**STATEMENT OF STEVE LARGENT, PRESIDENT/CHIEF EXECUTIVE OFFICER, CTIA—THE WIRELESS ASSOCIATION®**

Mr. LARGENT. Well thank you Mr. Chairman for the opportunity to be here, and Co-Chairman Inouye, and Senator DeMint, we appreciate the opportunity to testify. I have to tell you that I guess I'm somewhat biased, but I sincerely believe that our industry is the poster child for the topic of this hearing, competition and convergence.

The wireless industry has had tremendous success in providing our customers and your constituents with the greatest array of choices they have ever received from any segment of the communications industry. American wireless subscribers have a myriad of opportunity when it comes to choosing a service provider, when it comes to choosing devices, service plans, and applications, be it video, data, music and much much more.

American consumers,—rural and urban, rich and poor—have benefited enormously from Congress's farsighted decision in 1993 to limit regulation of this industry.

Last year the FCC's 10th Annual Competition report which highlighted the fact that, "97 percent of the total U.S. population lives in counties with access to three or more different wireless operators." Today there are more 180 wireless licenses, providing service to 200 million plus customers in this country.

As a result of the numerous choice of providers, wireless subscribers are the beneficiaries of lower prices, more reliable service, and a variety of new features on their handsets.

Just to give you a brief perspective on the economic impact of the wireless industry, in 2004, approximately 3.6 million jobs were directly or indirectly dependent on the wireless telecom sector. That same year the wireless industry contributed $92 billion to the gross domestic product, and as of mid-2005 the industry had spent more than a $187 billion to create and upgrade networks and facilities.

Moreover the industry spent an additional $20 billion to acquire spectrum at auction. This tremendous investment in infrastructure, coupled with a continued commitment to bring the best and most cutting edge services to Americans has resulted in wireless consumers being able to obtain a converging array of mobile voice,

data, and video. These services have profoundly changed the way we communicate as well as the way we live our lives. The wireless industry is on the verge of a renaissance as carriers obtain access to more spectrum and deploy faster technologies and even more innovative services. CTIA and our member companies believe the best is yet to come for American wireless subscribers. Wireless Internet and broadband capabilities are in their infancy, but such things as viewing real-time video over a handset is happening today. Unfortunately however, we see storm clouds on the horizon. Continued regulatory and legislative creep, at the state and local level is undermining the national framework that Congress established in 1993 for the wireless industry.

Under the guise of consumer protection, states are beginning to enact inconsistent and conflicting regulation on the wireless industry. A patchwork quilt of state by state regulation threatens to chip away at the ability of wireless carriers, suppliers and developers to collectively bring new services to consumers and business users across the country in a time efficient and affordable manner. It would be understandable if these state laws and regulations were a result of growing consumer dissatisfaction and rising prices. But that is not the case. Last year based on FCC data, wireless-related complaints fell 46 percent the last 5 months of 2005 to 24 complaints per million customers or less than 3 one-thousandths of 1 percent. Correspondingly, wireless rates have fallen 84 percent the last 13 years. I know of no other way to put it, than states are seeking solutions in search of a problem. Each instance of state regulation will add unneeded cost to the consumer and exponentially complicate the provision of mobile services that are inherently interstate in nature.

Even regulation by a small handful of states threatens to undermine the nationwide and regional calling plans that are so common-place in the wireless market.

What can this Committee and Congress do to stem the rising tide of inconsistent and conflicting state regulation? CTIA and the companies I represent strongly believe that because of the interstate nature of wireless services, Congress should preempt state laws that would conflict with its national framework for carrier practices and regulate only in instances necessary for public health and safety or demonstrated market failure. Finally Congress got it right in 1993 when it amended section 332 of the Communications Act to create a Federal deregulatory framework for commercial mobile radio services. Wireless consumers have come to expect that they will receive more minutes, more reliability, and more features for less money. But in order for wireless to grow, flourish and experience its next renaissance, it needs a strengthened deregulatory national framework to foster innovative, efficient, and convenient wireless devices and services.

Again I want to thank you, Mr. Chairman, for the opportunity to appear before you this afternoon and I look forward to your questions.

[The prepared statement of Mr. Largent follows:]

PREPARED STATEMENT OF STEVE LARGENT, PRESIDENT/CHIEF EXECUTIVE OFFICER, CTIA—THE WIRELESS ASSOCIATION®

Chairman Stevens, Co-Chairman Inouye and Members of the Committee, thank you for the opportunity to appear before you to testify on two important issues, Competition and Convergence. My name is Steve Largent and as President and CEO of CTIA—The Wireless Association® (CTIA), I am pleased to be here today to discuss with this Committee the tremendous success the wireless industry has had in providing American consumers with the greatest array of choices they have ever received from any telecommunications segment—choice of providers, service plans, devices, and much, much more. American consumers—rural and urban, rich and poor—have benefited enormously from your decision in 1993 to limit regulation of the industry. I urge your continued leadership in helping the wireless sector to continue being able to provide American consumers with the kinds of wireless services they want at prices they can afford. As we enter our third decade, the industry is poised to bring the Internet to its more than 200 million mobile subscribers. We are at a critical juncture in our evolution and need your leadership to help us stay the course in providing maximum benefits to the consumer.

The significant growth and expansion of the competitive mobile wireless industry has also had a profound impact on the U.S. economy. In 2004, approximately 3.6 million jobs were directly and indirectly dependent on the U.S. wireless telecommunications industry. In that same year, the wireless industry generated $118 billion in revenues and contributed $92 billion to the U.S. Gross Domestic Product. The wireless industry has continued its ongoing investments in the networks and other facilities needed to deliver increasingly sophisticated wireless services—with almost $174 billion in cumulative capital investment reported as of year-end 2004. Over the past five years, the wireless industry invested on average more than $20 billion annually in new facilities. In addition, carriers have bid in excess of $20 billion in winning spectrum licenses from the FCC. In the first six months of 2005, wireless carriers invested another $13 billion in capital, further demonstrating their commitment to improving and expanding the reach of existing services and also increasing the delivery of advanced capabilities to consumers across the country.

This tremendous investment in infrastructure, coupled with a continued commitment to bring the best and most cutting edge services to Americans, has resulted in wireless consumers being able to obtain a converging array of mobile voice, data and video, profoundly changing the way we communicate and the way we live our lives. Indeed, the wireless industry is on the verge of a Renaissance as carriers obtain access to more spectrum and deploy faster technologies and more innovative entertainment services like games, mobile television (including news and sports), movie clips and music.

**The Wireless Competition Story**

In 1993, Congress amended Section 332 of the Communications Act and created a federal, national regulatory framework for "commercial mobile radio services," recognizing that a nascent industry like wireless needed air to breathe and develop. Congress wisely and pointedly decided not to subject the wireless industry to the economic regulation typically applied in the landline context at the Federal and state levels. As a direct result of this historic Congressional high-tech, and pro-consumer initiative, industry growth exploded and consumers began realizing benefits rapidly. Over the next ten years, more than 160 million wireless customers signed-up for service. Today, the wireless industry provides service to more than 200 million consumers nationwide through more than 180 facilities-based providers, Mobile Virtual Network Operators (MVNOs) and others.

The FCC's 10th Annual Competition report to Congress last year noted that, "97 percent of the total U.S. population lives in counties with access to three or more different operators offering mobile telephone service, the same level as in the previous year, and up from 88 percent in 2000, the first year for which these statistics were kept. The percentage of the U.S. population living in counties with access to four or more and five or more different mobile telephone operators also remained roughly the same as in the previous year." Furthermore, the FCC also concluded that wireless companies are competing effectively in rural areas. In rural markets, the report notes, "there is no evidence in the record to indicate that" the existence of somewhat fewer competitors than in urban areas "has enabled carriers in rural areas to raise prices above competitive levels or to alter other terms and conditions of service to the detriment of rural consumers."

Competition in the wireless marketplace has resulted in the cost of wireless service to consumers dropping 33 percent since 1997, and by more than 80 percent since 1994. Wireless service leads all U.S. telecommunications services in price declines

since 1997. Consumers are getting more for less and doing more with it. In 1996, consumers used their mobile phones for an average of 125 minutes per month. In 2005, they used their mobile devices for more than 680 minutes per month. If the average wireless consumer in America spends $54 per month on wireless voice and data services, that same consumer would pay approximately $125 U.S. for the same services in the European Union.

Hyper-competition among carriers has produced tailored service plan features and options, improved customer service, declining cost of service, ease of billing, and improvements in call performance. Dozens of rate plans are available in practically every market, from prepaid or pay-as-you-go plans, to family plans, and big bucket plans—almost all of which offer options like national, no-roaming, free or discounted nights and weekends, or in-network calling, as well as a wide variety of wireless phones and devices. In effect, there's a service plan and device tailor-made for you. In 2005, Harris Interactive found that 90 percent of wireless consumers are "very to somewhat" satisfied with their wireless service, and three-quarters of wireless consumers thought wireless a good value for the money. The highly competitive nature of the wireless industry is focusing carriers' attention on improving customer service, with increased numbers of customer service representatives and more training, as recently reported by the *New York Times*. The industry's focus on customer care is reflected in the small number of complaints filed with the FCC. In the FCC's latest report on Consumer Complaints released in February of 2006, the FCC noted that wireless complaints fell 28 percent in the fourth quarter of 2005. (In fact, the monthly number of complaints fell 46 percent between August and December of 2005.) The total wireless complaints for the fourth quarter amounted to 24 complaints per million subscribers, equal to 0.0024 percent. That's 24 ten-thousandths of one-percent.

Although a number of high-profile mergers have occurred in the wireless industry over the past few years, the total number of commercially operational wireless companies has remained relatively constant, with more than 180 facilities-based companies identifiable as directly offering wireless service to consumers in markets across the country. The facilities-based companies include national, regional, affiliate, and independent operators. Additionally, numerous MVNOs have launched or announced the launch of service, including Disney, ESPN, TracFone, and Virgin Mobile, among others. Last year, RCR Wireless News published a list of 19 active MVNOs and resellers, estimated to serve a minimum of 10.6 million customers, indicating they offered prepaid, postpaid, and hybrid service plans to consumers.

Facilities-based licensees continue to announce the initiation of service, expansion of networks, and the construction of new cell sites in markets—including rural markets—across the country. They also continue to modify their market holdings in order to establish footprints they believe will allow them "to more effectively provide value and services to customers," as well as more robust spectrum holdings in order to deliver more spectrum-intensive services to more people. The FCC's Memorandum Opinion and Order approving the merger of Sprint and Nextel noted the potential benefits to customers from the combination, including faster data rates and interoperability between push-to-talk capabilities. Likewise, Cingular Wireless has noted its on-going upgrading of the combined network resulting from the acquisition of AT&T Wireless' operations, and the greater capabilities offered by its increased spectrum holdings.

**Convergence: The Wireless Perspective**

The proliferation of IP-based networks has clearly pushed industry segments away from silo models to a more integrated delivery system. Where does wireless fit in? Mobile voice has begotten digital mobile voice and data which has given rise to e-mails away from the office, mobile photography, mobile music and mobile media. The fully converged wireless network will permit consumers to access voice, video, and an extraordinary array of data services—at home, at work, in cafes, and on the move. The wireless platform offers a solution that overcomes some of the technological and economic challenges inherent in any wired environment, extending the reach of broadband technologies to traditionally underserved communities, including rural areas and less affluent urban markets. Mobility, however, is the factor that separates wireless from other broadband services, and mobility is the primary reason wireless broadband has the potential to grow at unprecedented rates.

Mobile broadband services are already spreading across the country. In December of 2005, Cingular Wireless announced that subscribers could access its BroadbandConnect service through Cingular's new 3G network. Verizon Wireless has launched a broadband network based on evolution data only (EV–DO) technology available in 171 metropolitan markets covering more than 140 million people. Sprint Nextel began to roll out its EV–DO technology in mid–2005 and now of-

fers wireless broadband services in 208 markets. Alltel offers both its Axcess Broadband service which feature bursts up to 2.4 Mbps and average speeds of 400 to 700 Kbps, and its Axcess Mobilink service which lets customers use the Internet with bursts up to 144 Kbps and average speeds of 40 to 70 Kbps. In addition to its extensive network of wireless hotspots, T-Mobile offers mobile Internet access though its GPRS service. According to CTIA's own semi-annual wireless industry survey, as of mid-2005, half of all wireless customers had mobile devices that were capable of web-browsing.

These and a host of other applications and advanced services are being offered in rural and urban areas across the country by these and other carriers, including: Alaska Communications Systems' ACS Mobile Broadband service, and the broadband and mobile Internet services of Cellular South, Cellular One of Amarillo, Dobson Cellular, First Cellular of Southern Illinois, and Midwest Wireless, and U.S. Cellular's array of easyedgeSM data services. Many other wireless applications (such as mobile television, multimedia messaging, text messaging, and wireless e-mail) are now being offered across the country.

Mobile television is an application that has attracted the attention of both wireless carriers and network programmers, and is the basis for competitive offerings both inside the CMRS space and between CMRS and other providers. Informa Telecoms & Media, a British consultancy, predicts that in just five years, there will be more users of broadcast mobile television worldwide—124.8 million—than there are currently U.S. television homes (110 million). It has been reported that 2.4 million wireless customers in the U.S. viewed some form of mobile video in September 2005, and that 10 percent of wireless users expect to view some form of mobile video in 2006.

MobiTV, Inc. (formerly known as Idetic, Inc.), a third party provider of video programming, offers a multitude of program networks, including The Discovery Channel, ESPN, MSNBC, and the Weather Channel. Sprint Nextel, Cingular Wireless, Midwest Wireless, Alltel, and Cellular South all currently offer MobiTV service in the U.S., while Centennial Wireless and Verizon Wireless offer MobiTV service in Puerto Rico. Subscribers to Verizon Wireless' V CAST service also have access to content from NBC, CNN, Fox Sports, and ESPN, among other content providers.

These are just some of the offerings that demonstrate we are in the midst of a wireless Renaissance. In addition to video applications, other applications or features now available with wireless devices include a variety of competing music services, and the broad suite of functions included on Smartphones and other advanced handheld devices. The iTunes-equipped wireless phone, the satellite-radio equipped phone, and the potential for the m-commerce and proximity payments enabled by wireless handsets—all figure in the evolving wireless converged marketplace.

**The Wireless Renaissance: Bringing the Internet to You**

Today, wireless carriers are the standard bearers for competition and are in the process of rolling out a wide variety of mobile broadband services. From a once local and high-priced voice service, wireless has become an unbounded array of affordable national and regional service offerings as the competitive landscape has driven ongoing innovation in services and technologies, and lowered prices for consumers. Although CTIA believes the best is yet to come, storm clouds are on the horizon. A patchwork quilt of state-by-state regulations threatens to undermine the ability of wireless carriers, suppliers, and developers to collectively bring new services to consumers and business users across the country.

State legislation regulating carrier billing practices threatens to balkanize the regulatory environment for wireless services. The wireless industry has developed sufficient guidelines that ensure customer billing information is clear and non-misleading while enabling carriers the flexibility to differentiate themselves in the market. State laws would undermine these market-oriented, consumer-focused solutions and hinder the industry's ability to compete in the converging telecommunications marketplace. Each instance of state regulation will exponentially complicate the provision of mobile wireless services that are interstate in nature. Even regulation by a small handful of states threatens to undermine the nationwide and regional calling plans that now are so commonly purchased by consumers. Consumers in rural areas, where the cost of service tends to be higher, are particularly threatened by regulation that could put an end to uniform nationwide calling plans. In addition, both large national and small regional wireless carriers will be harmed by inconsistent state-by-state regulations. Congress should preempt state laws that would conflict with its national framework for carrier practices and regulate only in instances necessary for public health and safety or demonstrated market failure.

State regulation of CMRS must be preempted in order to facilitate a national regulatory framework. A deregulatory national framework, consistent across 50 State

jurisdictions, is the best way to protect consumers' rights and promote access to innovative and convenient wireless devices and services. The adoption of even one of these bills could immediately impact nationwide service offerings and prices. The problems associated with state-by-state regulation would escalate exponentially as each new state implements its own laws. Even state laws that appear to be consistent on their face run the very real risk of being implemented or enforced in an inconsistent manner. Absent strong Federal action, activity in the states will create a patchwork of complex and conflicting regulatory and legal schemes that would negatively impact consumers throughout the country.

Wireless carriers have reduced the number and complexity of pricing plans, reducing or eliminating additional charges for roaming, peak/off-peak, and long distance calling. Wireless carriers have also made enormous improvements in how consumers are informed about, acquire, and manage their wireless services. Website and in-store literature provide details on price, plans and other options. Wireless carriers have also developed sophisticated on-line tools to provide more efficient and user-friendly self-care options—from checking minute usage to signing up for new services to paying bills via the Internet and via the mobile phone itself. Wireless companies now list on their bills contact information not only for their own customer service departments, but also for state and Federal regulatory agencies, including TTY contact information.

As the wireless industry strives to become a broadband alternative for millions of Americans, the cost of service is critical for widespread acceptance. The significant decline in prices for wireless consumers, that resulted from competition rather than regulation, is increasingly threatened by excessive and discriminatory taxation at the state and local level. Nearly five years after the National Governors Association (NGA) and the National Conference of State Legislatures (NCSL) urged states to reform and modernize their telecommunications taxes, most states have failed to enact meaningful reforms. On average, the typical consumer faces a 16.85 percent total of taxes, fees and surcharges on wireless service each and every month: a 5.91 percent Federal rate and a 10.94 percent state/local rate. One only needs to compare the average wireless rate of 16.85 percent to the average tax rate of 6.94 percent for other goods and services to see the need for reform.

State policymakers offer the defense that they need to ensure their citizens, especially those in rural and underserved areas, have access to advanced communication services through broadband networks; however, these same states ignore the effect sky-rocketing taxes have on consumers (19 states have double-digit transaction tax costs). Additionally, some state and local governments tax wireless communications at rates that approach those levied by "sin taxes" that were designed to discourage usage of a product. This seems an odd approach to facilitate expansion and use of wireless broadband across the country and especially in rural areas. The ability for the wireless industry to continue its tremendous growth and deliver advanced services to urban and rural consumers depends on reasonable taxation.

Wireless broadband also can not fully occur without access to a core resource: spectrum. I applaud the leadership of this Committee for passing the Commercial Spectrum Enhancement Act that establishes a trust fund to relocate government users in specific bands. As a result, the auction of Advanced Wireless Service (AWS) licenses is scheduled to occur this June. The auction for AWS spectrum is, by any measure, critical to U.S. mobile wireless carriers and their customers. This auction represents the first significant expansion of allocated spectrum for third generation mobile wireless systems, and substantially increases the overall spectrum available for commercial mobile radio services. CTIA believes that the new services that can be introduced using this spectrum—including expansion of broadband data systems consistent with the Administration's priorities—will be of incalculable benefit to the American public and to the continued competitiveness of U.S. businesses and industries. This auction also holds the promise of strengthening intermodal competition for mass market broadband offerings. CTIA appreciates and supports the FCC efforts to hold this auction in June. CTIA also believes that in the auction context, in the absence of compelling reasons, the Commission should use standard procedures. CTIA believes the FCC should be cautious in implementing new auction procedures for the upcoming Advanced Wireless Services auction. CTIA is concerned about proposals that would result in increased complexity and potential market confusion for one of the most critical auctions in over a decade.

I also commend the leadership of this Committee in establishing a hard date for the release of valuable analog spectrum. The inclusion of the February 17, 2009 deadline in the Deficit Reduction Act will allow for improved public safety communications as well as further expansion of wireless broadband opportunities.

As stated earlier, the success of the wireless industry stems from the wisdom of Congress in 1993 when Section 332 of the Communications Act was amended to cre-

ate a federal, deregulatory framework for "commercial mobile radio services," under which wireless services were exempted from many of the traditional, economic regulation typically applied in the landline context, as well as from state rate and entry regulation. The incredible and unprecedented growth of the mobile wireless industry over the last decade would not have been possible without the environment of regulatory constraint created by the Omnibus Budget Reconciliation Act of 1993. We ask Congress to reaffirm that wisdom and allow wireless to experience its next Renaissance. Our 13 year track record stands second to none in delivering enormous benefits to your constituents. Please let us take that to the next level.

The CHAIRMAN. Thank you very much. Our next witness is Dr. Jerry Ellig, who's here to sort of coach us on what convergence is, from George Mason University. You have a habit now of having good coaches, Dr. Ellig.

**STATEMENT OF JERRY ELLIG, PH.D., SENIOR RESEARCH FELLOW, MERCATUS CENTER, GEORGE MASON UNIVERSITY**

Dr. ELLIG. Well thanks, Mr. Chairman, I appreciate the opportunity to testify, I appreciate your time. I should issue the disclaimer that I'm certainly not here speaking on behalf of George Mason. My remarks represent only my own views, not the views of George Mason University, or of its basketball team. In fact I guess I'm the only person here not speaking on behalf of any kind of members. I've spent about 20 years trying to understand industries that were monopolized and are moving toward competition and trying to figure out what we can do in terms of public policy to facilitate that process.

The CHAIRMAN. Well I have read part of your statement and I do hope you do ask the four questions and answer them, but I don't think you can do it in 5 minutes. But go right ahead.

Dr. ELLIG. No, don't worry. I'm programmed to speak 50 minutes in a shot, but I'll stay within five. Just defining convergence, actually Mr. Chairman, I think in your opening statement you hit the nail on the head. To me, anyway, convergence means that you have a piece of infrastructure that can be used to deliver multiple services which previously could only be provided with separate pieces of infrastructure. And the great thing about that is that means we can now fulfill some of the promise of the 1996 Telecom Act, because it creates a situation where you can have multiple competitors, all getting into each other's markets. Whether it's telephone cable, wireless, or whatever platform they're using because of convergence, both competing firms can offer packages, various packages of products and services. And that suggests to me—since all kinds of folks will be coming before you asking you to do all kinds of things because of convergence—that suggests to me kind of a simple rule of thumb, that won't always be right, but maybe it will be helpful in trying to sort out the priorities.

And that is that if something enhances competition, then it's probably relevant to the convergence issue. And if you're being asked to do something that doesn't enhance competition, then it's probably not relevant to the convergence issue even if it's being presented as something that you all need to do because of convergence. And if I look at a lot of the various telecom, cable, and other issues that are out there today and kind of apply that rule of thumb, there are certain things that stick out, well, like sore thumbs; there are some things that stick out as obvious opportuni-

ties to enhance competition. And I'd like to share a few of those real quickly. One of them is spectrum. It's true that the wireless industry has a great success story to tell about the benefits of competition, but it could be a lot better because of the way the Federal Government has chosen to allocate spectrum.

If you want a third, fourth, fifth, sixth broadband pipe into the house, if you want to get broadband pipes into places where it's maybe too expensive to run a lot of wire or cable, you want to have Federal policy make spectrum cheap, plentiful, widely available, easy to transfer, and flexible use. And that's what a market based spectrum policy essentially does. And I understand the Committee's held hearings on spectrum, and have talked about some of those kind of issues. But we did a little back of the envelope calculation, based on some work that one of my colleagues at George Mason, Tom Hazlett, has done suggesting that current U.S. spectrum policy costs consumers at least $77 billion a year. Part of that is higher prices for wireless service, prices higher than they would otherwise be. Part of it is services consumers forego because there isn't enough bandwidth; there isn't enough spectrum available out there to provide it to them. That's a big number. That's more than any other Federal telecommunications regulation.

So, making a larger amount of spectrum available to provide services to consumers helps us a lot in terms of both convergence and competition. Another area that looks like a big priority—again, picking off the low hanging fruit, trying to deal with things that are over barriers to entry—is the cable franchising issue. When we have well capitalized competitors, whose main difficulty getting into a market is getting permission from a local government, there's probably an opportunity there to clear that barrier out of the way and enhance competition tremendously.

We estimated that cable franchising costs consumers around $10 billion a year. About $7 billion of that is due to market power, because a lack of market entry by competitive wireline cable folks, or wireline video folks. The $10 billion also includes the cost of franchise fees and other things.

The final thing I'd want to hit on is, trying to shift our focus in public policy from regulatory solutions to solutions that are pretty much based on antitrust and competition policy. If we want the communications industry to behave like a competitive industry, we ought to start treating them like a competitive industry. That suggests things like merger review and the net neutrality debate ought to be conducted under the consumer welfare standard of antitrust. Either you tell the FCC to do it that way, or you give the jurisdiction to the antitrust agencies, rather than the FCC. It can be done either way. But I think that would get us a long way toward a policy that makes the effects of policy on consumers the highest priority instead of leaving it as an open free for all, where people can bring in almost anything they want to try to influence policy.

[The prepared statement of Dr. Ellig follows:]

PREPARED STATEMENT OF JERRY ELLIG, PH.D., SENIOR RESEARCH FELLOW, MERCATUS CENTER, GEORGE MASON UNIVERSITY

Mr. Chairman and Members of the Committee:

Thank you for your time and the invitation to testify. I am an economist and research fellow with the Regulatory Studies Program of the Mercatus Center, a 501(c)(3) research, educational, and outreach organization affiliated with George Mason University.[1] I have been with the Mercatus Center for the past ten years, with the exception of a two-year leave of absence in 2001–2003 when I served as Deputy Director of the Office of Policy Planning at the Federal Trade Commission.

The subject of this hearing is "Competition and Convergence." It's useful to define "convergence" before discussing its effects on competition and public policy. I will address four questions in this testimony:

1. What is "convergence"?
2. What caused convergence?
3. What does convergence mean for competition and consumer welfare?
4. What does this imply for public policy?

**1. What Is "Convergence"?**

"Convergence" has become a buzzword in the communications industry that means a lot of different things to different people. To me, convergence means use of the same infrastructure to deliver multiple services to consumers. A big part of the infrastructure is, of course, the physical communications network: coaxial cable, copper wire, fiber optics, satellites, cell towers, switches, and various other physical facilities. But the infrastructure also includes other assets necessary to provide service to consumers: call centers, the servers that hold account information, etc.

Convergence is more than bundling. Bundling occurs when the same firm sells multiple services as a package. The services might be provided using the same infrastructure, or they might be provided separately but sold together. A good example of the difference is the marketing partnerships that some of the phone companies have with satellite TV firms. Phone service, DSL, and video are sold as a package, but the phone service and DSL are provided over the phone company's wires, whereas the video comes via satellite.

Convergence represents a change from past practice, in which the communications industry was carved up into pieces that usually provided a single service or closely related set of services, such as landline telephone or cable television.

**2. What Caused Convergence?**

Several factors have combined to promote convergence in electronic communications. Moving an electronic communication over long distance no longer involves the huge additional cost that it once involved. Cheap fiber and computer chips have replaced expensive copper cable and mechanical switches. As a result, the additional cost associated with a long-distance phone call can be measured in tenths of a cent, if that much. The ultimate cost-reducing technological advancement, of course, occurred when digital transmission replaced analog transmission. Digital transmission using Internet Protocol allows information to be sent around the globe as cheaply as it can be sent across the street. As a result, we now have Voice over Internet Protocol offering long-distance service within the United States at no additional charge. One can even make free long-distance calls internationally, as long as they are computer-to-computer calls that do not require termination on the destination company's telephone system. This "death of distance" phenomenon is responsible for the convergence—or perhaps "re-convergence"—of local and long-distance calling.

Digital transmission has also fostered other forms of convergence. When a phone network moves and stores calls digitally, the phone company can now offer a wide array of services that previously required costly, specialized equipment on the customer's premises—such as voice mail, three-way calling, caller ID, and other features that many consumers now take for granted.

The convergence phenomenon extends well beyond telephone. When a phone call, television program, spreadsheet, or set of video game keystrokes is converted into bits, it can be transported on a network capable of transporting bits. Conversely, a network capable of transporting bits can support many different services that previously required different types of networks. So cable companies can offer digital cable and cable modem Internet access. They can also offer telephone service using VoIP rather than cable telephony. Broadband Service Providers offer high-speed Internet service and video over the same plant, and consumers can also use that

[1] This testimony reflects only the views of its author and does not represent an official position of George Mason University.

Internet connection for VoIP. Wired telephone companies can offer voice, data, and now even video service using DSL or fiber optic cable. The major wireless companies mostly offer voice and Internet service now—but what might they do with video if more spectrum were available?

**3. What Does Convergence Mean for Competition and Consumer Welfare?**

Convergence has the potential to increase competition and consumer welfare. After all, convergence means that multiple firms which previously offered different services can now offer multiple services in competition with each other. Convergence means that we are finally achieving the broad vision of the Telecommunications Act of 1996: firms that own competing networks are invading each others' markets.

The converging firms are often well-established and well-capitalized. Examples include cable, wireline telephone, wireless, and satellite. They thus have the potential to be robust and credible competitors, with fewer of the problems that plague small startups. They wouldn't spend so much time asking you to do something about the other guy's "unfair" advantage if they weren't afraid of each other!

For consumers, convergence could mean better value for the money. In some cases that may mean lower prices for the same services consumers purchased prior to convergence. We saw this phenomenon in long-distance phone service, for example. In other cases, better value means consumers might pay more, but the amount or quality that they get improves by more than enough to make the higher price worthwhile. Realistically, I suspect we're often likely to see both: lower prices for many services, plus improved quality.

The same underlying trends that drive convergence can also facilitate the introduction of new products and services that consumers previously did not even know they wanted. One example might be interactive video games. Another might be dating, where I'm told that text messaging and Internet chat are partly substituting for actual dates.

Industry observers today speak of the "triple play" of voice, video, and data—essentially relegating anything that's not voice or video to the "data" category. But perhaps in the future we'll hear of a rush to offer the "quadruple play" of voice, data, video, and interactive entertainment, where the design of networks includes special elements that enhance the interactive gaming experience. Or a "quintuple play" that adds personal relationship management. Competing on this last attribute might require all networks to find a way of adding a high-bandwidth mobility feature. In short, it is difficult to predict how ongoing technological change could affect the variety of services available to consumers, and the ways they are delivered.

You'll notice that I said convergence "has the potential" to increase competition and consumer welfare.

Realistically, the efficiencies associated with convergence are so large that consumers would likely receive some benefit even if electronic communications were monopolized. The history of cable television regulation provides a case in point. Cable rates rose significantly when they were deregulated in 1984, but quality (primarily the number of channels) improved significantly as well. After taking the value to consumers of quality into account, consumers were better off with unregulated cable rates after deregulation than they were with regulated rates prior to deregulation. [2]

Two decades of economic research, however, also demonstrates that cable consumers would have been still better off with competition. Competition will be most vigorous, and consumer welfare will be greatest, when consumers are served by multiple competitors who have the capability to offer multiple services.

**4. What Does This Imply for Public Policy?**

Two general principles should guide public policy. First, focus on the most important task at hand by removing barriers to market entry. Second, ensure that government intervention in communications meets a consumer welfare test.

*Barriers to Entry*

A variety of factors either prevents firms from "converging" or prevent "converged" firms from serving consumers as expeditiously as possible.

A firm that wants to sell consumers a conduit capable of handling multiple services must have sufficient bandwidth to do so. Now that the legal uncertainty regarding the regulatory status of cable modem and DSL has been settled, the cable and

[2] Robert W. Crandall and Harold Furchtgott-Roth, *Cable TV: Regulation or Competition?* (Brookings, 1996).

wireline phone companies are in pretty good shape in this regard.[3] These firms have essentially built their own bandwidth in their cables and wires.

Wireless

Other potential competitors aren't so fortunate. The digital wireless networks could play a bigger role as the third, fourth, fifth, and/or sixth broadband pipe into the home—but that likely requires more spectrum.

As part of the Mercatus Center's ongoing program to assess the costs and outcomes associated with regulation, I recently examined the costs of major Federal telecommunications regulations.[4] Out of all Federal telecommunications regulations, spectrum policy has by far the biggest effect on consumer welfare. The costs of the current spectrum policy are large in an absolute sense—in the neighborhood of $77 billion or more annually. Spectrum allocation is by far the costliest aspect of U.S. Federal telecommunications regulation, and it represents a very large share of the total. Even if the actual costs of U.S. spectrum allocation policy were only one-tenth the size that scholars estimate, they would still account for more than 20 percent of the total consumer cost of telecommunications regulation.[5]

During the past two decades, U.S. spectrum policy has gradually become more market-oriented. In 1993, Congress directed the FCC to auction an additional 120 MHz of spectrum for wireless communications. Consumers have reaped significant benefits as a result.[6] Nevertheless, current policy still generates large inefficiencies by preventing reallocation of additional spectrum to its most highly-valued uses—most likely wireless voice and data communications.

The costs of current spectrum allocation policy can be expected to fall sometime after 2006, if the FCC carries through on its plan to auction an additional 90 MHz of spectrum.[7] However, the multi-billion dollar cost estimate should only be taken as a rough approximation of the negative effects of spectrum allocation policy on consumer welfare.

The Commercial Spectrum Enhancement Act of 2004 and last year's digital TV legislation were positive steps that will eventually make more spectrum available for wireless communications. But doling out a few more slices of spectrum for a specific use is not the same thing as a comprehensive, market-based policy. A truly market-based approach would allow market transactions to allocate spectrum rather than licenses. Potential users could buy or lease spectrum, then choose how to use it. The amount of spectrum allocated to wireless telephone, broadcasting, broadband, and other services would be determined by market transactions and decisions of users, rather than regulatory proceedings. As Ronald Coase noted in 1959;

> Certainly, it is not clear why we should have to rely on the Federal Communications Commission rather than the ordinary pricing mechanism to determine whether a particular frequency should be used by the police, or for a radiotelephone, or for a taxi service, or for an oil company for geophysical exploration, or by a motion-picture company to keep in touch with its film stars or for a broadcasting station. Indeed, the multiplicity of these varied uses would

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[3] Last year's *Brand X* decision settled the issue that the FCC can ultimately determine the regulatory status of various services, and the FCC decided that cable modem service is an information service rather than telecommunications. A subsequent FCC decision determined the DSL is also an information service. For a discussion of the implications of *Brand X,* see Jerry Ellig and Alastair Walling, "Regulatory Status of VoIP in the Post-*Brand X* World," Mercatus Center Working Paper (Feb. 17, 2006), available at *http://www.mercatus.org/regulatorystudies/article.php/1542.html.* The FCC's DSL decision is available at *http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC–05–150A1.pdf.*

[4] The results have recently been published in Jerry Ellig, "Costs and Consequences of Federal Telecommunications Regulation," *Federal Communications Law Journal* 58:1 (2006): 37–102, available at *http://www.law.indiana.edu/fclj/pubs/v58no1.html.*

[5] Jerry Ellig, "The Economic Costs of Spectrum Misallocation: Evidence from the United States," presented to the conference on Spectrum Policy in Guatemala and Latin America, Universidad Francisco Marroquin, Guatemala City, Guatemala, June 9–10, 2005, *available at http://cadep.ufm.edu.gt/telecom/lecturas/JerryEllig.pdf.*

[6] The results are documented succinctly in Robert W. Crandall and Jerry A. Hausman, "Competition in U.S. Telecommunications: Effects of the 1996 Legislation," in Sam Peltzman and Clifford Winston (eds.), *Deregulation of Network Industries: What's Next?* (AEI-Brookings Joint Center for Regulatory Studies, 2000): 102–07.

[7] "FCC to Commence Spectrum Auction that will Provide American Consumers New Wireless Broadband Services," FCC press release (Dec. 29, 2004), available at *http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC–255802A1.pdf.* The auction cannot occur until June 2006 because the Commercial Spectrum Enhancement Act of 2004 requires the FCC to notify the National Telecommunications and Information Administration at least 18 months prior to the auction of any frequencies mentioned in the legislation, so that any public sector users can be relocated to other spectrum.

suggest that the advantages to be derived from relying on the pricing mechanism would be especially great in this case. [8]

I cannot claim expertise on the recent wireless company mergers, but I can't help asking whether those mergers occurred in part because buying a competitor was the most feasible way to acquire a big chunk of bandwidth.

Satellite

Another, lesser-discussed broadband conduit is satellite. Currently, high-speed Internet via satellite is often more expensive than DSL or cable modem, which makes it a good option primarily in rural areas that lack these competitors. Could more satellite slots and associated spectrum be made available to increase bandwidth from this source? Could more satellite slots and associated spectrum be made available through competitive bidding, so that existing competitors or new entrants could acquire more? I don't know the answers to these questions, but they are well worth asking.

Cable Franchising

A final set of entry barrier issues involves cable franchising, which tends to prevent additional providers of video service from entering local markets. This Committee has already held a hearing on the issue. A colleague and I submitted written testimony for the record, so I will not rehash our analysis in great detail here. Suffice it to say that we estimated that cable franchising costs consumers approximately $10 billion annually in higher prices and the value of services forgone due to the price increases. The costs attributable to anticompetitive exclusion amount to more than $6 billion annually. [9] Various new video entrants, including Broadband Service Providers and telephone companies, have identified local video franchising as a significant barrier to entry. Clearly, the potential gains to consumers from removing the franchising barrier to entry are large.

*Consumer Welfare Test*

Historically, many policy decisions about communications have been made according to a "public interest" standard. Unfortunately, a public interest standard is virtually no standard at all. A number of FCC chairmen, general counsels, and legal experts have noted that the "public interest" standard means precisely what its author, Sen. C.C. Dill, said it meant: "It covers just about everything." [10]

"Whatever" is not a satisfactory principle to guide merger decisions or other communications regulation. The public interest standard is a relic of the old, regulated monopoly mindset. Under regulated monopoly, government tells the firm, "We are giving you a special privilege, and in return we expect you to use some of the monopoly profits to do things that consumers would not normally be willing to pay for." Any regulatory decision then becomes an opportunity to extract "concessions" that may or may not benefit consumers. Historically, this has occurred at all levels of government—at the Federal level at the FCC, at state public utility commissions, and on the local level (as with cable franchising).

This "taxation by regulation" violates fundamental principles of transparency in government. Indeed, regulatory scholars have shown persuasively that opaque public interest requirements effectively allow public decisionmakers to confer benefits on specific interest groups while spreading the costs among consumers, who may not even be aware of the costs. [11]

Policy and regulatory decisions should be guided by a more concrete principle, and departures from the principle should be transparent and explicitly justified. A more specific, meaningful, and consumer-oriented principle is the "consumer welfare" standard that guides antitrust enforcement. Antitrust analysis requires public decisionmakers to define the relevant market, determine whether market power exists in the relevant market, assess whether the challenged business practice harms consumers, and identify any offsetting consumer benefits. Two examples—merger en-

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[8] Ronald Coase, "The Federal Communications Commission," *Journal of Law & Economics* 2 (1959): 16.

[9] Our testimony is available at *http://www.mercatus.org/regulatorystudies/article.php/1540.html.*

[10] Thomas W. Hazlett, "The Wireless Craze, the Unlimited Bandwidth Myth, the Spectrum Auction Faux Pas, and the Punchline to Ronald Coase's 'Big Joke,': An Essay on Airwave Allocation Policy," AEI-Brookings Joint Center on Regulatory Studies Working Paper No. 01–01 (Jan. 2001): 43; Coase (1959): 8.

[11] Michael Crew and Charles Rowley, "Toward a Public Choice Theory of Monopoly Regulation," *Public Choice* 57 (1988): 49–67; Richard A. Posner, "Taxation by Regulation," *Bell J. of Econ. & Mgt. Science* 2 (1971).

forcement and net neutrality—illustrate how the consumer welfare standard might imply a different approach to key government decisions that affect communications.

Merger Enforcement

It is well-known that FCC merger proceedings have, in the past, been used as a vehicle to induce "concessions" from merging parties that may or may not promote overall consumer welfare. One former FCC commissioner characterized the process as "naked regulatory extraction."[12]

In a statement on the proposed AT&T/Bellsouth merger, FCC Chairman Kevin Martin declared, "The FCC's primary responsibility is to determine whether the proposed transaction is in the best interest of consumers."[13] This is a laudable sentiment, but it is unfortunate that the definition of the goal depends on the views of the FCC commissioners, rather than a much more permanent commitment enshrined in legal precedent—as occurs under antitrust law.

Another disadvantage of current merger review practice is that the FCC is not bound by the same predictable timetables that accompany the Hart-Scott-Rodino merger review process. As Congress recognized when it created the HSR process, the potential for delay can discourage mergers that promote consumer welfare. While the FCC has improved the timeliness of merger review in recent years, it remains true that timeliness, like the consumer welfare goal, depends on the priorities and goodwill of the commissioners.

If we expect the communications industry to behave like a competitive industry, then the principles and processes guiding merger review should likewise be the same as those that apply in other competitive industries. This could be accomplished in one of two ways. One option would be for Congress to direct the FCC to review mergers under antitrust rules: employ consumer welfare as the sole standard, assess mergers under antitrust law subject to antitrust precedent, and observe the same deadlines as the antitrust agencies. The other option would be to simply take merger review away from the FCC and give it solely to the Department of Justice's Antitrust Division and/or Federal Trade Commission.

Some communications firms are common carriers. The FTC currently lacks jurisdiction over them. By default, the Antitrust Division would end up reviewing mergers involving common carriers. If Congress believes this result is unsatisfactory, it should give the FTC jurisdiction over common carriers.

Some might argue that antitrust rules would make merger review in the communications industry less thorough, raising the likelihood that mergers harming consumers might slip through. There is no reason that this would necessarily occur. Longtime members of this Committee can no doubt recall past instances in which regulators at the Interstate Commerce Commission, Surface Transportation Board, or Department of Transportation approved railroad and airline mergers over the objections of the Antitrust Division—either because the regulators differed with the Antitrust Division's analysis of competition, or because they believed other factors were more important.

Net Neutrality

"Net neutrality" seems to mean different things to different people. I cannot claim to know all the various meanings that different parties attach to that term. But the consumer welfare issues in the net neutrality debate are not at all new. Rather, this debate is a replay of general antitrust discussions about restrictive business practices.

If the policy goal is overall consumer welfare (as opposed to benefits for some particular segment of the communications industry, or satisfying some type of ideological objective), then competition could normally be expected to protect consumers. In a competitive market, owners of the "conduit" might engage in business practices that violate some parties' concept of net neutrality—but only if the practice offers consumers a corresponding benefit. Conduit providers who violate net neutrality without offering consumers some other benefit in return will have a harder time gaining and keeping customers. Net neutrality should not be a problem requiring a public policy solution if there is sufficient competition among providers of broadband Internet service. If broadband providers have market power, then a more specific and fact-intensive analysis is required to determine whether the benefits to consumers justify any harms.

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[12] Separate Statement of Commissioner Harold Furchtgott-Roth, *In re Applications of Ameritech Corp. and SBC Communications, Inc.,* Memorandum Opinion and Order, CC Docket 98–141 (Oct. 10).

[13] Martin Statement (March 6, 2006), at *http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC–264179A1.pdf.*

Viewed in this light, the net neutrality "problem" is little different from any other antitrust analysis of restrictive business practices under the rule of reason. First, define the relevant market. Second, determine whether there is significant market power. If there is market power, determine whether the business practice harms consumers. If the business practice harms consumers, determine whether there are any offsetting benefits.

Antitrust enforcement agencies have extensive expertise in this type of analysis. For example, the net neutrality issue is quite similar to the Internet Service Provider issues that the Federal Trade Commission dealt with in the AOL-Time Warner merger. I see no reason the antitrust agencies are not competent to analyze net neutrality as a restrictive business practice. And thus I see no reason that net neutrality deserves special regulatory attention.

Of course, this approach will not satisfy the purists on either side of the issue. There are pro-regulation interests who view any violation of their concept of net neutrality as abhorrent—even if it produces an offsetting benefit for consumers. There are free-market advocates who similarly view the antitrust approach as abhorrent, because it may sometimes justify government intervention.

Nevertheless, I see two key benefits to the antitrust approach. First, it avoids reinventing the wheel in terms of analysis. Second, and most important, it is probably the most effective way to promote consumer welfare. Treating net neutrality as an antitrust issue rather than a regulatory issue would help ensure that overall consumer welfare remains the paramount consideration, since consumer welfare is the touchstone of antitrust analysis.

**Conclusion**

Convergence promises consumers enormous benefits. Robust competition is the key to ensuring that consumers receive the largest possible benefits. Congress can take three steps to help ensure this result:

1. Allow markets to allocate much larger swaths of spectrum, so that multiple wireless conduits have the bandwidth to offer consumers a full range of services.

2. Remove local cable franchising as a barrier to entry.

3. Ensure that competition policy decisions, such as merger review and net neutrality, employ consumer welfare as the sole standard, are consistent with antitrust precedent, and follow the same deadlines that antitrust agencies must follow.

The CHAIRMAN. Thank you very much. Our last witness is Dr. Mark Cooper, who's the Director of Research at the Consumer Federation of America, we welcome you, Dr. Cooper.

## STATEMENT OF DR. MARK COOPER, DIRECTOR OF RESEARCH, CONSUMER FEDERATION OF AMERICA; ON BEHALF OF THE CONSUMER FEDERATION OF AMERICA, FREE PRESS, AND THE CONSUMERS UNION

Dr. COOPER. Thank you, Mr. Chairman, as the last witness, on the last panel, I greatly appreciate the opportunity to bat cleanup. I have a rather different view of what has gone on and what needs to be done.

But let me make it clear, I don't think we need to give up our pro-competitive vision of the future. What we must do is build it on a realistic assessment of what competition can work, what policies are necessary to promote competition, where it can, and above all we have to stick to some very traditional values that are important in telecommunications and in communications, beyond pure competition theory.

So while convergence was certainly contemplated in the Act, competition was the crown jewel. And I suggest that to anyone who thinks the 1996 Act contemplated the emerging situation in which the average consumer has essentially two choices for full scale broadband 21st Century communications. One of them being the

incumbent local exchange company which is reconstituting the Bell local monopoly with a 95 percent share of voice, 75 percent share of long distance, 75 percent share of local transmission and middle mile facilities, 50 plus percent in region share of wireless, that's the one company. The other company is the incumbent cable company, which still has a 75 percent share of video, has (doubled) my rates in the last 10 years. If you contemplated and suggested that that was going to be the competitive outcome of the 1996 Act, I think you didn't read the record. The record promised me an awful lot more competition than that. That's not the way it was supposed to work.

Given that background, the idea that the telephone and cable companies are giving you, that their duopoly is sufficient competition to allow you to eliminate fundamental principles like that of nondiscrimination and access to telecommunications, and to abandon the vigorous and historic commitment to Universal Service, to slash the role of local governments in meeting the needs of citizens—those claims that two is enough competition are simply outrageous, unsupported by economic theory, empirical evidence, or practical experience. Two is not enough, three is not enough, in economics there is an expression, four is few, and six is many. And the prospect that we'll get beyond two or three, is very very bleak, particularly because we have allowed the incumbent wireline companies through merger, or joint venture to capture the bulk of the wireless companies. The three leading wireless companies are now either owned by or in a joint venture with the dominant wireline companies. We've allowed the competition to slip away.

The fundamental point here is that in reality, communications is still substantially a local service; you cannot initiate or terminate a communication, voice or data in Anchorage, Alaska, without a local transmission medium, a local switch or a router, and local transpoint, in Anchorage, Alaska. You cannot initiate or terminate a communication in Honolulu without those local facilities, so at the core there's a local component to this industry that has not changed. Technology has not changed there. That local network is absolutely critical. And what we're contemplating here is allowing the very small numbers of local competition, the very small numbers in those facilities to destroy the vigorous competition we have on the Internet, or undermine the competition we might like to see in other and related markets.

Now it was earlier suggested that the critical factor here is when the FCC abandoned its traditional values. And I think in communications some traditional values are very important. When it failed to stick to nondiscrimination in broadband. When it failed to open the local markets. When it allowed mergers to create regional giants, fortress hubs of both cable and telephone companies. It really did undermine our hopes for competition.

Ironically, earlier this month the number two telephone company petitioned the FCC, filed a complaint about denial of access, about discrimination in access to program, and this very month the number two cable company filed a complaint with the FCC complaining about discrimination in interconnection. Yet these companies will tell you that they don't want to be obligated to provide non-

discrimination for Internet services applications or content. We simply cannot allow ourselves to abandon that principle.

The computer inquiries in 1968 were in fact the modern equivalent of nondiscrimination. They required the network to be neutral, thereby opening the door to support the growth of the Internet. Second of all the clear commitment to vigorous expansive Universal Service, the availability to all Americans of an evolving level of communications is a commitment that was in the 1934 Act, repeated in the 1996 Act and must not be abandoned.

And finally Congress can certainly promote the goals of competition and Universal Service simultaneously by making available more spectrum. I agree with Jerry, you ought to liberate the spectrum; I would liberate it for unlicensed uses, the WiFi networks that have been so successful over the past decade. But we ought to liberate more spectrum, and we ought to reserve the right of cities to provide the streets and roads, the onramps, for the information edge. To provide that local link to the global networks that are in fact much more competitive than the local market. Thus there's clearly room for a pro-competitive policy based upon the principles of nondiscrimination and interconnection and carriage and commitments to Universal Service. Thank you.

[The prepared statement of Dr. Cooper follows:]

PREPARED STATEMENT OF DR. MARK COOPER, DIRECTOR OF RESEARCH, CONSUMER FEDERATION OF AMERICA; ON BEHALF OF THE CONSUMER FEDERATION OF AMERICA, FREE PRESS, AND THE CONSUMERS UNION

Mr. Chairman and Members of the Committee

The Consumer Federation of America,[1] Free Press,[2] and Consumers Union[3] appreciate the opportunity to testify on the issue of competition and convergence in the telecommunications market. My name is Dr. Mark Cooper. I am Director of Research at the Consumer Federation of America.

This year, the Committee has now heard from dozens of witnesses in a score of hearings about the current state of telecommunications policy and the need for reform. It is not a pretty picture for consumers. Previous hearings have dealt with specific details of the failure of the competition policy under the Telecommunications Act of 1996 (the 1996 Act). The 1996 Act promised an explosion of competition voice, video, and data communications, and yet today we are witnessing the reconstitution of Ma Bell and the crystallization of a cozy duopoly of cable and telco. The Committee has been told of skyrocketing cable rates and the plummeting position of the United States in the global race to the broadband future. It has been presented with examples of anticompetitive and anti-consumer behaviors of the giant communications companies that now dominate the market. Despite the perverse anticompetitive results of the "pro-competition" policies in 1996 Act, these companies come before you to demand that you legalize discrimination in the provision of access to the communications network of the future, an approach that Congress has rejected for a century.

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[1] The Consumer Federation of America is the Nation's largest consumer advocacy group, composed of over 280 state and local affiliates representing consumer, senior, citizen, low-income, labor, farm, public power and cooperative organizations, with more than 50 million individual members.

[2] Free Press is a national, nonpartisan organization with over 225,000 members working to increase informed public participation in crucial media and communications policy debates.

[3] Consumers Union is a nonprofit membership organization chartered in 1936 under the laws of the State of New York to provide consumers with information, education and counsel about good, services, health and personal finance, and to initiate and cooperate with individual and group efforts to maintain and enhance the quality of life for consumers. Consumers Union's income is solely derived from the sale of *Consumer Reports,* its other publications and from noncommercial contributions, grants and fees. In addition to reports on Consumers Union's own product testing, *Consumer Reports* with more than 5 million paid circulation, regularly, carries articles on health, product safety, marketplace economics and legislative, judicial and regulatory actions which affect consumer welfare. Consumers Union's publications carry no advertising and receive no commercial support.

If future prospects are determined by our success in the broadband market (which few analysts deny), our current position is untenable. We are now 16th in the world in broadband penetration. Virtually none of our broadband lines can sustain even 1 megabit per second of speed in both directions—up and down the network. We pay $15–$20 a megabit for download speed—20 times more than the global leaders. We have a pervasive rural/urban digital divide that is *increasing* as time passes. Our Universal Service policies have not been updated and reformed to efficiently address our broadband woes. Insufficient spectrum has been opened to facilitate a legitimate, independent wireless broadband competitor. All we are left with is the false promise of competition from 1996 and the farcical declarations from cable and telephone giants that a duopoly market is vigorously competitive.

The parade of horribles with which you have been presented goes on and on and I will not regurgitate them in detail today. I have attached a half dozen Appendices to this testimony which contain detailed analyses prepared by our organizations of the failure of competition under the 1996 Act. I believe that we have been brought to this sorry condition because:

(1) the 1996 Act tried to do the impossible in some markets, aiming to build competition where conditions could not sustain sufficient competition to protect the public from abuse (e.g., local, last mile access);

(2) the Federal Communications Commission (FCC) and the antitrust authorities mishandled the introduction of competition in markets where it was sustainable, allowing the incumbents to drag their feet, engage in all manner of anti-competitive behaviors, and mergers (e.g., network opening, program access and mergers); and

(3) the FCC misread the 1996 Act in other markets, undermining and threatening competition that actually existed (e.g., Internet access and services).

In amending the Communications Act (the Act) we do not have to abandon a procompetitive vision for the future, but we must fully understand the failures of the anticompetitive past. A competition-friendly, consumer-friendly future requires that we return to certain key traditional values and fundamental principles that made the American communications network the envy of the world throughout most of the last century.

**Social, Technological and Economic Principles for Communications Policy**

In order to evaluate competition and convergence in the communications sector in the context of a legislative hearing on amendments to the Communications Act of 1934, there are four basic principles that must be kept in mind.

First, the Act has a specific purpose laid out clearly in the first sentence of Title I, Section I: "to make available, so far as possible, to all people of the United States, without discrimination on the basis of race, color, religion, national origin or sex, a rapid, efficient, nationwide and world-wide wire and radio communications service with adequate facilities at reasonable charges." This commitment is more important than ever because access to communications is increasingly vital in the digital information age.

Second, today's analysis must be forward-looking, in the spirit of the Act, focusing on the broadband communications network that will be the dominant means of communications in the 21st century. Looking to the future does not mean we should ignore the problems or the progress of the past. On the contrary, the right combination of correcting past mistakes and evolving successful policies for the digital era is the only means of satisfying the public interest. Certainly, the track record of competition and the past behavior of market participants are relevant, especially if the same actors play similar roles. These market patterns can give a good indication of what is likely to happen under the various policy regimes under consideration. However, policies that attempt to segregate the "legacy" network from the future network and "ghettoize" Universal Service are unacceptable. The commitment to Universal Service needs to include a commitment to an evolving level of service to ensure all Americans participate in the future, as the Telecommunication Act of 1996 (the 1996 Act) explicitly recognized in Section 254.

Third, at its heart, communications is local. Communications starts and ends with a local transmission medium and a local network. In order to make a call from Los Angeles to anywhere in the world, you need a wire or spectrum in Los Angeles. In order to terminate a call in New York from anywhere in the world you need a wire or spectrum in New York. The network in between may be national or global, but the last mile is local. Global networks are useless without last mile facilities—the local switches/routers and transport facilities that connect the consumer to the world. The Act recognizes this as well, in the first two sections of Title II, which establish the obligation to provide interconnection and carriage of communications

on nondiscriminatory rates, terms and conditions. Technology has not changed this basic fact.

Fourth, competition is an operational means to serve public interest ends; it is not the end in itself. Further, the state of competition is an empirical question, not a theoretical statement of belief or desire. There is an expression in economics used to describe competition in markets—"four is few, six is many." When there are fewer than the equivalent of roughly six, equal competitors, a market is considered highly concentrated because economic theory, empirical evidence and a century of practical experience shows that markets that are this concentrated do not perform well. In highly concentrated markets, prices are set above costs and innovation declines. With so few competitors, it is easy to avoid vigorous, head-to-head competition, especially when each uses a different technology, specializes in a different service, or concentrates on a different geographic area or user sector. Where competition is lacking, there is little chance that markets will accomplish the goals of the Act. Even where there is vigorous competition, there are circumstances in which the market will not accomplish the broader goals of the Act. It is the responsibility of legislators to conduct a fair assessment of competition thresholds in order to maximize the effectiveness of public interest communications policy. We must not place our trust in the rhetoric of special interests without facts on the ground.

**The Current State of Competition and Convergence**

In the emerging, converging world of 21st century communications, prospects for vigorous competition in the local segment of the industry are not good. At present, there are only two local, last mile communications networks that can provide a fully functional broadband network to the residential consumer—the incumbent local telephone companies and the incumbent cable operators. Two is not a sufficient number to ensure vigorous competition, and both sets of incumbents have a miserable record of anticompetitive, anti-consumer behavior.

The best hopes for a third, last mile alternative were undercut when regulators allowed the most likely candidate—wireless—to be captured by dominant wireline firms through ownership or joint ventures. It stretches credible expectation to assume that a wireless provider owned by an ILEC, or in partnership with a cable giant, will market a wireless broadband product that directly competes with its wired product. They will offer premium, supplementary services to be sure—but it will not be a true third broadband competitor. Hope and hype surrounding other technologies cannot discipline anticompetitive and anti-consumer behavior. Mergers such as that proposed by AT&T and BellSouth will only make matters worse. No company with sufficient market power to set monopoly rents will fail to do so absent proper public policy protections.

On the current trajectory, consumers are falling into the grip of a "cozy duopoly" of cable and telephone giants, which will abuse its market power, abandon it social responsibility and retard the development of our 21st century information economy. We can debate whether a regulated monopoly is better or worse than an unregulated duopoly, but we believe the evidence shows beyond any doubt that the feeble duopoly we have will not accomplish the broad Communications Act goal of a ubiquitous, nondiscriminatory networks available to all Americans at reasonable rates.

The danger of relying on a "cozy duopoly" is already apparent. The harm has already been done, and its impact is severe. America has been falling behind in the global race to the broadband future, not because there is inadequate incentive to invest, not because we are less densely populated than other nations, but because there is inadequate competition to push the "cozy duopoly" to deploy attractively priced services and unleash the Internet economy to develop consumer-friendly services. The current jostling for upscale consumers with big bundles of services leaves the majority or Americans behind. On a per megabit basis Americans pay five to twenty times as much for high-speed services as consumers in many other nations. Is there any doubt that the primary cause of the broadband digital divide is price? Now, after leaving the American consumer in a serious predicament, the network giants are insisting on the right to discriminate against content, applications, and services on the Internet, as blackmail for building broadband networks. (See Appendix A)

The failure of penetration resulting from high prices and the threat of discrimination in network access drives innovation out of the American Internet space and overseas. We should take note that the world's most advanced broadband nations have instituted policies that are based on last-mile competition, strategic direct investment in infrastructure, and free market principles of nondiscrimination on the network to drive innovation. Not only has the FCC failed to institute pro-competitive policies, the Commission has done precisely the opposite, masking it in rhetorically glowing but substanceless reports on the state of the broadband market.

**The Past as Prologue: Successes and Failures on the Road to Convergence**

*Telecommunications*

The idea behind the break up of AT&T in 1984 was to separate those parts of the industry that could be competitive from those parts of the industry that could not and use public policy to advance competition in the competitive sector. It worked in the long distance industry for most consumers. Requiring the local companies to provide "equal access" to their networks and shifting fixed cost recovery onto consumers, Federal regulators created an environment in which long distance companies eventually commoditized long distance—as long as consumers took large bundles—and competed the price down.

The Telecommunications Act of 1996 sought to introduce more competition into last mile markets in telecommunications and cable. In telecommunications, it sought to promote competition by identifying the various elements of the local exchange network and making them available to competitors on terms that would allow competition. The idea was that new entrants would invest in competing facilities where they could, while the monopoly elements were rented from the incumbents. Billions of dollars were invested, but this experiment failed. In the decade since the Telecommunications Act of 1996 was passed, the Federal Communications Commission (FCC) and the antirust authorities failed to enforce the communications and competition laws of this Nation to promote a consumer-friendly competitive environment. The FCC allowed the incumbent local telephone and cable companies to avoid their obligations under the law to promote entry into the communications field, while the Department of Justice (DOJ) and the Federal Trade Commission (FTC) allowed them to buy up their actual and potential competitors. (See Appendix B)

The Competitive Local Exchange Carriers (CLECs) were strangled by the failure of the FCC to force the incumbent local exchange carriers (ILECs) to open their local markets. And when the possibility of voice over Internet protocol (VoIP) arose, the ILECs slammed the door by tying high speed Internet to VoIP service. In essence, forcing consumers to pay twice, if they wanted an unaffiliated VoIP provider. The two largest CLECs were recently absorbed by the two largest ILECs. The same two dominant local companies also absorbed the two players in the largest long distance service and enterprise market, reconstituting the old Bell system as two huge regional entities that dominate their home territories with about a 90 percent share of local service, an 80 percent share of long distance, and over a 50 percent share of wireless service. (See Appendix C)

*Cable*

The 1984 Cable Act ended local regulation under the promise of competition. Overbuilders were supposed to enter to compete head-to-head, and satellite providers were supposed to provide intermodal competition. It never happened. The last mile market for cable proved too difficult to crack. Cable rates skyrocketed and the industry was subject to conditions of nondiscrimination in access to programming in 1992. Rates stabilized because of regulation, not competition.

As in telecommunications, the 1996 Act sought to stimulate head-to-head competition in multichannel video programming distribution (MVPD), but failed. Overbuilders could not crack the market—taking a scant 2 or 3 percent of subscribers. Satellite grew, but could not discipline cable's market power nor effectively discipline prices. The local telephone companies were invited into the cable business in a variety of ways, but chose not to enter.

Cable operators still account for about 85 percent of all MVPD subscribers. Regional concentration has reinforced market power at the point of sale. Monthly cable rates have doubled since the 1996 Act and consumers are offered massive, monthly packages which afford them little choice in what to buy (see Appendix D). Geographic consolidation has created a huge obstacle to entry into the programming sector. Cable operators control the programming that reaches the public and discriminate against unaffiliated programmers. The results of these market trends have left consumers and independent programmers at the mercy of the cable giants. (See Appendix E)

*Internet*

When cable rolled out a telecommunications service—cable modem service—the FCC moved the goal posts, redefining cable modem service into a different regulatory category. It abandoned one of the vital underpinnings of the success of the Internet, the "Computer Inquiries." This was the digital age expression of the principle of nondiscrimination that the FCC applied to computer and data services starting in 1968. As telecommunications in this country have evolved, the FCC established the policy of keeping the network neutral—allowing the intelligence in the

network to stay at the edge. This dovetailed with the end-to-end principle of the Internet and provided an arena for free market innovation, competition and consumer choice, that was unparalleled in recent experience.

When the FCC abandoned this policy for cable modem service, America's slide from Internet leadership began. This allowed the cable operators to discriminate against Internet service providers—forcing consumers to pay twice if they preferred an Internet service provider other than the cable affiliate (See Appendix F). They have imposed all manner of anti-consumer, anti-innovation restrictions in their customer agreements, which have driven applications developers away from this space. More importantly, the decision to remove common carrier regulations from cable modem service paved the way for a total cashiering of a century of communications policy. The immediate result will be nothing short of the destruction of the Internet if the Congress does not move to hold the line on the last remaining safeguard—network neutrality. The fundamental mistake in communications policy, which we have made over and over in the last two decades, is to allow a very small number of network owners to control the physical communication system. If we duplicate that mistake again, the result will be the destruction of the vibrant, vigorous competition and burgeoning innovation of the Internet economy.

**The Future**

The telephone companies now say they are ready to compete with cable in video, and the cable companies now claim to be ready to compete with telephone companies for voice. But they have demanded the elimination of the fundamental social obligations of the Act—Universal Service and nondiscrimination. The notion that Congress anticipated or would ever have enacted the 1996 Act under belief that we would end up with a duopoly is not believable. The hope was for vigorous competition among many providers.

Two competitors are simply not enough to discipline pricing, as the new entrants just match the high priced bundles of the incumbents. Two are not enough to ensure nondiscriminatory access to the communications network, as the new entrants demand to be allowed to discriminate and exclude Internet service providers and rival services. By traditional economic standards, three or four market players are not enough to assure competition, certainly not when access to the means of communications are at stake. If both network giants in a market adopt the same anti-competitive practices, where will consumers go? They are trapped.

The fundamental importance of nondiscriminatory access to networks and services embodied in the Communications Act was reaffirmed just this month by key members of the "cozy duopoly." Time Warner, the second largest cable company, has petitioned the Federal Communications Commission to impose an obligation of nondiscriminatory interconnection on the incumbent local telephone companies, under Section 251 of the Act. Verizon, the second largest telephone company, has petitioned the Commission to impose an obligation of nondiscriminatory access to video programming under Section 628 of the Act. Yet, both of these entities directly and indirectly through their trade associations, are lobbying the Congress, and have pushed the FCC, to eliminate all such obligation with respect to Internet access and services.

The fact that the anti-competitive and anti-consumer policies come and go, as political pressure or public attention ebbs and flows, is not a justification to abandon the principles of nondiscrimination. On the contrary, when innovation depends on the whims of network gatekeepers it is stunted and chilled. As Vint Cerf has said: the Internet is about "innovation without permission." When the choices are few and the switching costs for consumers are large, innovative activity will go elsewhere.

Current arguments against obligations to provide nondiscriminatory access are based on the claim that competition exists between two networks and that is all the American economy needs. That claim is wrong as a matter of historical fact and practical experience. The obligation of nondiscrimination came to this country under English common law. From the founding of the Republic, public roads competed against privately owned canals, but they were both subject to obligations of nondiscrimination. Private railroads were added to compete with canals and roads, and when they began to brutally discriminate, refusing to be bound by their common law obligations, they brought common carrier down upon themselves with the Interstate Commerce Act of 1886. Telegraph and wireline telephone were also expected to behave in a nondiscriminatory manner, but when AT&T refused to interconnect with independent companies, common carrier obligations were extended to that industry in the Mann-Elkins Act of 1910, thus ensuring nondiscrimination in communications.

In other words, one of the enduring principles of communications in America has been nondiscrimination. We have layered alternative modes of communications one

atop another, each using a different technology, each optimized for a somewhat different form of communications and still we imposed the obligation of nondiscrimination. We have accomplished this through both a liability approach and a regulatory approach. The layering of networks subject to the obligation of nondiscrimination makes even more sense when the importance of the free flow of information is magnified as it is in our digital economy.

**Conclusion**

As this Committee moves forward to construct a new regime of communications policy, we urge the Congress to begin from the successful principles of past policies and to learn from the problems and failures of past mistakes.

- Nondiscrimination in interconnection and carriage should be the explicit legal obligation of communications networks that provide last mile connectivity and local network access, as it has been for the last century.
- The commitment to Universal Service should be strengthened, not weakened, and we should apply the program beyond the dial-tone to broadband capabilities. We support legislation introduced by Members of this Committee to meet this need.
- Congress can promote the goals of competition and Universal Service simultaneously by making available more spectrum for unlicensed uses and protecting the right of local governments to build last mile networks. We applaud Members of this Committee who have introduced legislation to accomplish both of these goals.
- Congress should recognize the economic reality of the communications market and direct public policy to correct for the abuses of a duopoly market structure. Without explicit, pro-competitive policy, we cannot expect it to grow of its own accord.

APPENDICES SUBMITTED FOR THE RECORD

**Appendix A: Broadband Penetration**

Expanding the Digital Divide and Falling Behind on Broadband: Why a Telecommunications Policy of Neglect is Not Benign—October 2004.

Broadband Reality Check: The FCC Ignores America's Digital Divide—August 2005.

**Appendix B: Local Competition**

Competition at the Crossroads: Can Public Utility Commissions Save Local Competition—October 2003.

Broken Promises and Strangled Competition: The Record of Baby Bell Merger and Market Opening Behavior—June 2005.

**Appendix C: Wireless**

Petition to Deny of the Consumer Federation of America and Consumers Union, *In the Matter if Application for the Transfer of Control of Licenses and Authorizations from AT&T Wireless Services, Inc. and its Subsidiaries to Cingular Wireless Corporation,* Federal Communications Commission, WT Docket No. 04–70, May 3, 2004.

Reply—Federation of America and Consumers Union, *In the Matter if Application for the Transfer of Control of Licenses and Authorizations from AT&T Wireless Services, Inc. and its Subsidiaries to Cingular Wireless Corporation,* WT Docket No. 04–70, May 3, 2004.

**Appendix D: Cable**

Time to Give Consumer Real Cable Choices: After Two Decades of Anti-Consumer Bundling and Anti-Competitive Gatekeeping—June 2004.

Reply Comments of the Consumer Union and the Consumer Federation of America, *In the Matter of Comment Requested on a la Carte and Themed Tier Programming and Pricing Options for Programming Distribution on Cable Television and Direct Broadcast Satellite Systems,* Federal Communications Commission, MB Docket No. 04–207, August 13, 2004.

**Appendix E: Cable**

Comments of Consumer Federation of America, Consumers Union and Free Press, *In the Matter of the Commission's Cable Horizontal and Vertical Ownership Limits and Attribution Rules,* Federal Communications Commission, MM Docket No. 92–264, August 8, 2005.

**Appendix F: Internet**

The Public Interest in Open Communications Networks, July 2004.

The CHAIRMAN. Well, I'm only sorry the rest of our colleagues aren't here, because I think the six of you really have hit on the basic issues connected with this overall subject of convergence that we have to address, and we thank you for taking the time to do that. I do think, implied in a couple of your comments, there is a criticism of my friend and I who started the concept of spectrum being available and being auctioned. And I've got to tell you that I agree with a lot of what you said Dr. Cooper, I still feel that the public is right, that those airways are owned by the public and somehow or other the public ought to have some return for the use of them when it's done for profit.

Now your last comment really about opening up more to unrestricted use, is a question I was going to ask you anyway, and that is: So we open up a lot more for use, it's going to primarily be used on the local level, but how do we know its really used for anything other than profit making? How do we know it's really used for public use rather than competing with the people who are paying rates to have the balance of the spectrum?

Dr. COOPER. Frankly, I think when you provide unlicensed spectrum to be available to a vigorously competitive marketplace to exploit it; I think the public gets its value back directly. That is they get it back directly in the form of using that spectrum. Rather than taking the spectrum and giving a license to a single person whether you allocated the license in the past by essentially roulette at the FCC or by auctioning, you're essentially establishing an exclusive right to that spectrum. I think people use the spectrum.

The CHAIRMAN. I only have so much time. And we are going to separate here, and we're going to have to go back and vote soon. But OK, so we give out a bunch of unlicensed spectrum, what's the sanction if they misuse it. And how do we control that, it will be pornography, it will be all the stuff we're trying to prevent in terms of misuse of the airways. If you can use it without any permission, what's the sanction to the people who misuse it?

Dr. COOPER. Unlicensed doesn't mean anarchy in fact——

The CHAIRMAN. How do you regulate it?

Dr. COOPER. The FCC will establish rules of non-interference, they will protect the primary users and the white spaces, and the devices will in fact not interfere, the issue——

The CHAIRMAN. Not interference, it's use. It's content. How do you control the misuse of that spectrum by unlicensed people?

Dr. COOPER. Well frankly the same way we control the misuse of streets by bank robbers who drive away in automobiles, we don't ban automobiles——

The CHAIRMAN. Well, they've got cops.

Dr. COOPER.—and we don't eliminate streets.

The CHAIRMAN. They've got cops in every town for that. You're not going to have cops for this unlicensed spectrum. I don't mind you talking to us about unlicensed spectrum for public use. Or community use, but when you say just turn anyone loose to use it, unrestrained, unrestricted, and say that the FCC is going to somehow have some control over it, from the point of view of what we want

our children to be listening to, or what we want our spectrum to be used for, believe me, I'm sorry. We ought to talk about that later.

You know, Kyle, you mentioned digital, two or three times. What's going to happen to all the people that still have analog if we give all this freedom to digital? Don't we have some layover here for a few years that we've got too much analog in the whole system, and you're talking about freeing up digital people. What about the people who still have analog, and still want analog, am I off base, technically?

Mr. MCSLARROW. No. I mean that's true. I mean interestingly the digital age actually helps analog customers. I mean what's actually happening now, the upgrade to the plant that we did to digitize data, even the data, the bytes that are bringing video is reconverted to analog for somebody who has an analog TV. So they benefit, they actually get a better picture, even if it's not a "digital picture."

The CHAIRMAN. Isn't that so, if you don't adjust it at the beginning, in terms of cable you can serve just your customers, but the other people who are picking up are going to pick it up still analog isn't that right?

Mr. MCSLARROW. Yes, I mean you can convert it back and forth. I mean from analog to digital, but ultimately you're right. There is a transitional period. There are right now, probably 40 million Americans who are cable customers who have analog TVs. Now we're trying to—from our digital transition.

The CHAIRMAN. You're looking at one of them.

Mr. MCSLARROW. And you probably have five of those right. And so——

The CHAIRMAN. No, I'm talking about up home.

Mr. MCSLARROW. So you're going to have a transition and our hope is that in the next few years, we're going to get all those customers into the digital age. But in the meantime we have to deal with both digital and analog customers.

The CHAIRMAN. Steve, what do you think about this program of spectrum, that Dr. Cooper and I have been talking about? You mentioned spectrum too, I think you criticized the auctioning of spectrum, is that right?

Mr. LARGENT. No, sir, we didn't. We're not critical of the auctioning of spectrum. In fact Congress has gone a long way over the course of the next several years to make more spectrum available to the wireless industry and we're greatly appreciative of that. And we pay dearly for it. I did mention spectrum, and we paid over $20 billion for the spectrum that we utilize today.

The CHAIRMAN. Senator Inouye.

Senator INOUYE. I believe all of us have read *the Wall Street Journal* of Tuesday. What is France doing right, or what are we doing wrong?

Mr. COMSTOCK. Mr. Chairman, if I might take a shot at that. I think that the important part about that article from *the Wall Street Journal* regarding France Telecom is that they are applying essentially the same provisions that Congress adopted in 1996. They're saying we have an incumbent infrastructure here and that that incumbent has to make that service available. That infrastruc-

ture, the transmission infrastructure, must be available on reasonable terms and conditions. And that is what has lead to much of the competition that you hear mentioned today. And again I don't think it should be lost. There's a lot of discussion about all the available voice competition services you have and that is where wireless comes into the fray. But when you're talking about data, it's down to two in the residential areas, and it's down to one in the business. And so the idea that we're going to is that the consumer is going to get the benefit of the infrastructure that they've already paid for by having these reasonable rules. And the rules under the existing 1996 Act include a reasonable profit, that's written right into the statute.

And it's through the use of these unbundled network elements and special access that much of the competition that consumers enjoy today, including wireless competition, is made available. Because at the end of the day all of these networks come back onto the wireline infrastructure. And if cable can't interconnect to the incumbent infrastructure, if the wireless companies can't interconnect, if the CLECs can't get there then we can't compete. And we can't offer service, and that's the important thing. What France is doing right, is they are applying much the same rules that Congress adopted in 1996 in Sections 251 and 252 of the statute.

Mr. MCCORMICK. Mr. Chairman, if I might respond to that. They have an entirely different philosophy. It's a philosophy that's been reflected in that part of Western Europe for a long time. France Telecom is a government-owned telephone company. And what they have done is that the government has funded the deployment of a new network. They don't have to make money operating it; they don't have to worry about investors investing in it. And what they have done, is they have then made that government network available to folks for a price.

What they have done is they have gone to a government-owned and operated model. They do the same thing with regard to their airlines. In our country for over 100 years we've had a different model; it's been the private-sector model. But what we need to do, Mr. Chairman, is not be betwixt and between. We need to at this point free up our private sector model from government-managed competition and really embrace the free market. We have investors who are willing to invest their capital to upgrade the networks, if they're allowed to offer over those networks everything technology will allow them to offer. So, for example, in McMinnville, Tennessee, I've got a small telephone cooperative that the community, the people own their telephone company, and they have upgraded their telephone company plan to offer not just voice service, but voice and video and Internet access. But to serve that little community of 40,000 people in middle Tennessee, the co-op crosses 25 franchise areas. And so, for over a year now, they've been trying to obtain franchises to offer video. What we need to do Mr. Chairman, is if we're not going to have a government-owned model, then let's really have a free-market model and allow those who invest in new infrastructure to use that infrastructure for whatever services they think consumers might want to buy.

Dr. COOPER. Senator, in fact if you look at British Telecom, they're pursuing the same model. It's not a government-owned mo-

nopoly. In fact the key, in almost every one of the nations that have moved past us, in the past half decade in terms of broadband penetration is when the regulator said open your local markets, the telephone companies did. They started a little bit later than we did, their CLECs are competing for the triple player, or the quadruple play, actually the triple play, and so they're competing against the bigger pot of money and that made it more doable. The regulators also set rates so that it was attracted to competition, they didn't have a half a decade of litigation until death. And so it is a model that can work and that has been made to work, essentially by providing nondiscriminatory access to the infrastructure.

And in almost every one of the cases, only a few of them involve substantial government subsidies. Most of them do not involve that kind of government subsidies. It's simply a question of opening the network, allowing the incumbent to make the investments recover the cost of those investments, and the FCC might have made some mistakes on how they allocated the revenues and that model is in fact beating the heck out of our approach.

Dr. ELLIG. I think when we look at these kinds of issues we have to be careful to distinguish between some type of mandated interconnection so that the traffic is exchanged between networks, versus use—mandated use of other facilities in ways other than interconnection. The half decade of litigation unto death, I assume, Mark, you were talking about the whole unbundled network element platform controversy, which was a fight over a competitor being allowed to use someone else's network to reach the customer instead of building their own stuff. I think that's a little bit different from the much more limited type of argument and discussion you can have over the fair and nondiscriminatory terms on which various carriers are going to exchange traffic back and forth so that everybody with a phone or an Internet connection can reach anybody else who has a phone or Internet connection.

The CHAIRMAN. Senator DeMint.

Senator DEMINT. I'm with you Mr. Chairman, this has been very helpful to see the different perspectives all across the industry. It's interesting though to listen, back up a little bit and see cable wants access to phone switches, but doesn't want to give other companies access to cable, and the CLECs want access to cable and phones. The phone company wants to compete for video but wants to continue to get the universal subsidies, even though you just gave a great example in Tennessee, people will invest in a rural area, but to continue to pad the bottom lines with taxpayer dollars is questionable. Wireless seems to want to just be left alone, which sounds good. I think the decision gets back the philosophy between Dr. Ellig and Dr. Cooper, if the government weighs in, we decide we're going to continue to regulate the technologies; clearly we're going to end up with another hodgepodge of regulation that restricts competition. But in order to move toward the approach where we have real good consumer protection, that new license spectrums and let this go, I mean it just seems obvious to me that it's changing, it's so complex we've got to let it go, we could sit back and watch for a few years if consumers were not getting a good deal, we could come back in and do what Dr. Cooper wants and try to regulate the industry. But I just want to challenge you and the different in-

dustries, if we really want competition we've got to figure out how not to get this little regulation for this industry so you can have access to that industry, by the time we get through we're not going to be better off than we are today.

Why don't we just let it go, protect the consumer and just see if in a few years we need to come back and create a regulatory structure. We couldn't do any more harm than we're doing now. So if anybody wants to comment—yes sir.

Mr. COMSTOCK. Senator, I'd like to point out that New Zealand gave that a try and they recently reestablished their regulatory authority, because they found it was a complete disaster, and in fact one of Walter's companies, Bell South was an active participant down there. So I mean the idea—the problem you've got is it's not like we're all lined up at this table and you shoot the gun and we're all racing for that wall, and may the best man win. You've got two people sitting on my left and my right here, who already got to build ubiquitous infrastructures in a protected environment. And so they start out with, in the case of the telephone company, connections that reach 100 percent of the consumers and businesses in this country and they've already got the customers for at least one service, at least voice and probably data in the case of phone companies. In the case of the cable companies, they got to build their network in a protected environment, the phone companies were told to keep out, and they got to build it and they got 100 percent of the customers for video.

Now, then as I said, the Congress let satellite in through the program access rules. But the reality is the wireless guys couldn't even exist today without mandated interconnection; section 332(c) which Steve Largent referred to, includes a provision that Congress had to put in in 1993. Why? Because the local phone companies wouldn't give competing wireless companies interconnection.

So, the idea that you can have a level playing field, in which there's no ref and there's no rules, and two guys get to start out with basically 100 percent of the stack of peanuts, it's just not going to work, and so you really do need some rules. And I think what Dr. Cooper and I are saying is look, if you want the continued innovation that brought us the Internet, that's brought all these technological changes that you talk about that are applications, you need to have some rules. There doesn't have to be a lot of them, but there have to be some basic ones that give people access to that infrastructure or you're not going to have the continued innovation in this country, which is what all the consumers like.

Senator DEMINT. You want access to all the new technology that is—Mr. McCormick's folks are building in Tennessee, they do all that investment, you want access——

Mr. COMSTOCK. It's not new technology Senator, it's fiber optics, which has been around for——

Senator DEMINT. Well not new technology, but new investment.

Mr. COMSTOCK. That's right, if I get to start out with a 100 percent of the customers, then it would be fair for somebody else to use my network. They're using public rights of way which are limited—there isn't enough money in this country for each one of us to build our own network to the consumer. So if you want competition you've got to share the network.

Senator DEMINT. But somehow it's true in every other industry but yours, how just—a quick comment and I know I need to run.

Mr. MCSLARROW. You didn't say this, but the implication was that you know we're all sort of hypocritical here.

Senator DEMINT. No. No. I'm just saying——

Mr. MCSLARROW. I know it's not a high bar, I actually try to avoid hypocrisy, but let me—let me just say——

Senator DEMINT. I think we live in a glass house on this side of the desk too.

Mr. MCSLARROW. Let me just say this. The question you really asked about whether or not we shouldn't just walk away from all of this, I think is a fair one. We are all sort of stuck in a system that has quid quo pros, and so you hear that from each of us. And there is something attractive about walking away if you will and sort of starting over. I mean, I know, I read your bill obviously and I think there's a lot of attraction to a different kind of model that's a pure free market, competitive model. If we're not in that universe, then we have to deal with the world as it is, and for us what we would urge across the board is as little or no economic regulation as possible. And narrowly targeted if there are social obligations that are important, like E–911, and USF, and that kind of stuff, then everybody should play by the same rules. And as Earl said, when it comes to interconnection, reality is we have a public switch telephone network, you cannot exchange traffic unless you can interconnect. It's different from every other part of the telecommunications.

Senator DEMINT. I'll probably have to leave as you're talking.

Dr. COOPER. I'll get it on the record anyway. I mean the simple fact of the matter is telecommunications is different; it has always been treated different. The principle of nondiscrimination is centuries old. Established under English Common law, brought over to this country in that law. It applied to every means of transportation and communication we have ever deployed in this country, roads, canals, railroads, telephone, telegraph, and steamship lines. Everything has been subject to this principle. It used to be a legal obligation actionable liability, and then it became regulation when the railroads refused to accept their obligation. When Ma Bell refused to interconnect with independent companies, it got slapped with common carrier regulation as well.

But the simple fact of the matter is that we have always had this obligation on every means of communication and transportation in this country, and there's no reason to believe that the problem will be solved by individuals who have market power if we just let them go.

The CHAIRMAN. Thank you very much. As you know we have a very active young staff sitting behind us, young compared to me anyway, and they have questions prepared for both Senator Inouye and I to ask you. And we both have to be at a Commission, the Eisenhower Commission. So what I'd like to ask you to do is if you would reply to these questions. I'm going to limit the staff to two questions, from each one of us to each one of you, if you would send them back. And I tell you what if you make them no longer than one page and get them back to us before next Thursday, I promise you I'll read every one of them personally, OK. But I also want to

ask you another question. And I would like to have each one of you give me about one page, maybe a little bit longer, I see Earl reaching for his pen already. It's a simple question Earl.

[Laughter.]

The CHAIRMAN. If you were drafting this bill, what would you include in it, that would help promote competition, and what would you include that would force consumer prices down? We say promoting competition is designed to bring it down, so it may be that there's one answer for that double question, but I don't think so. What would you include to promote competition, and what you include to really bring consumer prices down? And I think we've all read *the Wall Street Journal* article, and I understand your answers to the questions that you've had, but it still rings a bell with us, that one of the major expenses of the American family now is communications. And we're using it not just in one of the old—as you said not the phone on the wall, I can remember when you had to go over and you could listen into three or four other people on the same line, and you had to ring it, turn it over to make it ring, and we had to do three longs, and one short to get on the line ourselves, OK. Now we've come a long way since that, and you have so many variations now of communications available. And hopefully, as I said this morning, we can talk about communications, not telecommunications, it's total communications again now, we want a communications act, not a telecommunications act. We don't want an act that deals one way with information and another way with telecommunications and another way with communications and another way with satellite. We want a communications act, if we can possibly do it. Your suggestions I think are very helpful to us, and again I thank you all for coming back I don't think we'll ask you to come back again to mark up this bill, but once we get your suggestions we might, I don't know. But we'd very much like to have your help. You six really have helped address the broad spectrum of the problems we face and we appreciate your suggestions.

Thank you very much, gentlemen, we appreciate it.

[Whereupon at 4:34 p.m., the hearing was adjourned].

# A P P E N D I X

## RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TED STEVENS TO KYLE MCSLARROW

*Question 1.* If you were drafting this bill what would you include in it that would help promote competition and what would you include that would force consumer prices down?

Answer. *Voice:* Any bill that seeks to promote competition in the telecommunications marketplace would be incomplete without addressing voice competition where the Bell companies still control 85 percent of the voice market and still serve as the "hub" to which all other carriers must connect in order to reach each others' customers.

The fundamental problem is that the telephone companies have no incentive to give their competitors access to their network, which was funded by rate payers, and competitive voice services simply cannot survive without such access. To address this, the 1996 Telecom Act provided interconnection rights to the Bells' competitors (CLECs) so they could exchange traffic with the Bells on an economic basis, without glitches or delays, in order to promote local voice competition.

Today, there are a host of new technologies—such as Internet Protocol—that are capable of providing voice service. And just as they sought to block competition from CLECs through litigation, the telephone companies are seeking to block competition from VoIP providers arguing that they don't qualify for interconnection rights based on the technology they use. Unless Congress acts to explicitly extend these interconnection rights to ALL voice competitors, on a technology neutral basis, the best hope for true competition in the voice market will never take hold.

*Video:* Today there exists vigorous competition in the video service marketplace with most consumers having a choice among at least three video providers—a cable operator and two national direct broadcast satellite providers. Cable now has 68.3 percent of the multichannel video market as compared to 95 percent twelve years ago, further evidence that video competition is thriving.

To the extent that Congress believes that the franchise process needs to be modernized, we support reforms that:

(1) ensure that a new entrant can get a franchise in as little as 30 days;

(2) ensure a level playing field so that all providers of video services are treated equally and play by the same rules; and

(3) ensure local governments have the ability to negotiate and enforce the policies of Congress.

*Broadband:* Today, competition in the broadband market is strong and continues to grow. Cable broadband service is available to 93 percent of households passed by cable. DSL service is available to more than 76 percent of households where the phone companies offer local telephone service. Based on June 2005 data from the FCC, 74 percent of U.S. zip codes have three or more broadband providers.

The imposition of network neutrality regulations would threaten this robust competition and stifle investment and innovation. With bandwidth usage growing at a rapid pace, continued investment will be needed to meet the demands of consumers. Broadband providers and content providers need the flexibility to develop business models to share the costs of the network investments in order to maintain an affordable retail price for Internet access and promote further broadband penetration.

Where the marketplace is highly competitive, where no real world problems needing a solution have been identified, and where the pace of technological development is breathtaking—as is the case in broadband—government intervention is unnecessary.

*Question 2.* Cable is very concerned about the terms of video franchising for new entrants. What other instances are there where cable is either advantaged or disadvantaged against competitors using other platforms?

Answer. When cable operators offer voice services they have no advantage over other voice competitors. (1) In fact, without the right to interconnect with incumbent local exchange carriers, they operate at a disadvantage. (2) Claims that cable operators are subject to lighter regulation than incumbent local telephone companies when entering the telephone business are false.

(1) As referenced in the one page response attached, in order to ensure true voice competition language must be included to clarify that the interconnection rights Congress established in 1996 to promote voice competition apply to all providers of voice services on a technology neutral basis.

The phone companies argue that private negotiations between themselves and their competitors will yield voluntary interconnection arrangements. The reality is that the phone companies have no incentive to enter reasonable commercial interconnection agreements with their potential competitors. And over the last few years the Bells, as well as rural and independent phone companies, have been seeking to limit interconnection rights based only on the technology used by a voice provider. Limiting interconnection and related rights to providers of voice services using traditional technology will ensure the Bells retain their dominance by hampering the introduction of IP-enabled voice services—the best hope for competition in the voice market.

The Bells' continuing consolidation increases the need for interconnection protections. When the two largest CLECs in the market (AT&T and MCI) merged with the two largest Bells (SBC and Verizon), the most experienced and well-funded negotiators of interconnection agreements were removed from the competitive voice market. The AT&T/ BellSouth merger would only solidify the Bells' monopoly market power and make it more difficult for competitors to get a fair shake in interconnection negotiations. And even as they buy their largest competitors and consolidate their market power, the Bells are asking Congress and the FCC to abandon the basic interconnection rules established in 1996.

Basic interconnection rights necessary for all voice competitors include:

a. the right to interconnect to the incumbent phone company's network anywhere it is technically feasible, including at the incumbent's switch, at rates that are based on the incumbent's costs;

b. the right to collocate equipment on the premises of the incumbent local exchange carriers, to ensure efficient interconnection;

c. the right to obtain telephone numbers directly from the administrator of the North American Numbering Plan;

d. the ability to have access to poles, rights of way and conduits at reasonable cost-based rates;

e. the right of customers to move their existing telephone number from one carrier to another (number portability) in a quick and efficient manner and not to dial extra digits to reach customers of other carriers (dialing parity);

f. guaranteed access to incumbent phone company databases for E–911, customer service record information, directory listing information and other local service requests through established interfaces and systems; and

g. access to incumbent carriers' circuits at cost-based rates to carry traffic from one network to another (transiting).

(2) The phone companies claim that cable operators are subject to lighter regulation when entering the phone business in order to justify their position—that they should not be required to comply with social obligations associated with the provision of video service. The fact is, cable operators offering voice services, including VoIP, abide by the kind of "social" obligations (i.e., Universal Service, E–911, and CALEA) the telephone companies want to avoid in the video business (i.e., providing video service to all consumers—not just "high value" consumers). Cable never sought, or received, exemptions from the type of fundamental provider obligations the phone companies seek to avoid.

- When cable companies rolled out circuit-switched phone service, they complied with substantially the same framework as Verizon. Cable and other competitors were exempt only from regulations tailored to the monopoly provider.
- When cable companies roll out VoIP service, they compete within the exact same regulatory framework as incumbent phone companies or to new entrants. Verizon and AT&T, who complain most about "unregulated" competition from cable VoIP, are themselves among the largest vendors of VoIP service.
- Cable operators are deploying telephone service across their entire franchise areas. Cable operators provide their new digital telephone service over the same

upgraded broadband facilities that they use to provide video and high speed Internet access. Because cable operators are already required by their video franchise to deploy those upgraded facilities essentially throughout their franchise areas, their new digital phone services will be similarly deployed throughout all neighborhoods in their franchise area.

*Question 3.* At what rate are you gaining phone customers where your members have rolled out VoIP service?

Answer. Cable operators began the deployment of voice services in 2000 using circuit-switched technology. In 2003, VoIP service was launched. Below are yearly industry-wide statistics for circuit-switched, VoIP and total telephony subscribers.

| Year | Total Telephony Subs | Circuit Switched | VoIP |
|---|---|---|---|
| 2000 | 850,000 | 850,000 | ..... |
| 2001 | 1,500,000 | 1,500,000 | ..... |
| 2002 | 2,500,000 | 2,500,000 | ..... |
| 2003 | 2,746,000 | 2,702,000 | 42,000 |
| 2004 | 3,500,000 | 3,000,000 | 587,000 |
| 2005 | 5,600,000 | 3,100,000 | 2,550,000 |

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## RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TRENT LOTT TO KYLE MCSLARROW

*Question 1.* I know this Committee has spent a lot of time talking about video competition, but what can we do to ensure there is healthy competition in the voice marketplace?

Answer. Any bill that seeks to promote competition in the telecommunications marketplace would be incomplete without addressing voice competition where the Bell companies still control 85 percent of the voice market and still serve as the "hub" to which all other carriers must connect in order to reach each others' customers.

The fundamental problem is that the telephone companies have no incentive to give their competitors access to their network, which was funded by rate payers, and competitive voice services simply cannot survive without such access. To address this, the 1996 Telecom Act provided interconnection rights to the Bells' competitors (CLECs) so they could exchange traffic with the Bells on an economic basis, without glitches or delays, in order to promote local voice competition.

Today, there are a host of new technologies—such as Internet Protocol—that are capable of providing voice service. And just as they sought to block competition from CLECs through litigation, the telephone companies are seeking to block competition from VoIP providers arguing that they don't qualify for interconnection rights based on the technology they use. Unless Congress acts to explicitly extend these interconnection rights to ALL voice competitors, on a technology neutral basis, the best hope for true competition in the voice market will never take hold.

*Question 2.* I have some real concerns about any provider cherry picking the wealthiest neighborhoods in my state while leaving the rest behind. There has been a lot of discussion about this in the context of franchise reform. Is there anything Congress can do to protect all consumers?

Answer. Yes. The rollout of the fledgling Bell video services have already demonstrated that the telcos will only provide service to high-income areas and their current business plans do not suggest that lower-income Americans will receive these services anytime soon. The Congress can and must ensure that service providers do not create telecom and video have and have nots by including simple protections for all consumers.

To ensure effective enforcement of this anti-discrimination principle, we would suggest making clear that cable operators may not exclude localities from their service area or deny service to consumers within a franchise area based on income. Additionally, franchise area needs to be carefully defined to ensure that a cable operator cannot cherry-pick among the neighborhoods within a locality that is served by its telephone or cable network.

Given that states and localities are in a better position than the FCC to identify violations of this principle, it seems most appropriate to give them the enforcement authority to require cable operators to extend service, file a complaint with the FCC or otherwise have the ability to correct such violations.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TED STEVENS TO EARL W. COMSTOCK

*Question 1.* If you were drafting this bill what would you include in it that would help promote competition and what would you include that would force consumer prices down?

Answer. Promoting competition is the least regulatory, and most effective, way to force consumer prices down. The alternative is retail price regulation, something that has been tried before in both the telephone and cable markets with unsatisfactory results.

Four facts dictate the options Congress has to promote competition and bring down consumer prices for all communications services. The first is that the incumbent telephone companies are the only entities in any given area with a wireline network that reaches all business and residential customers in that area. The second is that the incumbent cable operators have the only wireline alternative network that reaches nearly all of the residential consumers, though that same network reaches very few business customers. The third, and perhaps most important, is that both the incumbent telephone companies and the incumbent cable operators were each allowed to build their network over the course of a decade or more while protected from competition, with the assurance that they would get all of the customers that chose to purchase their service in that area. Finally, it is clear that both here and abroad that wireless services are a higher priced complement to, and not a substitute for, wireline network services. As a result, incumbent telephone companies and incumbent cable operators retain at least 70 percent market share in their core service more than 10 years after passage of the 1996 Act.

The reality is that, in both the residential and business markets, the construction of additional ubiquitous wireline networks will not occur. No competitor can get the financing for such an undertaking, and consumers do not want to pay for yet another network. Even in the wireless marketplace, where incumbent cellular operators had less of a head start, what you see is consolidation and dominance by the two incumbents.

In light of these facts, which preclude the FCC's preferred model of "inter-modal" competition (i.e., each competitor can reach the end user by building its own wired or wireless network), Congress needs to adopt rules which require network operators, and in particular the two wireline network operators that were allowed to build their networks and establish a customer base while protected from competition, to provide reasonable and nondiscriminatory access to those networks. The scarce resource in communications markets is the transmission network. By requiring network operators to allow everyone to use these essential facilities to reach consumers, consumers will receive the benefits of competition—lower prices, better service, and greater innovation.

The key measures needed to ensure reasonable and non-discriminatory access by competitors include (1) access to elements of the network so that competitors can create their own services; (2) interconnection at any technically feasible point; (3) the ability to collocate equipment; (4) the ability to attach devices to the network; (5) the right to resell transmission between or among points on the network as part of their own voice, video, and data offerings to consumers; (6) the right to use any technology and offer any service that does not harm the network; (7) nondiscriminatory allocation of all transmission capacity on the network (i.e., elimination of cable rules that allow network operators to reserve capacity for their exclusive use); (8) reasonable terms and conditions for each of these measures; (9) a neutral arbitrator to resolve disputes, and (10) efficient enforcement mechanisms to execute these rights. Congress must also require the FCC to establish Universal Service contribution and distribution requirements, and inter-carrier compensation rates (including access charges), which treat all transmissions and service providers equally.

Adoption of these measures would not mean that the network operator could not charge consumers and other network operators more money for using more bandwidth. Nor would these measures prohibit a network operator from offering whatever additional services (for example information services or video programming) they chose. However, these measures would prevent network operators from using their ownership of the network to discriminate in favor of their own content and services. They would also prevent the network operator from unfairly cross-subsidizing their own transmission services by charging competitors higher rates for transmission or requiring consumers to buy unwanted video or information services in order to obtain transmission capacity.

*Adoption of these measures will not discourage broadband deployment.* In fact, they will do just the opposite. By readjusting inter-carrier compensation and access charges so that all traffic is treated equally you eliminate the arbitrage opportuni-

ties, and by prohibiting the network operators from reserving capacity and discriminating against other providers you re-align the network owner's financial interests. Adopting these rules will mean that to make more money from the network, the network operator will want to maximize the use of the network. By adding more capacity to the network, the network operator makes more money. *As long as Congress and the FCC do not regulate the price that network operators charge for transmission, then network operators will be able to recover whatever Wall Street demands to support the investment in more capacity.* The only price regulation that is required is a nondiscrimination requirement. Whatever the network operator charges others for transmission capacity, the operator has to charge himself and his affiliates for the same transmission capacity. To allow the operator to do otherwise will result in price distortions that will reduce or eliminate competition.

Adopting pro-competitive measures that require network operators to share transmission networks that use public rights of way or public spectrum will drive down the price paid by the consumer. This model has worked here in the United States in long distance and was starting to work in local until the FCC abandoned network sharing in favor of its flawed inter-modal competition model. Network sharing is working in Europe, not only for broadband Internet and voice services, but for cable services as well. By phasing out the cable rules that allow network operators to reserve capacity for their exclusive use, Congress can bring vigorous price competition to consumers in all communications markets. Competition through network sharing will result in more competitors offering a wider range of services to consumers at lower prices, while also providing incentives to network operators to expand their capacity in order to increase their own revenue.

*Question 2.* The FCC recently allowed a forbearance petition from Verizon to go into effect that would impact high capacity special access lines. What impact would that have on your customers?

Answer. Special access services are high-capacity connections that link businesses via facilities owned by the incumbent local exchange carriers to the facilities of competing carriers. Special access services are at retail to businesses directly by the incumbent LEC, and on a wholesale basis by the incumbent LEC to competing carriers who seek to serve business customers. Because the incumbent LECs own the only wireline facilities that reach the vast majority of businesses in the country (cable companies do not serve most business customers), competitive carriers have no choice but to purchase special access service from the incumbents. Prior to their acquisition by the Bell companies, AT&T and MCI offered the only viable alternative to incumbent LEC special access services, but those alternatives disappeared as soon as SBC and Verizon bought these two competitive giants. Because they own and control the connections to almost all business customers in their respective business territories, the Bell companies in particular are now able to raise wholesale rates for special access services sold to competing carriers, as well as retail special access rates sold directly to business customers, resulting in price increases for those customers.

The FCC Chairman's decision to grant Verizon's forbearance petition by operation of law has the additional effect of eliminating common carrier regulation of numerous high-capacity broadband services, including ATM and frame relay services, offered by Verizon on a wholesale basis. COMPTEL member companies, including providers of both voice and data services, rely on these Verizon special access services as vital inputs into competitive service offerings. In the absence of common carrier regulation of its special access services, Verizon can refuse to provide such broadband services on a wholesale basis, can choose to provide them only to itself or its own affiliates, or can raise the price for such wholesale services to any rate it chooses (prior to the forbearance action, Verizon was at least theoretically constrained by the requirements in Title II of the Communications Act that rates not be unjust or unreasonable).

The forbearance petition impacts not only competitive LECs, but also wireless carriers and cable companies as well. In the absence of access to these special access services, for example, wireless companies cannot interconnect their services with the wireline network. Competitive providers of broadband services, including cable companies and competitive data providers, that depend on special access lines to connect their facilities to the Internet backbone will also be adversely affected.

As part of its justification for a recent decision scaling back unbundling obligations imposed on the incumbent LECs, the FCC found that where high capacity facilities were no longer available on an unbundled basis, special access services would provide an acceptable substitute for competitive providers. Now, the FCC has eliminated its regulation of numerous Verizon special access services, effectively eliminating the very competitive alternative to unbundled network elements that it promised would be available.

Ironically, COMPTEL member companies are still subject to the core obligations of common carriage, including the obligation to provide services on a just, reasonable, and nondiscriminatory basis. Verizon is the only telecommunications company in the Nation that is not subject to those core principles of nondiscrimination. COMPTEL has filed an appeal of the FCC's decision to free Verizon from common carrier obligations. As part of that appeal, COMPTEL will argue to the court that the FCC's failure to issue an order precisely defining the parameters of the relief granted to Verizon has left the competitive community without any definitive pronouncement on the exact nature of the relief granted to Verizon.

*Question 3.* How important are special access lines to your members in terms of revenue?

Answer. Very important, particularly now that the FCC has severely limited the availability of unbundled network elements that section 252 of the Communications Act made available at cost-based rates. Special access services are vital inputs to many of the services that COMPTEL members offer to consumers and small and medium sized businesses. In the absence of access to special access services, COMPTEL members may be unable to continue offering such services.

For example, wireless services are really only "wireless" for a short distance: they must be connected to the wireline network for the transport and termination of wireless calls. In the absence of access to the special access services that provide access to the wireline network, or if such access is priced at such a high rate as to be effectively unavailable, wireless carriers cannot access their customers. The same is true for wireline services.

Where unbundled network elements are not available because of recent FCC deregulation, special access services are the only means for competitive carriers to obtain interconnection with the incumbent network. If such access to the incumbent network is no longer available, or is priced too high to allow effective competition, COMPTEL members will be unable to provide service to their customers. Although the exact revenue impact is difficult to quantify, it is clear that the majority of COMPTEL member companies rely on incumbent LEC special access services as inputs into end user service offerings, and thus would be disproportionately impacted by any increase in cost or loss of access to special access lines.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TRENT LOTT TO EARL W. COMSTOCK

*Question.* What can be done to ensure there is healthy competition in the voice marketplace?

Answer. Competition in the voice marketplace will continue to diminish if Congress does not take steps to reverse the FCC's decision to rely on inter-modal competition alone. The FCC's inter-modal approach increasingly requires each competitor to own or control its own connection to the customer, potentially limiting residential voice competition to the incumbent local exchange carrier (ILEC) and, where cable is present and still has interconnection rights to the ILEC, to cable operators.

The FCC cites wireless as a competitor in the provision of voice service, but in fact wireless voice service is a complement to, and not a direct replacement of, wireline voice service. In most cases consumers sign up for both wireline voice service and wireless voice service. If wireless were in fact a replacement, then you would see more people choosing one or the other, but not both. The reason people typically sign up for both is simple—wireline phone service is generally cheaper (on a per-minute basis) and more reliable (you never get dropped wireline calls or have dead zones) and wireless phone service, though more expensive, offers convenience.

Voice over Internet Protocol (VoIP) services, whether offered by a cable operator, a competitive local exchange carrier (CLEC), or a provider (for example Skype or Vonage) that uses a CLEC to interconnect calls to the ILEC network, offer the best opportunity for increased price and service competition in the voice marketplace. In addition, many CLECs, and even a few cable operators, also offer circuit-switched voice services in competition with the ILEC. While most providers will eventually provide voice services using VoIP, maintaining the option to offer circuit-switched voice is important if the goal is to provide residential and business consumers with competitive alternatives.

In order for VoIP to be a viable competitor, Congress needs to adopt Net neutrality requirements in order to ensure that network operators, and in particular the ILEC and cable network operators, do not discriminate against unaffiliated VoIP providers. Without Net neutrality safeguards, the number of VoIP providers for residential customers could be quickly reduced to two, and for business customers to one (because cable networks generally were not built to businesses).

VoIP, like other Internet services and the provision of circuit-switched services, requires interconnection with other network operators, and in particular the ILEC network, on reasonable terms and conditions in order to work. However, unlike circuit-switched services, which dedicate a particular pathway to each call (whether data or voice), IP services make more efficient use of the available capacity by sharing the network. As a result, IP based services like IPTV and VoIP, even more than traditional services, need nondiscrimination rules in order to be provided on a competitive basis. Thus, Net neutrality rules need to include not only interconnection, but also nondiscriminatory allocation of the transmission capacity and a prohibition on network operators' discriminating in favor of their own content or services (for example, by prioritizing their own content and services or degrading or block other providers content and services). Net neutrality rules also need to permit providers and end users to attach any device that does not harm the network, and to resell the transmission capacity obtained from the network operator as part of their own service.

Competition in voice services can best be accomplished by adopting rules that ensure competitors, whether they have their own facilities or not, are able to purchase access to existing networks on reasonable terms and conditions. The key measures needed to ensure reasonable and nondiscriminatory access by competitors to provide voice services include (1) access to elements of the network so that competitors can create their own services; (2) interconnection at any technically feasible point; (3) the ability to collocate equipment; (4) the ability to attach devices to the network; (5) the right to resell transmission between or among points on the network as part of their own voice, video, and data offerings to consumers; (6) the right to use any technology and offer any service that does not harm the network; (7) nondiscriminatory allocation of all transmission capacity on the network (i.e., elimination of cable rules that allow network operators to reserve capacity for their exclusive use); (8) reasonable terms and conditions for each of these measures; (9) a neutral arbitrator to resolve disputes, and (10) efficient enforcement mechanisms to execute these rights. These rules, taken together, would achieve Net neutrality and promote the provision of VoIP and other voice, video, and data offerings.

Adoption of these measures would not mean that the network operator could not charge consumers and other network operators more money for using more bandwidth. Nor would these measures prohibit a network operator from offering whatever additional services (for example information services or video programming) they chose. However, these measures would prevent network operators from using their ownership of the network to discriminate in favor of their own content and services. They would also prevent the network operator from unfairly cross-subsidizing their own transmission services by charging competitors higher rates for transmission or requiring consumers to buy unwanted video or information services in order to obtain transmission capacity.

Adoption of these measures will not discourage broadband deployment. In fact, they will do just the opposite. By readjusting inter-carrier compensation and access charges so that all traffic is treated equally you eliminate the arbitrage opportunities, and by prohibiting the network operators from reserving capacity and discriminating against other providers you re-align the network owner's financial interests. Adopting these rules will mean that to make more money from the network, the network operator will want to maximize the use of the network. By adding more capacity to the network, the network operator makes more money. As long as Congress and the FCC do not regulate the price that network operators charge for transmission, then network operators will be able to recover whatever Wall Street demands to support the investment in more capacity. Nondiscrimination avoids the need for price regulation, because whatever the network operator charges others for transmission capacity, the operator has to charge himself and his affiliates for the same transmission capacity. To allow the operator to do otherwise will result in price distortions that will reduce or eliminate competition.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TED STEVENS TO WALTER B. MCCORMICK, JR.

*Question 1.* If you were drafting this bill, what would you include in it that would help promote competition and what would you include that would force consumer prices down? We say that promoting competition is designed to bring it down. So, it may be there's one answer for that double question, but I don't think so. What would you include to promote competition and what would you include to force the prices down, really, bring them down?

Answer. USTelecom believes the committee draft should include provisions to stabilize Universal Service; to address intercarrier compensation; to unleash the power of the free market for traditional voice services now that they face vigorous competition; and to facilitate video competition.

Much has been made of the need to accelerate broadband deployment. In fact, the ability to deliver video via broadband is a major driver of deploying the next-generation networks necessary for providing consumers with advanced services, including broadband. Unfortunately, the franchising process—developed in an era of competitive bidding for single providers—creates needless delay and drives up costs, as local governments seek to add extraneous requirements such as municipal holiday decorations, street-side flower pots, and community facilities unrelated to the provision of video services. Due to the lack of any real competition in the video market, cable bills have soared—rising 86 percent in the past decade.

The GAO has studied the video market and drawn two conclusions:

1. *Cable television faces no effective competition.* Satellite television is not an acceptable alternative for most consumers, and fewer than 2 percent of the Nation's households have a choice of wireline video provider.

2. *Wireline competition causes prices to drop.* The GAO report found that in markets with competition from a wireline video provider, prices are 15 percent lower.

USTelecom members plan to provide video in thousands of communities, but the local franchising process, requiring individual negotiations in over 30,000 local franchise areas, creates needless delay. Negotiating locality by locality creates the very thing we are moving away from in other sectors, a patchwork of different regulations and requirements—the cost of which inevitably burdens consumers.

If Congress fails to reform this outdated process, consumers will foot the bill, to the tune of billions of dollars annually. In one recent study, economists found that a one year delay in enacting franchise reform will cost consumers nationwide $8 billion.

*Question 2.* If Congress enacts franchise reform, how quickly will your companies deploy video services? Will the time frame be the same for small and mid-size carriers and what does this mean for rural areas?

Answer. Should Congress approve franchise reform this year, it will accelerate the deployment schedule nationwide, because local franchising creates a bottleneck taking 1½ to 2 years to complete. Some of our members, both large and small, would begin delivering video to customers almost immediately. For example, Verizon has installed fiber optic cable in dozens of communities and could begin service as soon as the franchise is received. Likewise, in the Middle Tennessee area, thousands of citizens could begin receiving video service immediately; video service is already available on their network but must be confined to those communities that have granted a franchise to the local co-op telephone company.

A number of our members have seen uncertainty in broadband investment due to the uncertainty of the franchising process, but they would begin investing promptly in preparation for going to market with video services.

More importantly, franchise reform will particularly aid small and mid-size carriers in deploying broadband in their communities. We know from experience that video drives broadband deployment. Thus franchise reform will enable operators in rural areas to be more assured of a video revenue stream as they provide broadband, accelerating deployment significantly.

For those rural operators who are acutely dependent upon revenue streams from Universal Service and intercarrier compensation, stabilization of Universal Service, reform of intercarrier compensation, and improved access to a reliable source of capital such as the RUS loan program are essential to accelerated broadband deployment. As a side benefit, video revenue streams may temper demands on the Universal Service Fund, enabling some of these funds to be used for even more sparsely populated areas that under no circumstance could ever support services from end user and intercarrier revenues.

For all our member companies, national franchising would dramatically improve their ability to invest in broadband network architecture.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TRENT LOTT TO WALTER B. MCCORMICK, JR.

*Question 1.* I know this Committee has spent a lot of time talking about video competition, but what can we do to ensure there is healthy competition in the voice marketplace?

Answer. In 1996, some important first steps were taken to end government-managed competition. However, since then, the competitive landscape has changed dramatically and much more must be done to create a marketplace controlled by supply and demand, rather than government bureaucrats.

Today we have vigorous cross-platform competition involving cable TV companies, on-line providers like Vonage and Sun Rocket, wireless companies, as well as ILEC and CLEC wireline providers. Due to this competition, Bell Operating Companies lost 4 million residential phone lines in 2005 alone.

Alone among these competitors, ILECs must comply with a wide variety of Federal and state regulations. For instance, in most states, we must file with state regulators BEFORE we can lower our prices to compete with a VoIP service provider. Typically, we have to provide 45-day notice to most competitors before our price changes take effect. We have to interconnect with all other providers and offer service for resale to competitors. These and a myriad of other regulations are legacies from the age of monopoly phone service. They apply to ILECs, but not to cable television companies or wireless providers.

Consumers pay a price for these legacy regulations—including higher prices.

We commend you for co-sponsoring S. 1504, the Broadband Consumer Choice Act, which is the best comprehensive legislation in the 109th Congress to create an open, consumer-controlled, free market for voice service. We believe enactment of S. 1504 would lead to a new era in which creativity and investment in the voice market would flourish.

*Question 2.* I have some real concerns about any provider cherry picking the wealthiest neighborhoods in my state while leaving the rest behind. There has been a lot of discussion about this in the context of franchise reform. Is there anything Congress can do to protect all consumers?

Answer. As USTelecom members seek to compete with a de facto monopoly, we urge the Committee to embrace a market-based approach which encourages more competition by granting relief from legacy regulation. As we have seen in the voice market, this strategy created an explosion in competition and significant price reductions.

The most important benefit Congress could provide to consumers is a lower bill for video services. Cable prices have risen 86 percent from 1995 to 2004—faster than almost any other consumer product except gasoline. The GAO found that wireline competition is virtually non-existent for cable companies, but where it exists, cable rates are at least 15 percent lower. A new Bank of America study found even larger declines. If you consider the amount a household spends annually on cable television, these are significant savings.

USTelecom members have every incentive to serve as many markets as possible. They are not developing a boutique product. Rather, they seek to enter tens of thousands of franchise areas to win a significant share of an $80 billion market. A high value customer is not necessarily a higher income customer. In fact, lower income residences have a higher propensity to purchase video services and are often located in more densely populated, less costly to serve areas.

Our companies have never engaged in red-lining, and they will not start when they enter the video market. The first broadband network our companies deployed was DSL. In seven years, more than 80 percent of telephone lines nationwide are DSL-capable. That was accomplished without a build-out requirement or a government mandate.

There are powerful market incentives to invest in network upgrades to accommodate broadband video. A larger percentage of Americans want advanced video more than Internet alone. Just look at cable rates compared to Internet-only rates. Research shows strong demand for video, without regard to household income. In fact, nearly 86 percent of households with a television are cable subscribers.

To the extent there is a role for government, we support the anti-redlining provisions in current law at 47 U.S.C. §(a)(3):

> In awarding a franchise or franchises, a franchising authority shall ensure that access to cable service is not denied to any group of potential residential cable subscribers because of the income of the residents of the local area in which such group resides.

While mandating build-out to an entire area may have made sense when cable entered as the de facto monopoly provider, it does not make sense with regard to new entrants. In fact, creating an all-or-nothing mandate would have the perverse effect of *slowing* deployment. Build-out arrangements have led companies to carefully select which markets to enter and avoid other areas entirely.

Imposing build out requirements on our deployments when we've barely begun adds to the tremendous risks and costs we face in a market where cable is already

dominant. Capital investors prefer the path of least regulatory resistance. And there is no reason to send the wrong message to Wall Street when the evidence shows that build-out mandates are unnecessary and counterproductive.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TED STEVENS TO STEVE LARGENT

*Question 1.* If you were drafting this bill, what would you include in it that would help promote competition and what would you include that would force consumer prices down?

Answer. In 1993 Congress made the wise decision to create a competitive environment for wireless services and to regulate only in limited instances. That decision has proven to be enormously successful. Since that time competition has dramatically intensified and the natural byproduct of competition, lower prices, is today enjoyed by more than 200 million wireless subscribers. CTIA therefore believes it is essential that any telecom legislation remain true to this established framework and take any steps necessary to prevent encroachment by state legislatures that threatens the success of the past 13 years.

Accordingly, the most effective guarantor of true competition and lower prices, and thus CTIA's chief legislative recommendation to this Committee, is the inclusion of clear language that creates a national framework for wireless and preempts state action. A patchwork of disparate state regulations will hinder the deployment of advanced networks that bring innovative services to consumers.

A national framework for the wireless industry is both logical and necessary. Because wireless services are not confined by geographical boundaries, and because wireless services are with growing frequency global in nature, it should logically be examined at the national level rather than state by state. And if the wireless industry is to continue to invest in network expansion and raise the needed capital, it is necessary to avoid the uncertainty created by inconsistent regulations at the state level.

Additionally, CTIA would recommend a few other measures as well that would ensure continued competition. Spectrum is a valuable and finite resource. It should therefore be allocated in a predictable and timely manner and underutilized spectrum should be reclaimed and reallocated for optimal use. Further, timely and efficient tower siting process should be implemented so that networks can be appropriately expanded to meet the demands of the public. Finally, fair interconnection rules should be established so that wireless carriers are not subjected to unreasonably high rates by those who have exclusive control of the networks to which wireless carriers must have access.

CTIA believes that implementation of these recommendations will assure continued competition, innovation, and consumer benefits in the wireless space. Even more, it will allow the industry to flourish as a competitive force in the broadband market. This can only be achieved, however, if its unique characteristics of mobility and accessibility are acknowledged and given separate legislative consideration in the manner we have described. A blanket application of legacy regulations on the wireless industry which were previously tailored to other parts of the communications industry will stifle innovation and inhibit true competition in telecommunications.

*Question 2.* Small rural carriers have complained about their ability to negotiate roaming agreements with the national wireless companies. In fact, when former FCC Chairman Powell visited Alaska his plane went off the runway in an Eskimo village. He whipped out his cell phone but it didn't work. No roaming. How should Congress address this issue?

Answer. Based upon a proven record of success in a limited regulatory environment, CTIA, as the voice of the wireless industry, strongly believes that Congress should regulate only in instances where public health and safety are at issue or when there is clear evidence of market failure. We believe that in the case of roaming agreements neither of these elements exist.

CTIA continues to work with member companies on this issue to identify and resolve problems that may arise. Based on what we have learned, we do not believe congressional action is necessary. Rather, CTIA believes that commercial negotiations in the marketplace will lead to far better solutions than having Congress step into a myriad of circumstances that are constantly changing.

This may take longer in some locations because of geographic considerations or unique business plans, but as networks are continually expanded, and technology is constantly changing, carriers will have to continually re-balance the needs of their own particular business situations. Additionally, we should be wary of significant

unintended consequences that could reduce incentives to build-out robust competitive networks, and recognize there may be technical considerations of network air interface differences that may make roaming more difficult or even impossible to achieve in some situations.

*Question 3.* Wireless service has gained rapid adoption from consumers. As broadband services gain popularity, are wireless services going to be able to compete effectively against wireline providers in that space?

Answer. As this question correctly notes, wireless services have enjoyed unprecedented consumer acceptance in daily life. This is a direct result of the sprint toward innovation necessitated by the hypercompetition that has been the hallmark of the industry since 1993. This innovation will also carry the industry into the broadband market and allow it to compete effectively against wireline providers.

This desired result, however, is based on a legislative and regulatory environment that does not automatically saddle the wireless industry with rules that may be appropriate for other parts of the communications industry. Rather, it is paramount that the characteristics of mobility and ubiquity that are unique to wireless are given special consideration. The wireless broadband market is a nascent but growing segment of the broadband market and the leadership of this Committee in freeing up the valuable spectrum in the 700 MHZ band will be instrumental in allowing for continued growth of advanced wireless networks. When this spectrum becomes available the wireless industry will distinguish itself through mobile broadband services and become a true competitor to the traditional wireline companies by offering customers the types of information and service they demand "on the go." With the assistance of national preemption deregulatory legislation that allows market forces to work, the wireless industry looks forward to providing all of the voice, video, and date services that its subscribers demand.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TRENT LOTT TO STEVE LARGENT

*Question 1.* I know this Committee has spent a lot of time talking about video competition, but what can we do to ensure there is healthy competition in the voice marketplace?

Answer. As CTIA noted in its response to a similar question from Chairman Stevens, in 1993 Congress made the wise decision to create a competitive environment for wireless services and to regulate only in limited instances. That decision has proven to be enormously successful. Since that time competition has dramatically intensified and the natural byproduct of competition, lower prices, is today enjoyed by more than 200 million wireless subscribers. CTIA therefore believes it is essential that any telecom legislation remain true to this established framework and take any steps necessary to prevent encroachment by state legislatures that threatens the success of the past 13 years.

Accordingly, the most effective guarantor of true competition and lower prices, and thus CTIA's chief legislative recommendation to this Committee, is the inclusion of clear language that creates a national legislative framework for wireless and preempts state action. A patchwork of disparate state regulations will hinder the deployment of advanced networks that bring innovative services to consumers.

A national framework for the wireless industry is both logical and necessary. Because wireless services are not confined by geographical boundaries, and because wireless services are with growing frequency global in nature, it should logically be examined at the national level rather than state by state. And if the wireless industry is to continue to invest in network expansion and raise the needed capital, it is necessary to avoid the uncertainty created by inconsistent regulations at the state level.

Additionally, CTIA would recommend the implementation of a timely and efficient tower siting process so that networks can be appropriately expanded to meet the demands of the public. Finally, fair interconnection rules should be established so that wireless carriers are not subjected to unreasonably high rates by those who have exclusive control of the networks to which wireless carriers must have access.

CTIA believes that implementation of these recommendations will assure continued competition, innovation, and consumer benefits in the wireless space. Even more, it will allow the industry to flourish as a competitive force in the broadband market. This can only be achieved, however, if its unique characteristics of mobility and accessibility are acknowledged and given separate legislative consideration in the manner we have described. A blanket application on wireless of legacy regulations previously tailored to traditional wireline industries will stifle innovation and inhibit true competition in telecommunications.

*Question 2.* I have real concerns about any provider cherry picking the wealthiest neighborhoods in my state while leaving the rest behind. There has been a lot of discussion about this in the context of franchise reform. Is there anything Congress can do to protect all consumers?

Answer. In CTIA's view the issue of franchise reform is not applicable to the wireless industry. By contrast with other segments of the telecommunications industry, wireless companies acquire their "franchises" through the auction process conducted by the FCC. Obtaining licenses so that carriers can operate in a given area requires enormous financial commitments and thus provides ample incentives to maximize the use of scarce spectrum resources. The wireless industry has always met those obligations and indeed would do so even without these mandates, as evidenced by the more than 183,000 cell sites that have been deployed throughout the country. The inherent mobility of wireless services and their broad demographic appeal have driven wireless carriers to create ever broader coverage areas, as demonstrated by the record of the wireless industry over the past 13 years of meeting and exceeding the needs and demands of its customers.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TED STEVENS TO JERRY ELLIG, PH.D.

*Question 1.* If you were drafting this bill what would you include in it that would help promote competition and what would you include that would force consumer prices down? We say that promoting competition is designed to bring it down. So, it may be there's one answer for that double question, but I don't think so. What would you include to promote competition and what would you include to force the prices down, really, bring them down?

Answer. The most important thing Congress can do to promote sustainable competition is to adopt policies that facilitate the creation of multiple conduits through which customers can obtain a variety of voice, data, video, and other services. As I mentioned in my testimony, two of the most significant opportunities are (1) removal of video franchising as a barrier to competitive entry, and (2) continued movement toward a market-based spectrum policy that will make more spectrum available for wireless services. These measures will help ensure that multiple conduits are available to as many consumers as quickly as possible.

Experience suggests that we can usually expect competition to generate substantial price reductions and quality improvements. In cable TV, for example, 20 years of economic research consistently demonstrates that prices are 15–20 percent lower, and the number of channels is larger, in markets with two wireline video providers.[1] Competition in long-distance telephone service substantially reduced long-distance rates, even after accounting for long-distance access charge reductions mandated by the Federal Communications Commission.[2] The explosion of competition in wireless communications, triggered when Congress made an additional 120 MHz of spectrum available in 1993, led to several years of double-digit reductions in the per-minute price of wireless service.[3] More recent years have seen significant new wireless services and features, such as camera phones, Internet access via PDAs, and wireless broadband cards. In all of these examples, the principal and most effective form of competition consists of entrants who made substantial investments in building their own networks.

Competition can benefit consumers even when it does not generate price reductions.

If a monopoly is providing only a low-priced, low-quality service, and many consumers would prefer a higher-priced, higher quality service, then competition might increase prices while simultaneously increasing quality. Consumers, however, would be better off as a result. Competition ensures that consumers receive the combination of price, quality, and innovative new services that they would most prefer.

Alternatively, if a regulated monopoly is selling one service at a price that is below cost and selling other services at prices that exceed costs, then competition may lead to a price increase for the service sold below cost, coupled with reduced

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[1] Jerry Brito and Jerry Ellig, Public Interest Comment on Video Franchising, submitted to the Federal Communications Commission (Feb. 13, 2006), pp. 7–11, available at *http://www.mercatus.org/pdf/materials/1539.pdf.*

[2] Jerry Ellig, "Intercarrier Compensation and Consumer Welfare," *University of Illinois Journal of Law, Technology & Policy* 2005:1 (Spring ), pp. 98–99.

[3] Robert W. Crandall and Jerry A. Hausman, "Competition in U.S. Telecommunciations Services: Effects of the 1996 Legislation," in Sam Peltzman and Clifford Winston (eds.), *Deregulation of Network Industries: What's Next?* (AEI-Brookings Joint Center for Regulatory Studies, 2000), pp. 102–105.

prices for the services sold at prices that exceed costs. Consumers who used only the below-cost service might be worse off as a result of competition, but the consumers who had been over-charged for other services would be better off. Overall consumer welfare would increase, because prices would more accurately reflect the actual cost of service. This is essentially what has happened in long-distance telephone service, where substitution of the Federal subscriber line charge for excessive per-minute access rates increased overall economic welfare by between $8 billion and $15 billion annually between 1985 and 1992.[4]

In short, we should be cautious about an exclusive focus on price when quality is important to consumers or when regulation has held some prices below cost. Even in those cases, however, competition can lead to price reductions for some services.

*Question 2.* You have stressed the importance of encouraging competition unfettered by regulation, but is it sometimes necessary to treat similar services differently? For instance, satellite providers don't pay a franchise fee but they don't use the rights-of-way either. Is there a problem with those types of distinctions?"

Answer. Firms that use the public rights-of-way to provide communications services should pay fees that promote efficient use and management of the public rights-of-way. The appropriate fee depends on what kinds of costs the firm's use of the rights-of-way imposes on the public, in terms of congestion on poles, excavation of streets, and similar factors.

Since satellite does not impose these costs, it would be inappropriate to charge satellite a franchise fee. For similar reasons, it would not be appropriate to charge wireless firms a franchise fee if they used some of their spectrum to provide video services. This does not amount to treating a competitor differently. Rather, the competitor is simply not charged for using something that it does not use.

Having said that, I would also like to point out that the wireline video providers probably have a legitimate complaint about franchise fees. It is likely that the current maximum 5 percent franchise fee is quite excessive, compared to the costs that cable companies, broadband service providers, and telephone companies impose on the public when they use the rights-of-way. Out of approximately 175 local governments that filed comments in the FCC's video franchising proceeding, only three reported franchise fees substantially different from 5 percent.[5] Data on the actual costs imposed by cable firms' use of public rights-of-way are sketchy, but a study of Berkeley, CA, found that these costs amounted to only $30,000 annually.[6] Other potential video entrants, such as incumbent phone companies and electric utilities that could use broadband over powerlines to transmit video, already have arrangements to use the public rights-of-way for other purposes. The additional costs they might impose on the public by adding video services are likely small.

Firms that do not use the public rights-of-way should not have to pay local governments for something they do not use. However, the excessive franchise fees paid by cable, telephone, and electric utilities most likely distort competition, and they surely increase consumer costs. Since franchise fees represent an increase in marginal costs, it is likely that they are passed right through to consumers.[7] The pro-consumer solution is to find a way to reduce franchise fees so that they reflect the actual costs that the franchisees create for the public when they use the public rights-of-way.

On a more general level, these two questions ask whether policymakers should seek to "level the playing field" by removing artificial distinctions between competitors created by public policy. The "level playing field" is an attractive metaphor that appeals to our sense of fairness. But not all "level playing fields" affect consumers equally.

One can level the playing field either by imposing all of the regulations and requirements faced by each competitor on all, or by removing most of them and then making the remaining ones competitively neutral. For example, Congress might change existing law so that all voice, data, and video services pay a 5 percent franchise fee to local governments, make contributions to the Federal Universal Service Fund, and pay the Federal Government some upfront fee before they can enter the

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[4] Jerry Ellig, "Costs and Consequences of Federal Telecommunications Regulations," *Federal Communicaitons Law Journal* 58:1 (Jan. 2006), pp. 53–54, available at *http://www.law.indiana.edu/fclj/pubs/v58/no1/ElligPDF.pdf*.

[5] Montrose, CO, White, SD, and Esopus, NY each charge 3 percent. See Jerry Brito and Jerry Ellig, "Video Killed the Franchise Star: The Consumer Cost of Cable Franchising and Proposed Policy Alternatives," SSRN Working Paper (March 2006), p. 18, available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=893606*.

[6] Thomas W. Hazlett, "Cable TV Franchises as Barriers to Video Competition," George Mason University Law and Economics Research Paper Series 06–06, p. 17, available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=889406*.

[7] For a more detailed explanation, see Brito and Ellig (2006), pp. 17–18.

market (as the wireless firms must do when they purchase spectrum). The playing field might be level, but consumers would pay substantially more for these services than they do now. Alternatively, policymakers could level the playing field by:

(1) requiring that local governments charge voice, data, or video service providers a franchise or other fee no greater than the costs that their use of the public rights-of-way actually imposes on the public,

(2) funding Universal Service through a phone-number-based charge, and

(3) making a large quantity of spectrum available for flexible use, which might result in less revenue from spectrum auctions but would substantially increase competition and consumer welfare.

From a consumer perspective, this second "level playing field" is much preferable to one in which all companies bear every burden currently borne only by some.

Finally, I strongly suggest that a fully "level playing field" should *not* be a prerequisite before policymakers allow new competitors to enter a market. One of the benefits of competition is that it helps reveal artificial advantages or disadvantages that public policy confers on some competitors, and it creates incentives to eliminate them. Competition, therefore, is an important tool that helps policymakers identify when the playing field is *not* level and find a pro-consumer remedy.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TRENT LOTT TO JERRY ELLIG, PH.D.

*Question 1.* I know this Committee has spent a lot of time talking about video competition, but what can we do to ensure there is healthy competition in the voice marketplace?

Answer. In the most general terms, the best way Congress can ensure healthy competition in voice service is to ensure that multiple conduits capable of delivering multiple services (including voice) are available to consumers. (I elaborated on this point in answering Chairman Stevens' first question.)

One additional, significant barrier to competition solely in voice service is the fact that many states still require incumbent phone companies to sell basic local service at a regulated price that is below the incremental cost of service in many markets. In Texas, for example, Robert Crandall and I found that only about 5 percent of the four largest incumbents' residential lines are sold at prices that cover long-run incremental costs.[1] As a result, new competitors have had to find a way to compete against incumbents who are forced by regulation to sell local service below cost in many places. Some temporarily succeeded by convincing regulators to force the price of the unbundled network element platform even further below cost than the regulated retail price of local telephone service. Sustainable competition, however, came only from competitors who could introduce a lower-cost technology (such as Voice over Internet Protocol), offer a quality attribute that wireline phone service could not match (such as the portability offered by wireless), or sell a package of services at a price that covered the cost of the whole package (as cable, wireless, "broadband service providers," and facilities-based competitors using only some of the incumbent's network elements have done).[2]

Congress could arguably prohibit states from setting rates for local telephone service below cost, because such price regulation interferes with the Federal goal of promoting competition in telecommunications. However, Congress may be understandably reluctant to interfere with state regulation of local telephone rates. The next best option would be for Congress to support, or at least avoid undermining, any FCC initiative to increase or deregulate the Federal subscriber line charge, which helps bring the price of local telephone service closer to cost.[3]

There are, of course, some very rural markets in which cost-based pricing might make voice service more expensive than policymakers feel is desirable. Federal Universal Service policy is intended to promote affordability in these markets. The most important thing Congress can do to promote competition in high-cost markets receiving Universal Service support is to make the support competitively neutral, and structure the support so that it creates incentives for continuous improvement and cost reduction. Universal service programs should have goals that are defined explicitly enough to guide the design of the programs. They should also have perform-

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[1] Robert W. Crandall and Jerry Ellig, "Texas Telecommunications: Everything's Dynamic Except the Prices," Texas Public Policy Foundation Research Report (Jan. 2005), available at *http://www.texaspolicy.com/pdf/2005–01-telecom.pdf.*

[2] *Id.* , pp. 117–118.

[3] The FCC has discussed increasing or deregulating the Federal subscriber line charge in its proceeding on intercarrier compensation, discussed in Ellig, *supra* note 2, pp. 116–118.

ance measures that identify how well the programs are accomplishing the goals that Congress established. [4]

*Question 2.* I have some real concerns about any provider cherry picking the wealthiest neighborhoods in my state while leaving the rest behind. There has been a lot of discussion about this in the context of franchise reform. Is there anything Congress can do to protect all consumers?

Incumbent monopolists frequently allege that competitors will "cherry pick" as a justification for preventing entry or imposing costly requirements that will raise competitors' costs. A common justification for requiring new entrants to serve all markets served by an incumbent firm is that "cream-skimming" in the most lucrative markets would erode the profits that subsidize prices in less lucrative markets. The less lucrative markets may be higher cost, or they may consist of consumers who buy only a basic service package. According to this theory, if the new entrant takes the "cream," the incumbent will have to raise prices to its remaining customers, or perhaps even discontinue service to the unprofitable customers.

Whatever the merits of the cream-skimming argument in theory, there are two practical reasons that it is not applicable to contemporary cable markets.

First, the cream-skimming theory requires that some customers pay prices that are below the incremental cost of serving them. These are the customers in danger of paying higher prices or losing service if the incumbent loses some of its profits from the more lucrative customers. I know of no economic studies showing that cable companies currently sell video, broadband, or telephone service to any subscribers at prices that fail to cover the incremental costs of serving those subscribers. As long as prices cover the incremental costs of serving a subscriber or a group of subscribers, they make a contribution to covering the fixed costs of the cable system. These customers may be *less* profitable than other customers, but they are not *un*profitable. As a result, there is no reason for the cable company to stop serving them just because it loses some of its more profitable customers. Indeed, if the less profitable customers are willing to pay a price that covers the incremental cost of serving them, then new entrants would also eventually extend service to them, and competition would likely lower their cable rates too.

Second, the theory that the incumbent deprived of the "cream" will raise prices to other customers makes sense only if regulation effectively constrains the prices these customers pay. But cable rates are effectively deregulated, because 90 percent of subscribers purchase "expanded basic" service, whose price is not regulated. [5]

An incumbent unconstrained by regulation will charge whatever price it believes the market will bear (taking into account concerns such as its reputation for fair dealing and the possibility that a higher price might attract competition). Such an incumbent is already charging its customers the most profitable price. A cable incumbent that lost customers to competition and then tried to increase prices on remaining customers would see its profits fall even further. Since cable rates are effectively unregulated, it is unlikely that cable companies are using profits from lucrative markets to subsidize the prices paid by customers in less profitable markets. Therefore, no consumers are harmed if new competitors are permitted to serve only part of the incumbent cable company's customers. Because noncompetitive portions of the jurisdiction will not see higher rates as a result of competition elsewhere, there is no reasonable justification for forcing new competitors to serve the incumbent's entire territory.

On the whole, I believe that concerns about "cherry picking," "redlining," and "cream-skimming" in cable stem from an inappropriate analogy with telephone service. Historically, regulation has forced phone companies to sell basic local service to many consumers at a price that is below the incremental cost of providing the service. Urban consumers, business customers, and long-distance users were overcharged to provide this subsidy. Cable companies, on the other hand, do not face effective rate regulation that would force them to sell to some consumers at prices below incremental cost. Therefore, the conditions that lead to cherry-picking are simply not present in cable.

The principal effect of requirements intended to prevent "cherry-picking" would be to prevent or delay entry by new wireline cable competitors.

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[4] Additional ideas on improving the effectiveness of Universal Service programs can be found in a series of comments that Mercatus Distinguished Visiting Scholar Maurice McTigue and I have filed in the FCC's proceeding on management of Universal Service programs. These are available at *http://www.mercatus.org/regulatorystudies/article.php/1509.html.*

[5] Federal Communications Commission, *Report on Cable Industry Prices* (2005), p. 3.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TED STEVENS TO DR. MARK COOPER

*Question 1.* If you were drafting this bill what would you include in it that would help promote competition and what would you include that would force consumer prices down? We say that promoting competition is designed to bring it down. So, it may be there's one answer for that double question, but I don't think so. What would you include to promote competition and what would you include to force the prices down, really, bring them down?

Answer. The key to promoting competition is to recognize where vigorous competition is possible and where it is not. Competition at the level of the underlying local network facilities (last mile transmission, local switching and middle mile transport) is likely to be very feeble because of economies of scale and scope. This is especially true for less urban and rural areas. Competition for content, applications and services that flow over the communications infrastructure can be much more robust because they are less capital intensive and can cover a larger market area (i.e., they are national and global in scope). This analysis argues for strong network neutrality and interconnection provisions in the bill. Without these guarantees, the primary arena for vigorous competition and price reduction will be constrained if not fully undermined.

We can maximize competition and discipline prices in consumer access charges by ensuring that the local network bottleneck is open and nondiscriminatory. The key point is to break the wireline duopoly of cable and telephone giants by restoring competition in the market for residential and business connectivity. This is precisely how the Internet grew under the Communication Act of 1934, and the digital age policy established for data transmission by the Federal Communications Commission in the *Computer Inquiries*. In the event that particular types of services—such as cable services—will be dominated by a duopoly in each market, the law should require reasonable build-out of the networks to ensure that every American household (not just the urban and the affluent) reaps the benefits of video competition.

In addition, as I noted in my testimony, Congress can promote the goals of competition and Universal Service simultaneously by making available more spectrum for unlicensed uses and protecting the right of local governments to build last mile networks. This is especially true in less urban and rural areas, as discussed in my answer to the next question. To truly address our alarming broadband digital divide and lack of global competitiveness, we must facilitate low-cost wireless technologies to offer universal, affordable broadband service.

*Question 2.* Should spectrum sales be broken down into smaller geographic areas so small carriers can afford to bid on the spectrum and to increase competition in the less urban and rural areas?

Answer. The issue is not geographic area, but population served. Creating smaller areas does not solve the business problem, especially in rural areas, since the population served is too small to create a base for viable business. While smaller entities might be able to buy spectrum licenses, they would not have the subscriber base to build a sustainable business.

In less urban and rural areas, the best solution is to allow unlicensed access to the spectrum that is set aside for television, since it is vastly underutilized. I strongly support the Stevens and Allen bills that would facilitate this goal. Unlicensed Wifi and WiMax in these bands with more robust propagation characteristics can meet the needs of rural residents for the full range of communications service. Allowing unlicensed spectrum lowers the initial capital outlay dramatically and decentralizes the investment. Not only does the unlicensed approach save on the initial outlay for spectrum, but a much larger share of the investment necessary is decentralized in the communications equipment owned by the households (i.e., the smart radios that form the wireless network).

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TRENT LOTT TO DR. MARK COOPER

*Question 1.* I know this Committee has spent a lot of time talking about video competition, but what can we do to ensure there is healthy competition in the voice marketplace?

Answer. The key to promoting competition is to recognize where vigorous competition is possible and where it is not. Competition at the level of the underlying local network facilities (last mile transmission, local switching and middle mile transport) is likely to be very feeble because of economies of scale and scope. This is especially true for less urban and rural areas. Competition for applications and services that

flow over the communications infrastructure can be much more robust because they are less capital intensive and can cover a larger market area (i.e., they are national and global in scope).

We can maximize competition and discipline prices in consumer access charges by ensuring that the local network bottleneck is open and nondiscriminatory. The key point is to break the wireline duopoly of cable and telephone giants by restoring competition in the market for residential and business connectivity. This is precisely how the Internet grew under the Communication Act of 1934, and the digital age policy established for data transmission by the Federal Communications Commission in the *Computer Inquiries.* In the event that particular types of services—such as cable services—will be dominated by a duopoly in each market, the law should require reasonable build-out of the networks to ensure that every American household (not just the urban and the affluent) reaps the benefits of video competition.

Thus, vigorous competition in voice can only be ensured through voice over Internet protocol (VoIP) if the underlying facilities are made available on a nondiscriminatory basis. The facility owners prevent vigorous competition in voice by creating discriminatory quality of service differentials between affiliated and unaffiliated VoIP providers.

*Question 2.* I have some real concerns about any provider cherry picking the wealthiest neighborhoods in my state while leaving the rest behind. There has been a lot of discussion about this in the context of franchise reform. Is there anything Congress can do to protect all consumers?

Answer. Cherry picking (choosing to serve some customers or areas ) or redlining (refusing to serve some customers or areas) should not be allowed in the deployment of infrastructure facilities. Broadband communications networks are clearly the communications infrastructure of the 21st century. The Congress should impose reasonable build out requirements. Absent these requirements, a franchise reform bill will effectively codify the digital divide into statute—guaranteeing a future with digital have's and have not's. A duopoly of cable and telephone companies does not constitute competition, nor is it a free market. Good public policy aimed at bringing broadband to all Americans is the proper remedy to close the digital divide and rebuild our strength in global competition.

Additionally, Congress should reform the Universal Service Program. The 1996 Act envisioned an evolving level of service and it is time to include broadband in that definition. Broadband certainly meets the criteria specified in Section 254 of the 1996 Act, but it will be a lengthy process under current conditions. Congress would do well to recalibrate the national commitment to Universal Service, using the transition to broadband to reform contribution and distribution systems to increase efficiency and rationalize costs.

Congress can promote the goals of competition and Universal Service simultaneously by making available more spectrum for unlicensed uses and protecting the right of local governments to build last mile networks. This is especially true in less urban and rural areas.

In less urban and rural areas, the best solution is to allow unlicensed access to the spectrum that is set aside for television, since it is vastly underutilized. Unlicensed Wifi and WiMax in these bands with more robust propagation characteristics can meet the needs of rural residents for the full range of communications service. Allowing unlicensed spectrum lowers the initial capital outlay dramatically and decentralizes the investment. Not only does the unlicensed approach save on the initial outlay for spectrum, but a much larger share of the investment necessary is decentralized in the communications equipment owned by the households (i.e., the smart radios that form the wireless network).

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