



Moving Forward:

**Driving Investment and
Innovation While
Protecting Consumers**

January 15, 2009

Federal Communications Commission

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Introduction

Over the past several years, we have seen a telecommunications industry undergoing rapid and unprecedented change. In 2001, the Commission was still mired in the fights between local and long distance telephone providers. Television stations had barely started making plans to broadcast in digital. More people had wireline telephone service than wireless. Broadband connections were not widespread. Cable companies weren't offering voice service and telephone companies weren't offering video.

Today, ushered in by the broadband revolution, we have finally found the promised land of convergence. Telephone calls are made using the Internet and over cable systems. Television programs are watched whenever we want, are offered by telephone companies and are increasingly available on the Internet. Cable, wireless and traditional telephone companies all sell packages of minutes that don't differentiate between local and long distance.

There are over 260 million wireless subscribers, or twice as many as there are wireline subscribers. And cell phones are mini-computers. They take pictures, play songs and games, send e-mail, and hopefully will send and receive emergency messages in times of disaster.

Faced with such fast-paced technological change, the Commission under Chairman Kevin Martin has tried to make decisions based on a fundamental belief that a robust, competitive marketplace, not regulation, is ultimately the greatest protector of the public interest. Competition is the best method of delivering the benefits of choice, innovation, and affordability to American consumers. Competition drives prices down and spurs providers to improve service and create new products.

Government, however, still has an important role to play. The Commission has worked to create a regulatory environment that promoted investment and competition, and set the rules of the road so that players could compete on a level playing-field. The FCC has also stepped in when the marketplace didn't allow for sufficient competition to a former monopoly, when the market needed to be open to new entrants and technologies, or when larger societal goals such as ensuring the needs of public safety, fell outside the market's scope. Finally, the Commission also made sure that as the industry was transforming, average consumers didn't get left behind.

During Chairman Martin's tenure, the Federal Communications Commission has been focused on establishing the appropriate regulatory environment that achieves the right balance between two competing interests: (1) to encourage investment in communications infrastructure; and (2) to make sure consumers and innovation are not unintentionally or intentionally disadvantaged by the owners of that infrastructure. The Martin Commission has acted to level the playing field so that all entrants could fairly compete, facilitating increased investment. At the same time, we have been able to push for more open platforms to spur innovation and the consumer benefits of lower prices and improved services.

Promoting Broadband Deployment

Broadband deployment has been a top priority of the Commission over the past four years. Broadband technology is a key driver of economic and social growth. The ability to share increasing amounts of information, at greater and greater speeds, increases productivity, facilitates interstate commerce, and helps drive innovation. Moreover, broadband Internet access has the potential to affect almost every aspect of our lives — how we communicate with each other, where we work, how we educate our children, how we entertain ourselves, and how we receive our health care. To fully appreciate and take advantage of the Internet today, consumers need faster broadband connections.

Under Chairman Martin, the Commission has focused on creating a regulatory environment that promotes investment in broadband network infrastructure and competition. The Commission has removed legacy regulatory obstacles that discouraged such investment and slowed deployment. Moreover, to evaluate the progress it has made in promoting broadband and to better direct resources toward unserved and underserved areas, the Commission has updated its broadband data gathering program.

Eliminating Legacy Regulations and Encouraging Infrastructure Investment

In 2001, the communications industry was mired in a period of far-reaching decline. Old-style regulations placed on new investment and broadband services were part of the problem.

The Commission has promoted broadband deployment by eliminating inefficient and unnecessary legacy regulation. The Commission also deregulated all broadband services, establishing a level playing field, in which all companies are subject to the same basic rules.

In August 2005, the Commission substantially reduced regulation of broadband access, removing legacy regulations, like tariffs and price controls, which discouraged providers from investing in broadband networks. The Commission subsequently classified

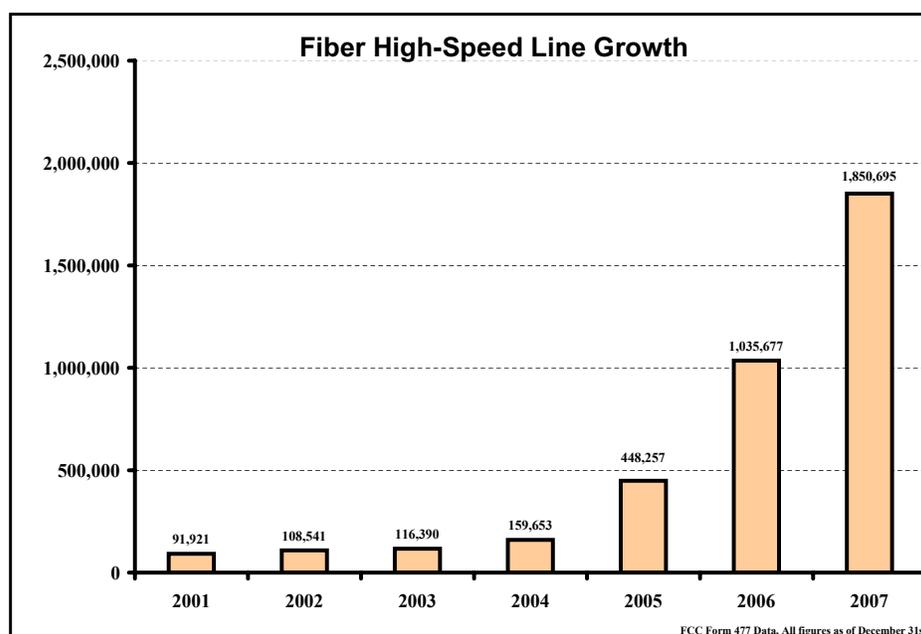
Promoting Broadband Deployment

Broadband-over-Power-Line and wireless broadband Internet access services as “information services” not subject to legacy regulations. These actions leveled the playing field among all operators in the provision of broadband Internet access services.

The Commission also removed wholesale unbundling requirements on new fiber investment by incumbent local exchange carriers—thus encouraging those carriers to invest in infrastructure in an environment free of economic regulation. Similarly, the Commission forbore from enforcing legacy Title II requirements and Computer-Inquiry requirements, such as tariff rules and price controls, on certain broadband enterprise services. In addition, the Commission streamlined the state and local franchise process for new entrants. The Commission also banned exclusive contracts in apartment buildings.

Investment in Broadband Infrastructure

The Commission’s broadband policies have led to increased investment in broadband infrastructure. Telecommunications companies expect to make \$50 billion in capital expenditures on broadband in 2008–2009.¹ Moreover, companies are increasingly investing in fiber. One company alone, Verizon, has indicated that it will spend up to \$23 billion to deploy its FiOS network throughout its service area.² And industry-wide spending on fiber-related telecommunications equipment is estimated to grow almost \$13.5 billion annually in the next three years.³ As a result of this investment, fiber is increasingly used across the United States for services from television, Internet access,

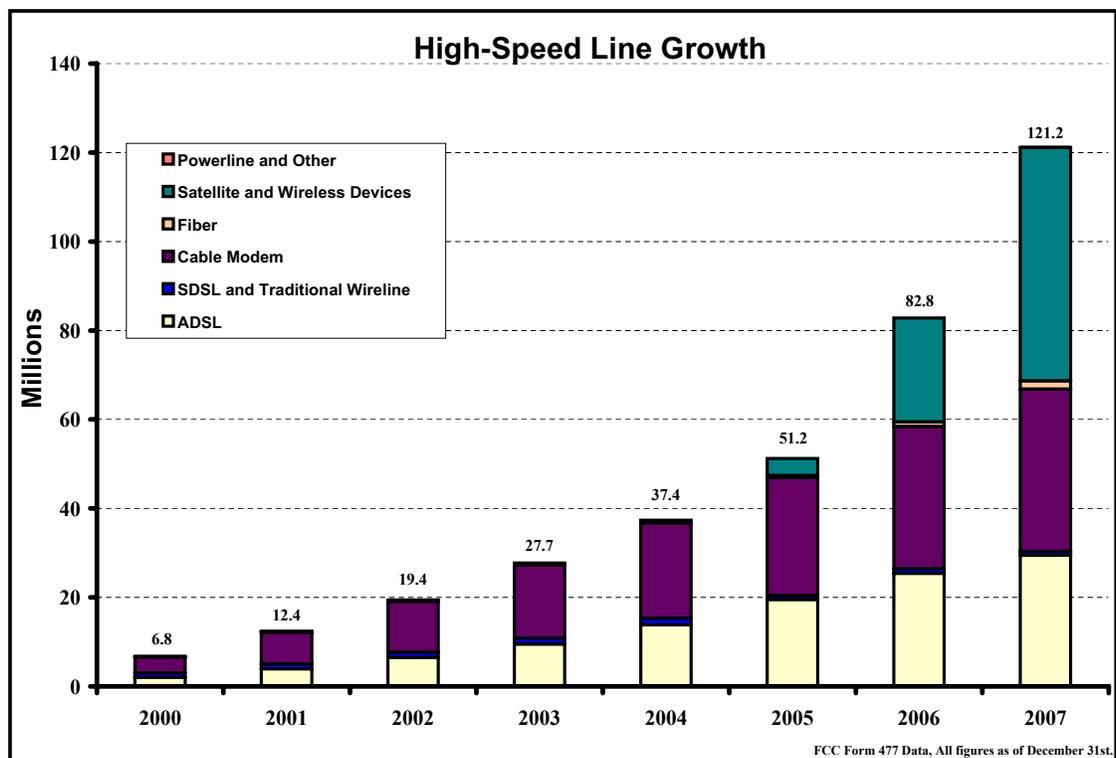


Promoting Broadband Deployment

telephony, security, and meter reading. The number of homes passed in the United States has increased from approximately 1.6 million in 2005 to over 13 million today. Nearly 4 million households have been connected (up from slightly over 200,000 in 2005). Video is now provided to approximately 2 million homes, up from well under 100,000 in 2005.⁴ The number of fiber lines has grown from just over 90 thousand in December 2001 to over 1.8 million in December 2007 (over 1900% growth).⁵

Increasing Broadband Subscription and Higher Speeds

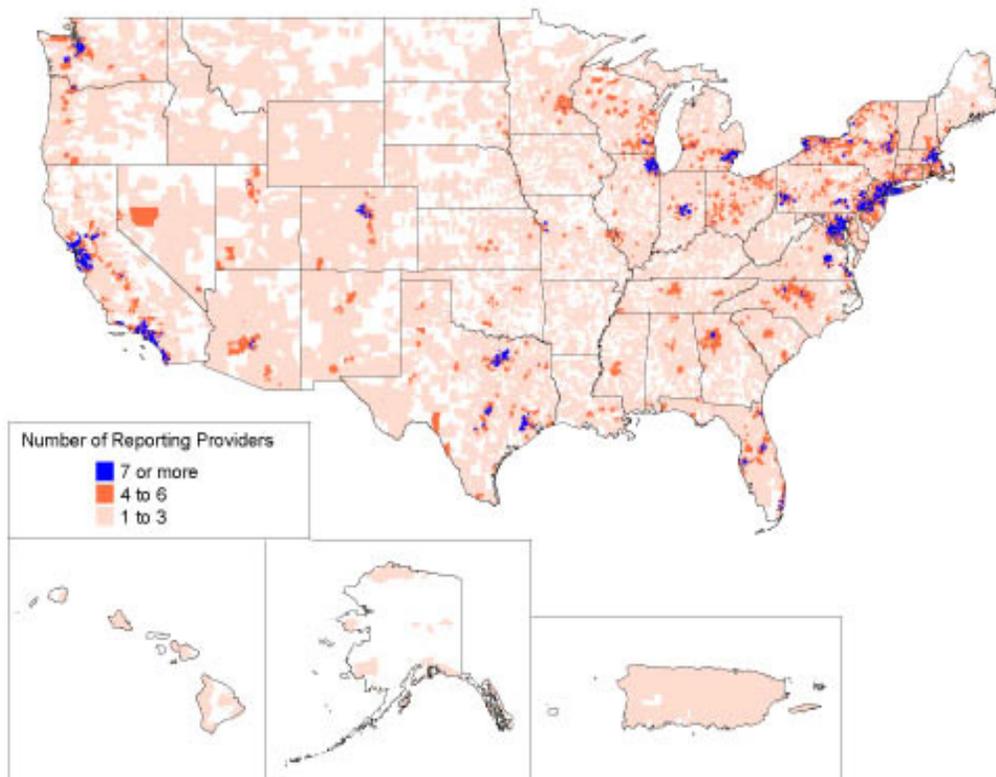
The Commission's actions to boost infrastructure investment have contributed significantly to the rapid increase in broadband subscribership. Since 2000, the number of high-speed lines has increased more than 1600 percent, from approximately 6.8 million lines in December 2000 to over 121 million lines in December 2007.⁶



Promoting Broadband Deployment

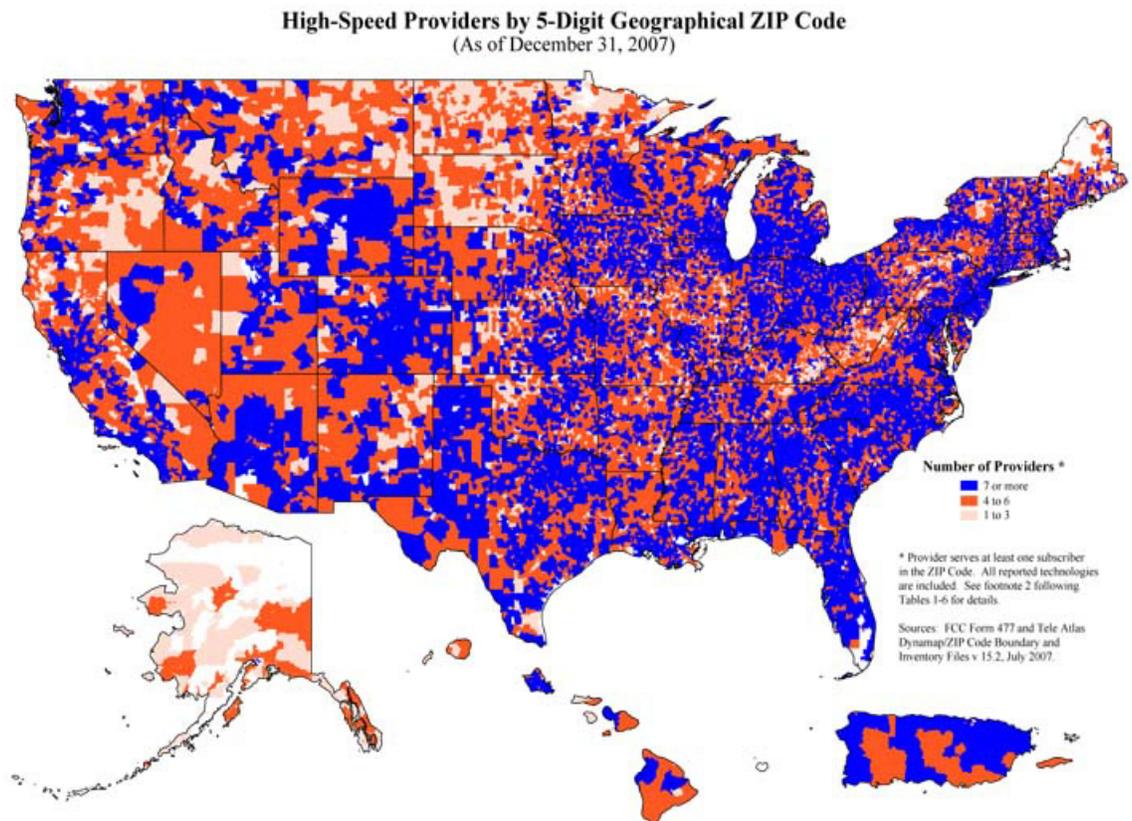
In 2000, almost 80 percent of the nation's geographic zip codes had three or fewer high-speed providers, with no high-speed provider in almost a third of all geographic zip codes.

High-Speed Providers by Zip Code
(As of December 31, 2000)



Promoting Broadband Deployment

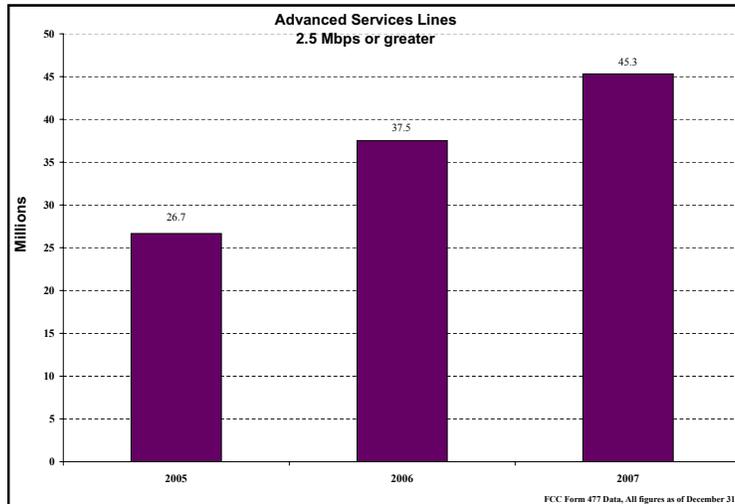
Contrast 2007, in which all but 62 of the nation's 30,152 geographic zip codes had at least one high-speed provider, and more than 50 percent had seven or more high-speed providers.



Prepared by the Federal Communications Commission,
Wireline Competition Bureau, Industry Analysis and Technology Division

Promoting Broadband Deployment

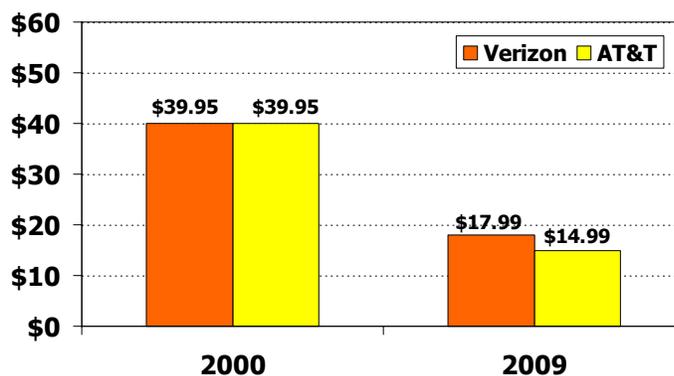
The number of broadband lines providing higher transmission speeds has also been increasing. From December 2005 to December 2007, the number of lines with transmission speeds greater than or equal to 2.5 mbps grew by 70 percent, from approximately 27 million lines to over 45 million lines.⁷



Lower Broadband Prices

As a result of the increased competition and investment resulting from the Commission's policies, we have seen both significant reductions in the price of broadband and significant increases in speed. Since 2000, the price of wireline broadband has decreased more than 50 percent.⁸

DSL Price Drop



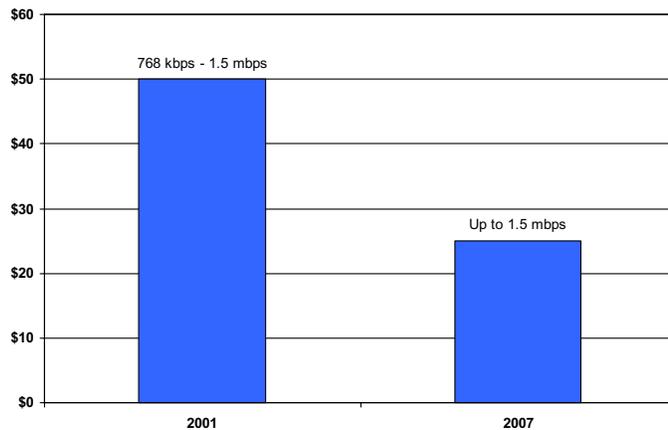
Source: Communications Daily, Feb. 15, 2000; Newsday, Dec. 4, 2000 and company Web sites 2009

Promoting Broadband Deployment

Furthermore, while it cost approximately \$50 in 2001 to obtain a 768 kbps connection, in 2007, \$50 could get you a connection with speeds up to 15 mbps. In that same period, speeds have increased, enabling consumers to purchase service that is over ten times faster than what was offered back in 2001.⁹

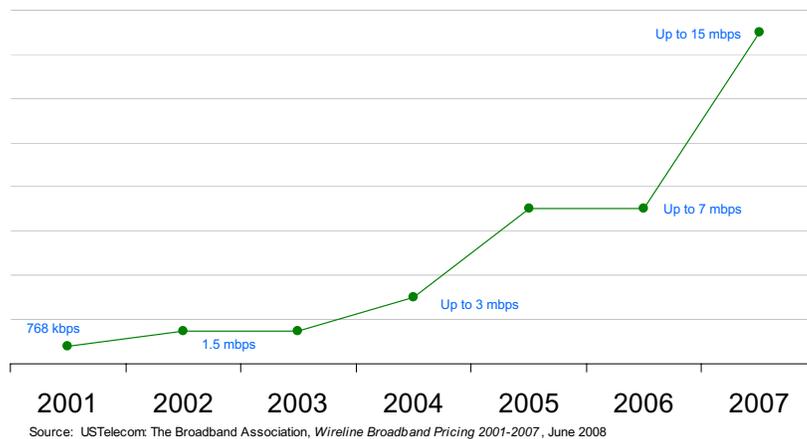
Wireline Broadband Prices and Speeds

Declining Prices, Increasing Speeds
(Maximum Advertised Price by Download Speed Tiers)



Wireline Broadband

Increasing Speeds for \$50
(Speeds based on Maximum Advertised Price Downstream Speed Tier)



As a result, the number of adult Internet users in the United States has increased from 127 million (64 percent of the adult population) in 2001 to 184 million (81 percent of the adult population) in 2008.¹⁰

Promoting Broadband Deployment

Understanding the State of Broadband in the United States

The Commission has worked to gain a better understanding of who has broadband and the nature of the broadband services being deployed in the marketplace. Recently, the Commission revised its broadband data gathering program in a way that significantly improves the utility and value of the data collected. Importantly, the Commission increased the speed of what is considered basic broadband from 200 kbps to 768 kbps. In addition to basic broadband, the Commission defined seven new upload and download speed tiers for reporting broadband subscribership data.

This new framework allows for finer distinctions among services with regard to their practical capabilities. The Commission also for the first time required carriers to report the number of subscribers in geographic units below the state level. The Commission’s choice of the census tract as the geographic reporting unit has the advantage that it enables the correlation of the collected broadband-subscribership data with a variety of demographic measures. This, in turn, will facilitate a better understanding of the demographic and economic factors that affect broadband adoption.

Reporting Broadband Connections: Speed Tiers

Old Tiers
Faster Direction
> 200 kbps, <2.5 mbps
≥ 2.5 mbps, <10 mbps
≥ 10 mbps, < 25 mbps
≥ 25mbps, < 100 mbps
≥ 100 mbps

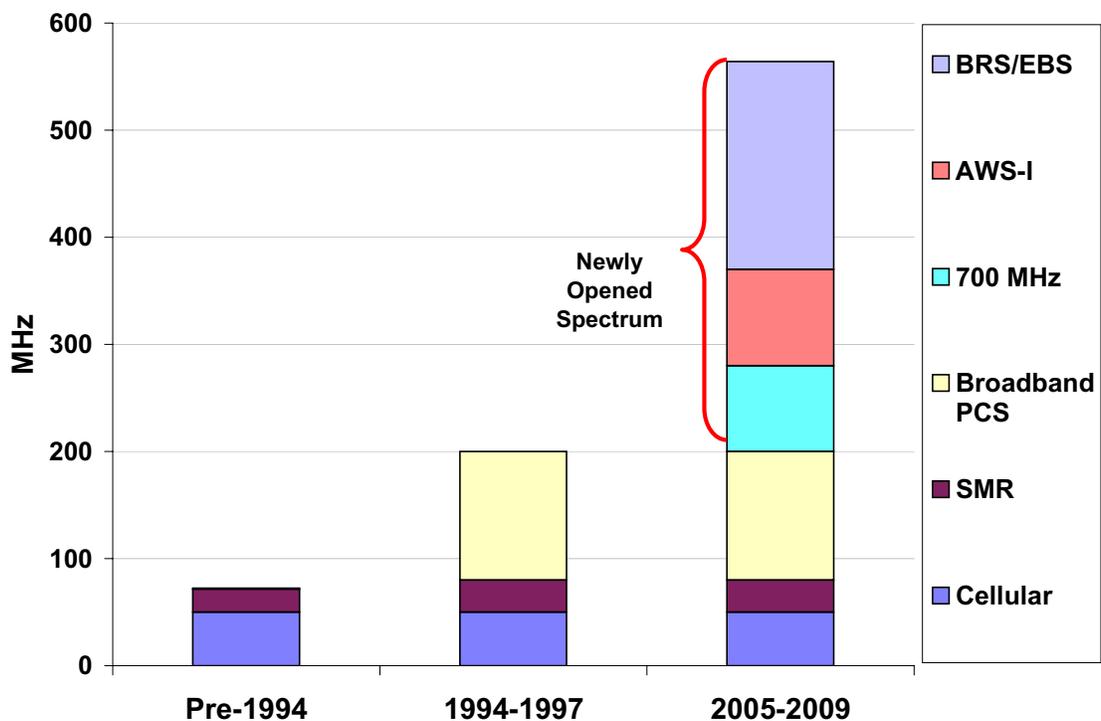
New Tiers	
Download	Upload
>200 kbps, < 768 kbps	< 200 kbps
	>200 kbps, < 768 kbps
≥ 768 kbps, < 1.5 mbps	≥ 768 kbps, < 1.5 mbps
≥ 1.5 mbps, < 3 mbps	≥ 1.5 mbps, < 3 mbps
≥ 3 mbps, < 6 mbps	≥ 3 mbps, < 6 mbps
≥ 6 mbps, < 10 mbps	≥ 6 mbps, < 10 mbps
≥ 10 mbps, < 25 mbps	≥ 10 mbps, < 25 mbps
≥ 25 mbps, < 100 mbps	≥ 25 mbps, < 100 mbps
≥ 100 mbps	≥ 100 mbps

Ushering in an Era of Wireless Broadband

Effective Spectrum Policies for Promotion of Wireless Broadband

Increasingly broadband is moving from a wireline to a wireless world. And wireless broadband uses spectrum. During Chairman Martin's tenure, the Commission promoted access to spectrum that will facilitate wireless broadband options for consumers. Specifically, the Commission has used spectrum auctions to efficiently and effectively make available as much spectrum as possible to put the next generation of wireless broadband devices into the hands and homes of consumers. All told, the Commission has made over 354 megahertz of spectrum available over the last four years for mobile wireless broadband services through auction and flexible use policies, which is a tremendous increase over the approximately 200 megahertz of spectrum that had previously been available for such services in the Cellular, Specialized Mobile Radio (SMR) and Broadband PCS bands.

Increase in Spectrum Available for Wireless Broadband Services



Source: FCC

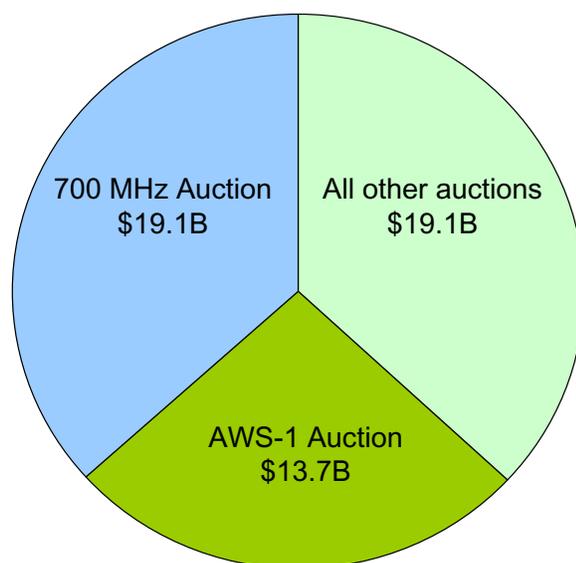
Ushering in an Era of Wireless Broadband

The Commission used various tools over recent years to open up this significant amount of spectrum. The Commission conducted rulemakings and spectrum license auctions in the 700 MHz and AWS-1 bands that have transformed these bands, previously occupied in part by federal spectrum users and analog television broadcasters. The Commission also approved the unlicensed use of the television (TV) “white spaces” spectrum, which represents is a significant victory for consumers. The Commission expects that everything from enhanced home broadband networks, to intelligent peer-to-peer devices, and even small communications networks will come into being in TV “white spaces.”

Putting Licensed Spectrum in the Marketplace

In fact, the 700 MHz and the AWS-1 auctions were the two most successful auctions in Commission history. The 700 MHz auction put an additional 62 MHz on the market and raised a record-breaking \$19.1 billion. In the AWS-1 auction 90 MHz was sold for \$13.7 billion.

Comparison of 700 MHz and AWS-1 Auction Revenues vs. All Others

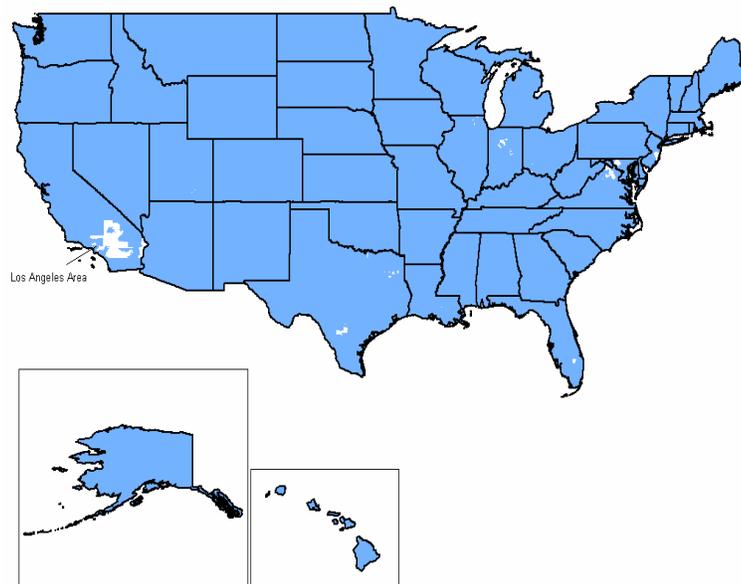


Note: 700 MHz Auction revenues do not account for bidding credits. (FCC, April 2008)

Ushering in an Era of Wireless Broadband

700 MHz band rules and auction. By making available new licenses for 52 megahertz of 700 MHz spectrum, the Commission made possible greater broadband penetration, which will provide more consumers with benefits from technological advancements.¹¹ The 700 MHz spectrum is especially well suited for wireless broadband because it can carry lots of data, penetrate walls easily, travel far distances, and do it with great efficiency and speed.

The Commission auctioned a total of 1098 licenses (Auction 73), with 4 licenses covering every location in the nation. The Commission licensed a variety of block sizes and geographic areas, allowing for broad participation by potential bidders with a variety of service plans and business models. Block sizes ranged from 6 to 22 megahertz. The geographic scope of licenses varied from 734 Cellular Market Areas (CMAs) in Block B to 12 Regional Economic Area Groupings in Block C. The auction of this 52 megahertz of 700 MHz spectrum has helped unleash previously latent potential in 18 megahertz of 700 MHz band spectrum that had previously been auctioned.



Note: Map includes 700 MHz A, B, and Upper C Block licenses in the 50 states won by bidders in areas without wired networks.

To ensure that as many people as possible have access to this wireless broadband service as quickly as possible, licensees in the 700 MHz band must meet stronger and more effective build out requirements for these wireless licenses, intended to promote better access to spectrum and broader deployment of broadband service, particularly to rural areas. In addition, to spur deployment in rural areas, holders of larger licenses must demonstrate that they meet the applicable benchmarks within each of a number of smaller

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geographic subdivisions of their license area. If a licensee fails to meet its interim performance benchmarks, the deadline for compliance with the end-of-term benchmark is accelerated by two years. If a licensee fails to meet the end-of-term benchmark, it will be subject to the Commission's "keep-what-you-use" policy, under which the unserved portions of the license area are reclaimed for future use by other service providers.

The Commission's 700 MHz auction brought spectrum ideally suited for wireless broadband Internet access to the market, with a bidder other than the incumbent DSL or cable provider winning 700 MHz spectrum in nearly every area in the country. Further, both nationwide incumbents that participated in the 700 MHz auction have announced they will deploy the very latest generation of wireless broadband services using this spectrum, which will operate at speeds competitive with the latest DSL and cable modem services.

Advanced Wireless Services (AWS-1) Rules and Auction. The Commission's service rules and auction process for the AWS-1 Band (1710-1755MHz and 2110-2155MHz) provided greater certainty to licensees with minimal regulatory intervention, thereby making possible greater benefits to consumers.

In 2005, the Commission modified the AWS-1 band plan to allow for smaller licenses. Over the course of two subsequent license auctions (Auction 66 and 78), the Commission offered and sold 1,122 licenses authorizing use of 90 megahertz throughout the entire nation. In fact, the Commission issued 6 licenses covering each and every location in the nation. The Commission created a variety of license types, with differing block sizes and geographic areas, allowing for broad participation by potential bidders with various service plans and business models. Block sizes ranged from 10 to 20 megahertz. The geographic scope of licenses varied from 734 Cellular Market Areas (CMAs) in Block A to 12 Regional Economic Area Groupings in Block F.

By 2008, wireless carriers began to deploy third generation (3G) wireless systems on AWS-1 spectrum. Thus, licensing 90 megahertz of AWS-1 spectrum furthered the availability of broadband access and increased competition in broadband services.

Revised BRS/EBS Rules. In addition, the Commission worked to transition the Broadband Radio Service (BRS) and the Educational Broadband Service (EBS) in the 2500-2690 MHz band to a new band plan suitable for advanced mobile broadband services. Aided by rule changes adopted in 2006, the transition has been completed in areas covering 86% of the United States population, and is already underway in areas covering an additional 8% of the population. Furthermore, Clearwire is using the band to provide Internet access in approximately fifty markets, and WiMAX service is being offered in the band in areas from Baltimore to Portland, Oregon, to rural Idaho. The Commission's actions opening up 194 megahertz of BRS/EBS spectrum for innovative mobile wireless technologies almost doubles the total spectrum available for such uses.

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The additional 354 megahertz of spectrum described above represents a substantial increase over the spectrum previously available for such services. Prior to 2005, the Commission made available approximately 206 megahertz in bands such as the Cellular, Specialized Mobile Radio (SMR) and Broadband PCS bands. (Of that amount, approximately 80 megahertz was made available prior to the advent of Commission spectrum license auctions in 1994, while 126 megahertz was made available between 1994-2004.)

Innovative Use of Unlicensed Spectrum

T*V White Spaces.* In addition, the Commission has dramatically increased spectrum on an unlicensed basis. In decisions issued in 2006 and 2008, the Commission adopted rules to enable unlicensed fixed and personal portable wireless devices to operate in the TV broadcast spectrum in what is referred to as “TV White Spaces.” The Commission’s action opening the white spaces will encourage the creation of a WiFi on steroids. It has the potential to improve wireless broadband connectivity and inspire an ever-widening array of new innovative Internet based products and services for consumers. The newly adopted Part 15 rules provide for unlicensed radio transmitters to operate in the TV broadcast television spectrum at locations where that spectrum is not being used by licensed services, making a significant amount of spectrum available for new and innovative products and services, including broadband data and other services for businesses and consumers. The rules are a culmination of several years of technical evaluation of TV devices and prototype unlicensed devices. The rules include many safeguards to prevent harmful interference to incumbent communications services, and are a conservative first step toward deployment of TV band devices.

Other Broadband Spectrum

3 *650-3700 MHz Band.* To facilitate the deployment of wireless broadband, the Commission has also established innovative services rules and realigned spectrum band plans. For example, the Commission finalized an innovative non-exclusive, nationwide licensing scheme for the 3650-3700 MHz band, which facilitates access to, and intensive use of, the spectrum for the provision of wireless broadband services. In 2007, the Commission began issuing licenses and registering links in the band for use with new high-speed, wireless local area networks and broadband Internet access operating equipment. Currently, there are 602 nationwide registrations and 1,407 registered links in the band.

This spectrum was available pursuant to a non-exclusive “light” licensing scheme and required operators to use equipment incorporating a contention-based protocol, *i.e.*, technology that permits multiple licensees to share spectrum by ensuring that all licensees have reasonable opportunity to operate without causing harmful interference to each

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other. The spectrum environment in the 3650-3700 MHz band is expected to encourage multiple entrants and stimulate the expansion of broadband service to rural and underserved areas.

Satellites. In the satellite sector, the Commission has acted to make use of allocated spectrum more rational, more efficient and responsive to consumer demands, including the demand for rural broadband connectivity. For example, the Commission adopted service rules in 2007 to open spectrum in the 17/24 GHz band to new satellite services. Additionally, the Commission adopted a Notice of Proposed Rulemaking that would enable Direct Broadcast Satellite (DBS) operators to operate new satellites between the DBS satellites currently in orbit. Final rules in this area could lead to increased competition for DBS services. The Commission also acted to grant Ancillary Terrestrial Component (ATC) authority to Mobile Satellite Service (MSS) operators to increase their ability to use their licensed spectrum more efficiently by allowing ground-based repeaters to strengthen satellite signals in places where it might be difficult to receive a signal directly from the satellite, such as mountainous or heavily forested areas, or between tall buildings in large urban areas. The Commission also made more spectrum available for the two 2 GHz-band mobile satellite service licensees, which will facilitate the provision of public safety and rural broadband services, and allow them to compete effectively in the market for mobile telecommunications services.

Other Licensed Spectrum. Ground work has also been laid to place even more spectrum in the hands of the marketplace, including up to 25 MHz of additional spectrum in the AWS-3 band. Similarly, we have worked to resolve the longstanding issues regarding the WCS and SDARS bands, thus opening this spectrum for broadband deployments. In each instance, we have attempted carefully to balance the rights of incumbent spectrum holders with the need to encourage the technological innovation that will facilitate the more efficient use of spectrum, notably in adjacent bands which previously could not be used.

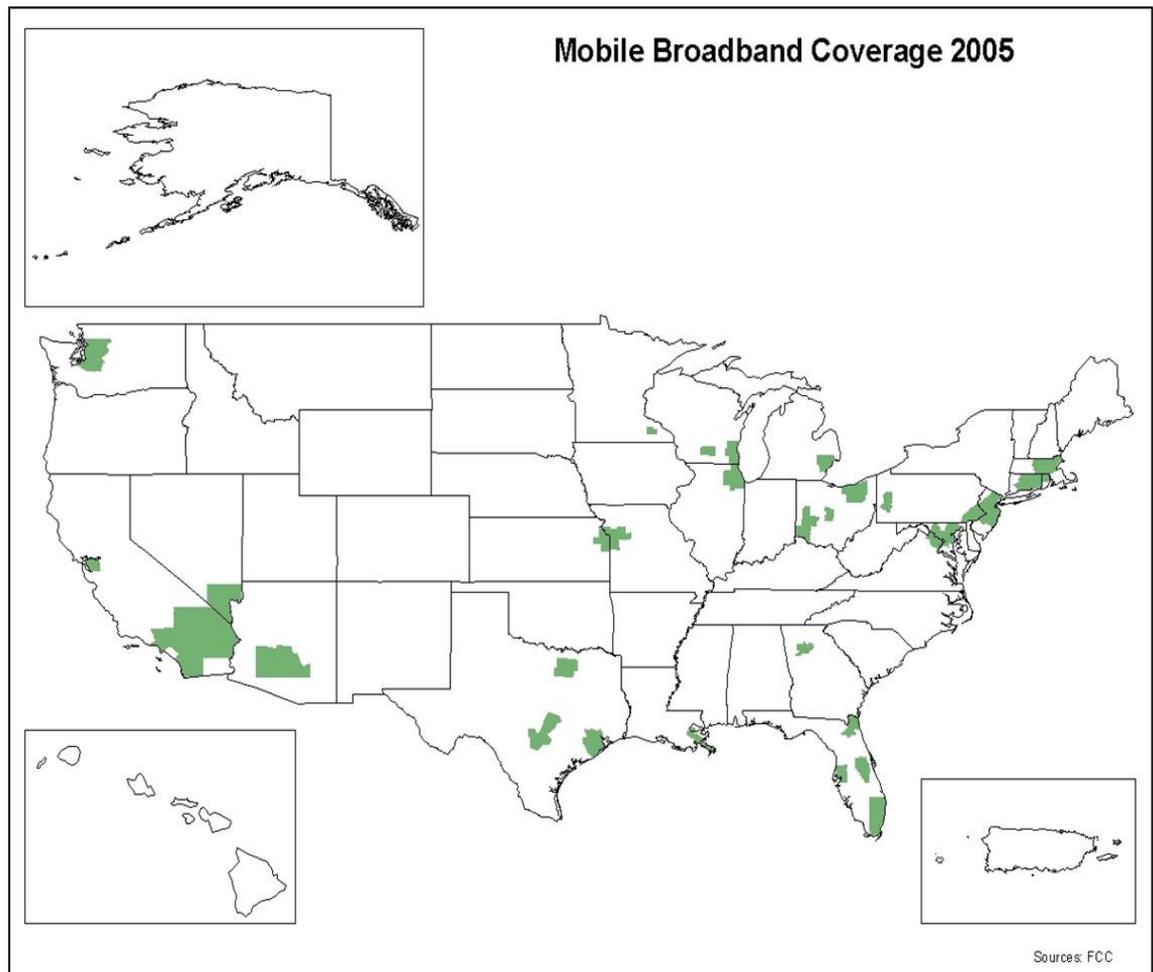
Other Regulatory Action to Increase Wireless Broadband Deployment. The Commission has promoted wireless broadband deployment in a number of other ways as well by eliminating regulatory barriers and approving mergers that promise to increase broadband access. For example, the Commission also classified wireless-based broadband Internet access service as an information service, thus ensuring regulatory parity among all broadband Internet access service competitors. Further, with the Sprint Nextel and Clearwire transaction, the Commission has encouraged investment and provided sufficient spectrum for the building of new nationwide communications infrastructure. That new company will deploy a new mobile broadband technology — WiMAX — nationwide.

These efforts are coupled with other steps that the Commission has taken to increase the efficient use of spectrum, including the introduction of mandatory narrowbanding requirements and the introduction of secondary markets initiatives, which allow partitioning, disaggregation and spectrum to allow licensees to put unused spectrum back in the marketplace so that spectrum assets work for them and for consumers.

Ushering in an Era of Wireless Broadband

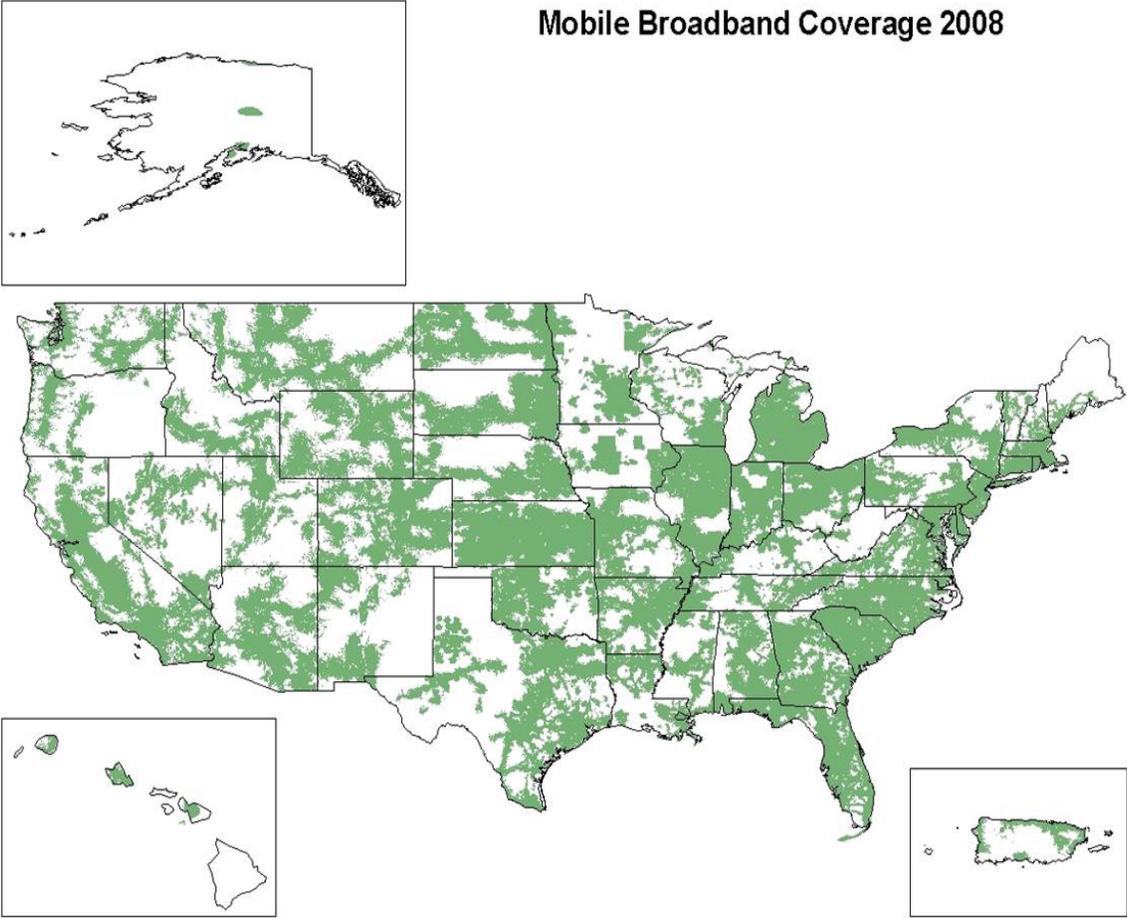
Wireless Market Developments

Growth, Competition, and Innovation. The increasing use of mobile data and Internet services by consumers over the past four years has been made possible by the continued deployment of mobile broadband technologies and the increasing availability of mobile broadband-capable devices. Mobile operators began launching broadband networks in a few cities in late 2003. These network technologies allow users to access the Internet at speeds comparable to DSL connections. As of mid-2005, mobile broadband services were available to around 25 percent of the U.S. population.



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By mid-2008, mobile broadband network availability had grown substantially to over 92 percent of the population.



Sources: American Roamer, August, 2008

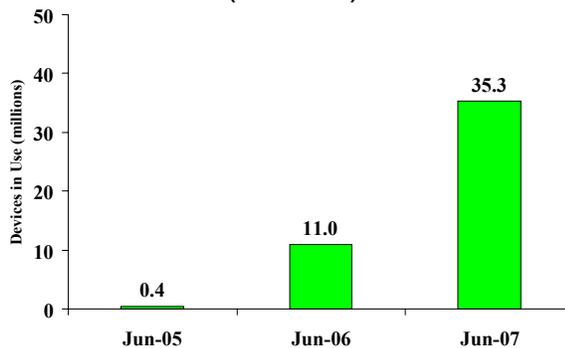
Ushering in an Era of Wireless Broadband

This represents a substantial investment on the part of mobile services providers. For example, in each of the last 3 years, Verizon Wireless has invested \$6.5 billion or more to expand and advance its network nationwide.¹² Since 2006, Sprint Nextel has invested more than \$15 billion in capital largely to enhance its networks.¹³

Investment is also continuing, and even more deployment is planned. Verizon Wireless has indicated it expects to begin deploying next generation LTE wireless broadband by the end of 2009,¹⁴ and Sprint launched a 3G/4G dual mode broadband service in December 2008.¹⁵ As of September 2008, T-Mobile had deployed its UMTS/HSDPA high-speed data network in 13 major US markets, and expected to have expanded this to 27 markets by year end.¹⁶ Clearwire has launched its WiMAX network in both Baltimore, MD and Portland, OR. It offers “pre-WiMAX” Internet services in 46 markets throughout the U.S., and as of December 23, 2008, AT&T Mobility’s 3G network is available in 335 major metropolitan areas, and expected to reach 350 markets by year end.¹⁷

Consumer use of mobile devices that are capable of accessing the Internet at broadband speeds has also increased significantly since 2005.

Mobile Broadband Devices In Use
(millions)

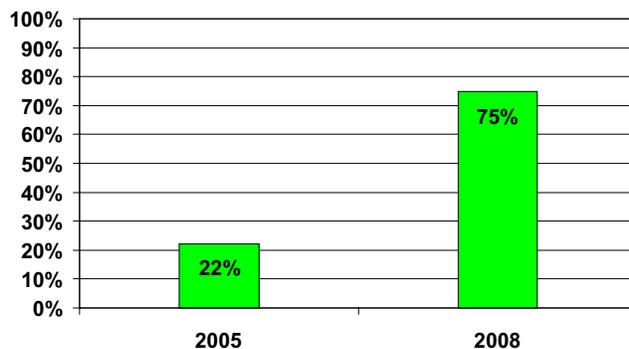


Source: FCC

Ushering in an Era of Wireless Broadband

In June 2005, just under 400,000 mobile wireless broadband-capable devices were in use in the United States. By June 2007, this number had grown to 35.3 million.¹⁸ In addition, the percentage of mobile devices with browser capabilities has risen from 22 percent to 75 percent from 2005 to 2008.

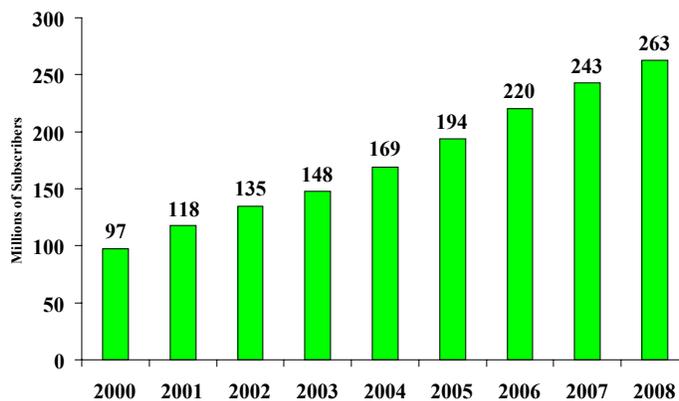
Percent of Mobile Devices with Web Browser Capabilities



Source: ComScore (MMetrics Mar 2008)

More generally, between 2000 and 2008, competition in the wireless marketplace continued to bring growth and innovation to the wireless industry and to provide significant benefits to consumers. The number of mobile phone subscribers rose approximately

Total U.S. Mobile Wireless Subscribers



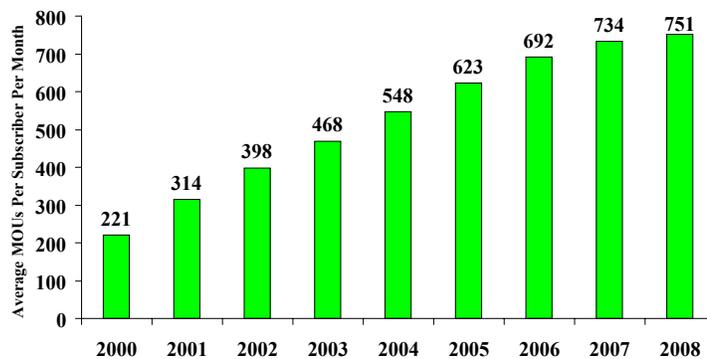
Source: CTIA-The Wireless Association, as of June of each year.

Ushering in an Era of Wireless Broadband

171 percent between 2000 and 2008, from 97 million to 263 million. This means that more than 85 percent of all Americans now own a mobile phone.

Consumers also are using their mobile phones and devices more than ever before. In mid-2008, the average mobile subscriber spent 751 minutes – or 12.5 hours – talking on the phone each month. This is an almost 240 percent increase from 221 minutes – or 3.7 hours – per month in 2000.

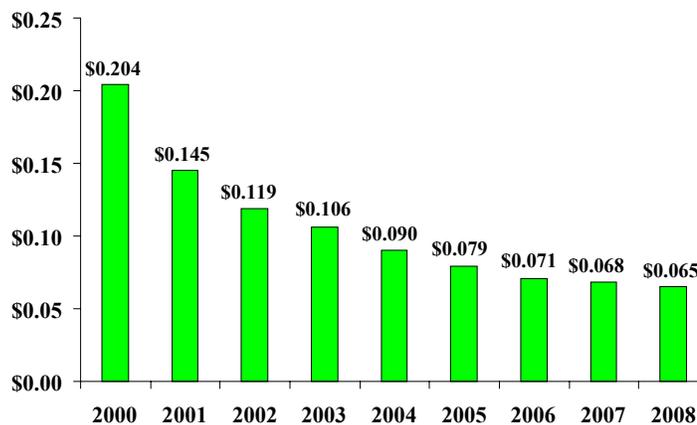
Average Minutes-of-Use per Month



Source: CTIA-The Wireless Association, as of June of each year.

At the same time, the per minute price of mobile phone service fell almost 70 percent from 20.4 cents in 2000 to 6.5 cents in 2008.

Price Per Minute for Mobile Telephone Service

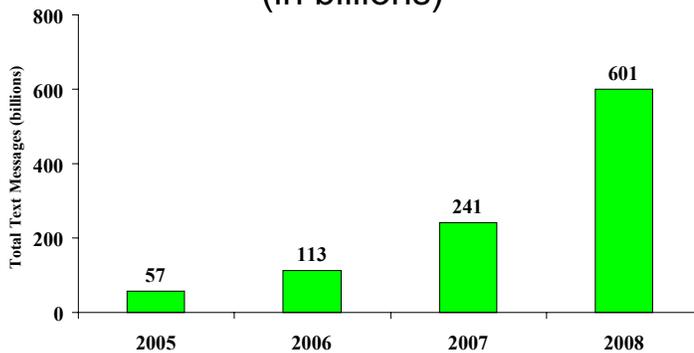


Source: Calculated using ALMB and Average Minutes of User per Subscriber per Month measures from CTIA-The Wireless Association. As of June of each year.

Ushering in an Era of Wireless Broadband

Americans also are using their mobile devices for much more than talking. Consumers use mobile data applications and Internet services to a much larger degree now than they did four years ago. For instance, the number of text messages sent by mobile phone users has risen tenfold from 57 billion in 2005 to 601 billion in 2008.

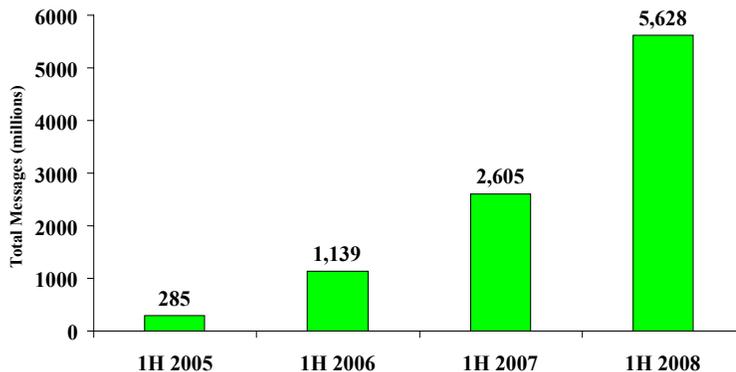
Growth in Text/SMS Traffic Volumes (in billions)



Source: CTIA-The Wireless Association (2005-2008). Annualized, June to June.

The number of photo and video messages (“MMS”) sent has also increased dramatically from 285 million in the first half of 2005 to 5.6 billion in the first half of 2008. While mobile data and Internet services were still nascent in 2005, their use has become more prevalent in recent years. Analysts estimate that, in 2008, around 57 percent of U.S. mobile subscribers used mobile data applications.¹⁹ One analyst also estimates that the number of active mobile Internet users (those who use the service at least once a month) increased 73 percent from May 2006 to May 2008.²⁰

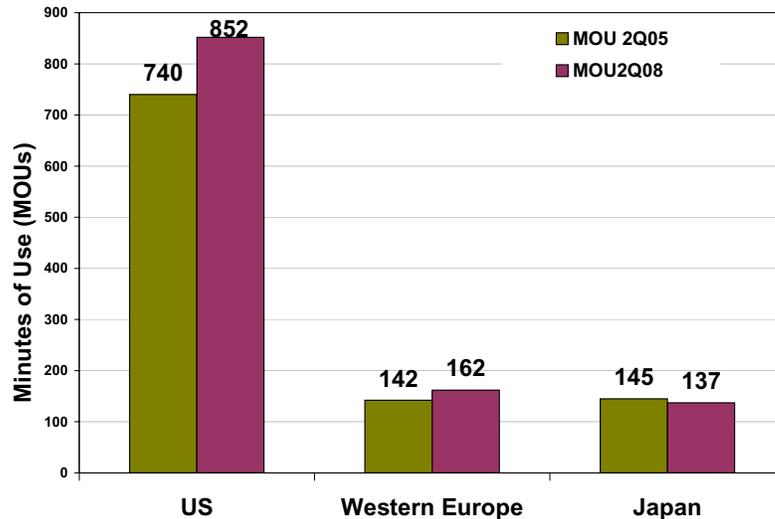
Growth in MMS Traffic



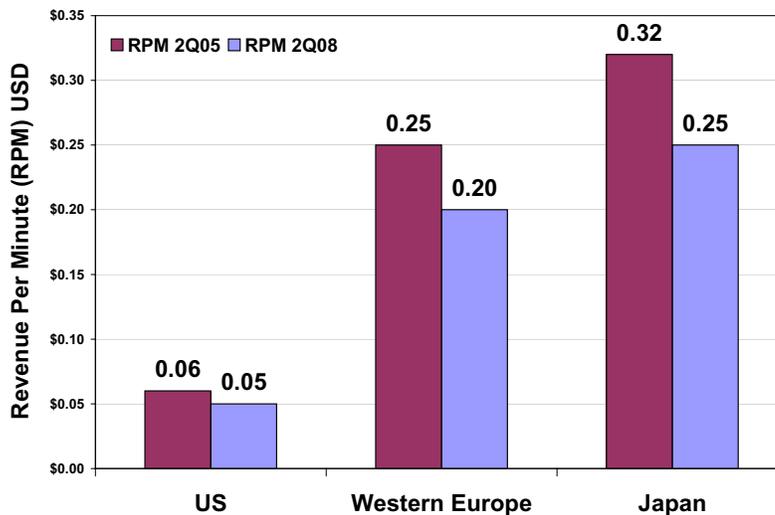
Source: CTIA-The Wireless Association (2005-2008).

Ushering in an Era of Wireless Broadband

International Comparisons. Over the past four years, mobile subscribers in the U.S. have experienced lower prices than mobile consumers in Western Europe and comparable Asia-Pacific countries, and U.S. mobile subscribers have led the world in mobile phone usage by a wide margin.²¹



Source: Merrill Lynch, Global Wireless Matrix



Source: Merrill Lynch, Global Wireless Matrix

In 2005, revenue per minute (“RPM”) of mobile service – a proxy for per-minute price – was three to four times higher in Western Europe and Japan than in the United States. This trend became more pronounced in 2008, when RPM was four to five times higher in Western Europe and Japan than in the U.S. In comparing usage, the amount of time that mobile subscribers spend talking on the phone is 400 to 500 percent higher in the United States than in Western Europe and Japan, a trend that has remained constant over the past four years.

Fostering Innovation and Open Technology Platforms

In addition to pursuing policies to encourage investment in networks we have also acted to ensure consumers can experience choice and innovation when using these networks. We have worked to achieve this goal by pursuing a policy of openness across all sectors including wireless, wireline and video.

A network that is more open to devices and applications can help foster innovation on the edges of the network. As important, it gives consumers greater freedom to use the wireless devices and applications of their choice when they purchase service from the new network owner. When the same decision was made decades ago on the wireline network, we saw an explosion in innovation and choice. Investment in the market increased, new phones and calling features were developed and consumers benefited. In the wake of the Carterfone decision, AT&T subscribers went from having to rent boring black rotary phones to purchasing competitively priced, innovative phones such as cordless phones, and phones with answering machines. Ultimately, these rules facilitated the development of the Internet, as consumers were able to attach modems to the network and go anywhere the Internet could take them without interference from the network owner.

Preserving the Vibrant Nature of the Internet

The Commission has a duty to preserve and promote the vibrant and open character of the Internet as the telecommunications marketplace enters the broadband age. To this end, the Commission, in August 2005, adopted its Internet Policy Statement comprised of four consumer-oriented principles, to protect consumers' access on the Internet. It contained four consumer-oriented principles:

- (1) Consumers are entitled to access the lawful Internet content of their choice;
- (2) Consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement;
- (3) Consumers are entitled to connect their choice of legal devices that do not harm the network; and
- (4) Consumers are entitled to competition among network providers, application and service providers, and content providers.

Fostering Innovation and Open Technology Platforms

In adopting these principles the Commission sought to protect consumers' ability to access content of their choice. When the Commission adopted these principles, it stated that all of these principles are subject to reasonable network management. Accordingly, broadband providers may use reasonable network practices to manage their networks, but they must do so without violating our principles and should do so in a reasonably transparent manner. Moreover, these principles were not adopted for one particular platform.

Since it adopted the Internet Policy Statement, the Commission has been vigilant in protecting consumers' access to content, applications and services on the Internet. As described in the section on Protecting Consumers from Harm, the Commission has not hesitated to enforce these principles when it was presented with evidence of traffic blocking.

Moving Towards More Open Wireless Platforms

Until only very recently, most wireless carriers operated "closed" networks. Within these "closed" networks, subscribers were limited to choosing among only those handsets and applications approved by the carriers themselves. In July 2007, the FCC adopted an "open platform" rule for one-third of the 700 MHz spectrum auctioned early last year (the "C Block"). The Commission deliberately took a cautious and limited approach to fostering more openness in the wireless world. Its plan followed a careful balance of spurring innovation and consumer choice while encouraging infrastructure investment. The Commission used this targeted approach to promote the development of networks that are more open to devices and applications.

Requiring licensees of this spectrum to allow consumers to use the devices of their choice and download applications of their choice has helped push the wireless industry to embrace more open networks. In less than a year, many wireless providers have evolved from vocal opponents to vocal proponents of open networks. This more open approach provides a ripe field for wireless innovation and growth, including opportunities for equipment manufacturers, software developers, and others.

Indeed, following the adoption of the 700 MHz "open platform" rule, several wireless carriers announced voluntary plans to deploy an "open platform" beyond the Commission's C Block requirement. In November 2007, Verizon Wireless issued an announcement that in 2008, its customers would be permitted to use the devices and applications of their choice on its network. In 2008, Verizon Wireless launched its Open Development Program, holding conferences and webcasts about certifying devices for use on its net-

Fostering Innovation and Open Technology Platforms

work, designating independent device testing labs to conduct certification, and certifying the first third-party devices to be used on its network.

In 2007, the Open Handset Alliance, a group of now more than 30 technology and mobile companies, was formed to develop the Android platform, a complete, open, and free mobile operating system. In 2008, T-Mobile with Google unveiled the first Android device, and three of the four nationwide providers have expressed interest in offering mobile handsets that use Android. Also in 2008, Sprint and Clearwire announced that New Clearwire would have an open platform. Using only a wireless modem, customers may use the device of their choice to access Clearwire's wireless broadband Internet service.

Many new and innovative applications have also been launched since the adoption of the "open platform" rule including those in Apple's App Store. Other manufacturers, including R.I.M. and Palm are planning or have launched similar sites. Using these portals, wireless device users can download onto their wireless devices applications to play games, track flights, find friends on the go, and make restaurant reservations, for example, and much more.

Non-Proprietary Set-Top Boxes

In 2007, the FCC acted to implement a nearly 10-year old statutory requirement to create a competitive market for set-top boxes. The Commission no longer allowed cable operators to integrate proprietary security elements into their set-top boxes. As a result, consumers may purchase a box of their choice instead of having to lease equipment from their cable providers. Enforcing the Commission's separable security requirement provided consumers electronics manufacturers the opportunity to develop and market innovative, feature-rich, state-of-the-art products. Chairman Martin's goal of a competitive set-top box market will give consumers greater choice and the benefits of innovation.

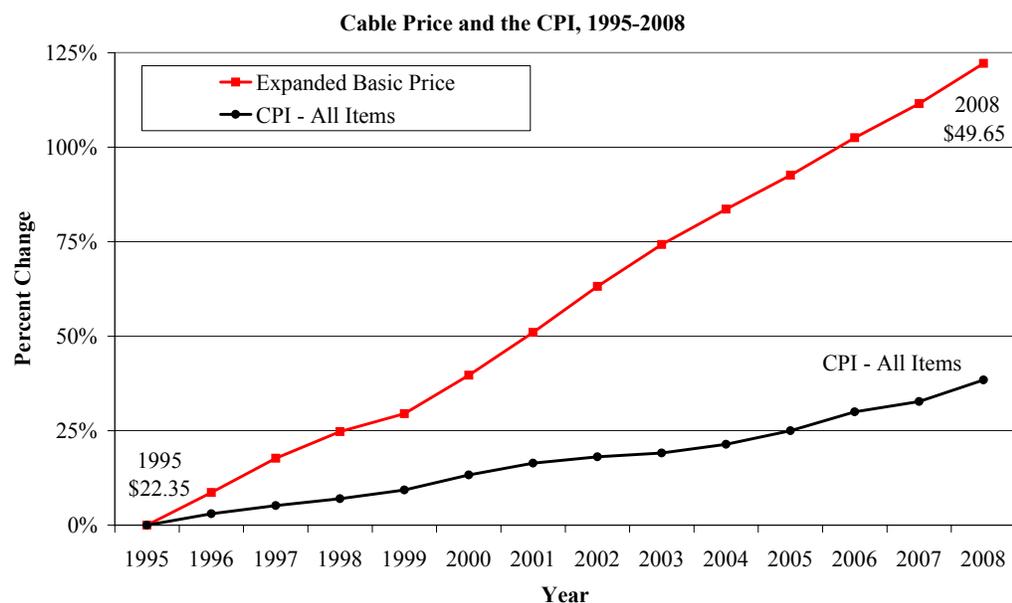


Promoting Competition in the Video Marketplace

Greater competition in the market for the delivery for multichannel video programming is a primary goal of federal communications policy. Increased competition can lead to lower prices and more choices for consumers. During Chairman Martin's tenure the Commission worked to increase competition by eliminating barriers to new entry into the video market.

Cable Prices

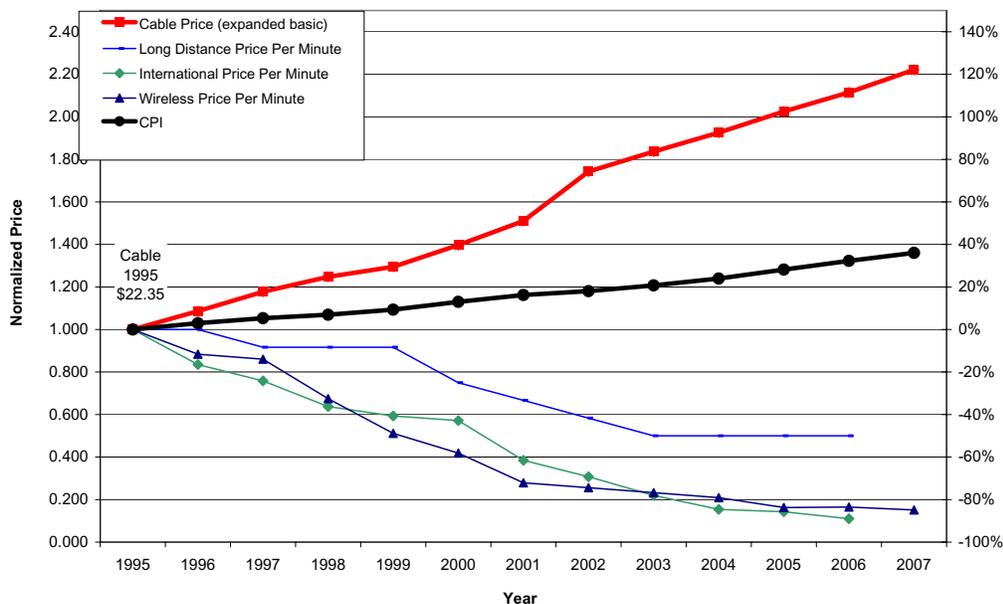
Consumers have seen their cable bills double over the last decade at the same time the costs for all other communications services have declined. It is almost universally accepted that cable rates have risen dramatically over the past decade and that consumers' bills for video services are too high. As described below, in recent years, the cost of basic cable services has gone up disproportionately when compared against other communications sectors. Specifically, since Congress enacted the 1996 Act, cable rates have risen every year – significantly higher than the rate of inflation. In 1995, cable rates were \$22.35 and in 2008 (using prices as of January 1, 2008) cable rates more than doubled to \$49.65.



Promoting Competition in the Video Marketplace

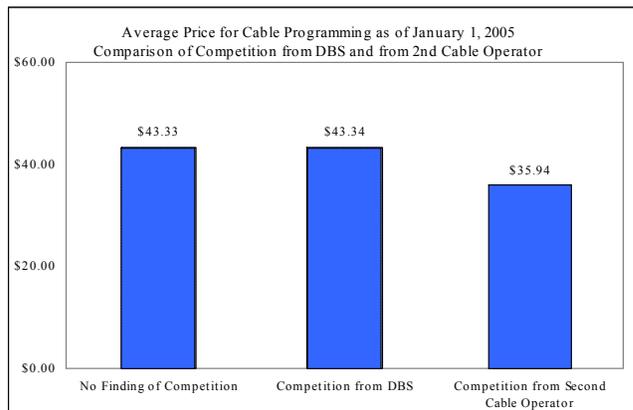
The increase in cable prices appears even more dramatic when viewed relative to the prices for a number of other communications services. The price for every service that the Commission regulates has decreased. For example, the average rate for wireless service has plummeted more than 85% (\$ 0.43 per minute in 1995, compared with \$0.07 per minute in 2007), average long distance rates has declined more than half (\$0.12 a minute to \$0.06 a minute), and international calls have declined more than 89% (\$0.91 a minute in 1995 to \$0.10 in 2007). In contrast, cable prices alone have increased, and they have risen more than 110% (from an average \$22.35 a month in 1995 to more than \$49 a month in 2007).

Rates for Communications Services 1995-2007



To state this a different way, before they were reregulated in 1993, average cable prices were \$22.23. When adjusted for inflation that average cable price would be \$33.88. Compared against 2007 cable prices of \$49.65, we see an increase of nearly 53%. That is, cable rates are now 50% higher, even when adjusted for inflation, than when Congress stepped in to reregulate them with the passage of 1992 Cable Act.

Video competition can impact cable bills. According to our cable price survey, where there is no competition, the average price for cable programming was \$43.33 in January 2005. But in areas where there was competition from a second cable operator, the average price for cable programming decreased to \$35.94.



Promoting Competition in the Video Marketplace

Competition from satellite providers did not have the same effect. In areas with competition from DBS alone, there was only a one cent difference in the price of cable from when there is no competition at all (with competition from DBS, cable cost one cent more). The Commission's data shows that DBS and cable do not seem to compete on price. Rather, the data indicates that only competition from a second cable operator has a downward impact on prices.

Given this, the Commission has adopted policies designed to encourage more cable operators to enter the video market. By removing regulatory barriers faced by new cable operators trying to enter the market, the Commission tried to ensure that consumers have the ability to choose among more than one cable operator. Such competitive choice will provide them one of the most important benefits of competition that the Act envisioned: lower prices.

Video Franchise Reform

As telecommunications companies were spending billions of dollars to upgrade their networks to provide video services in competition with cable providers, they encountered roadblocks when they applied for franchises from local franchising authorities. There were instances where local franchise authorities did not act upon applications for more than a year or required extraordinary in-kind contributions. The Commission concluded that the current operation of the franchising process constitutes an unreasonable barrier to entry that impedes the achievement of the interrelated federal goals of enhanced cable competition and accelerated broadband deployment. Thus, under Chairman Martin, the Commission streamlined the video franchise process by requiring action within a reasonable time period and preventing the imposition of unreasonable build-out requirements. These actions were designed to speed the delivery of new video services to consumers and thereby provide them more choices and lower prices.



Apartment Building Access

MDU Access Order. All consumers, regardless of where they live, should enjoy the benefits of competition. Approximately 30 percent of Americans live in Multiple Dwelling Units (MDUs) and their numbers are growing. The Commission found that contracts granting exclusivity access to cable operators harm consumers, competition and broadband deployment. Accordingly, the Commission concluded that such exclusive contracts

Promoting Competition in the Video Marketplace

are unlawful under the Act. The Commission found that prohibiting such clauses would materially advance the Act's goals of enhancing competition and broadband deployment. And, such prohibition would provide more competitive choice to the residents of MDUs who were locked into an exclusive contract with a cable operator. In this manner, a significant barrier to entry by competing video providers was eliminated.



Cable Inside Wiring Order. During Chairman Martin's tenure, the Commission also made it easier for competitive cable companies to gain access to "inside wiring" in these apartment buildings in a consistent fashion, further ensuring that all consumers – including those in apartment buildings – benefit from competition in the provision of communications services.

Fostering Greater Consumer Choice in the Video Market

The Commission has also worked to enhance consumers' choice and control over the video packages they purchase.

Program Access Order. In the fall of 2007, the prohibition on exclusive contracts under the Commission's program access rules was extended for an additional five year period until October 2012. Ensuring that competitive cable operators have access to cable affiliated programming is necessary for viable competition in the video distribution market. By extending this prohibition, the Commission ensured that new entrants, in addition to existing players, will continue to have access to critical programming on a nondiscriminatory basis.

Cable Cap Order. The Commission voted to cap the number of customers a single cable television company may serve nationwide. This order set a 30 percent limit on horizontal ownership nationwide, meeting Congress's mandate that no cable operator should be so large that it can impede the flow of video programming to consumers. In this manner, Commission promoted video programming diversity by ensuring new video programmers can enter and compete in the video market. And, the Commission sought to

Promoting Competition in the Video Marketplace

increase competition in the multichannel video programming market by providing consumers with greater programming choices and diversity.

Leased Access Order. The Commission also reformed the leased access rules to foster the development of independent programming channels on cable systems. In this manner, the Commission sought to ensure that consumers receive a broader and more diverse range of programming from their cable operators. In addition, the Commission adopted an expedited complaint process and a more rationale method of determining leased access rates in order to make it easier for independent channels, including those owned by minorities and women, to gain carriage from cable operators.

Greater Choice in Packaging and Sale of Video Programming Services. As stated above, cable rates have risen dramatically over the past decade – faster than the rate of inflation and faster than the rates of any other communications service. Consumers' video bills are simply too high.

According to a Nielsen Media Research report, the number of television channels received by the average household in the United States has more than doubled in the last decade, increasing from 41.1 in 1995 to 104.2 in 2006. The average household, however, has increased the number of channels it watches only from 10.5 to 15.7. This means that, today, cable subscribers are paying for more than 85 channels that they do not want to watch in order to obtain the approximately 16 channels that they do.

Indeed, a poll by the Associated Press found that 78% of respondents would prefer to choose and pay for their own tailored selection of cable channels. In response, the Commission has challenged cable and satellite operators to offer more cost effective alternatives, encouraging them to make family-friendly programming packages available and to offer networks in a more a la carte manner.

The Media Bureau's 2006 Further Report on Packaging and Sale of Video Programming Services to the Public found that themed tiers and a la carte could provide consumers the opportunity to reduce their cable bills by purchasing fewer channels or smaller packages. Specifically, using assumptions from the Booz-Allen-Hamilton study, the Bureau found that a consumer purchasing 11 cable channels would face a change in his bill ranging from a 13% decrease to a 4% increase, with a decrease in 3 out of 4 cases.

Minority consumers, particularly those living in non-English speaking homes, could also benefit tremendously from a la carte offerings. Currently, cable and satellite providers require subscribers to purchase dozens, if not hundreds, of channels in order to get foreign-language programming for which they must pay an additional cost. Under a la carte, however, non-English speaking consumers could purchase only those channels that offer programming they understand and desire.

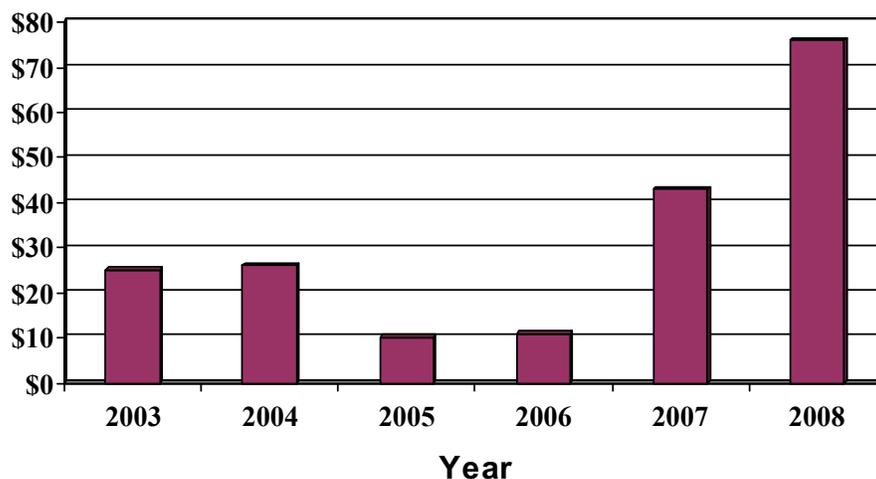
Protecting Consumers from Harm

Under the leadership of Chairman Martin, the Commission has been vigilant in protecting consumers from intentional or unintentional harm. The FCC took action across industries to address the needs and concerns of consumers and ensure they have the necessary tools to make informed decisions. The Commission preserved consumers' unfettered access to the internet content of their choice, protected children from inappropriate content, and strengthened consumer privacy.

Enforcing Commission Rules

Strictly enforcing its rules, the Commission under Chairman Martin issued over \$151 million in fines. That total amount is greater than the total combined amount of fines assessed under the preceding two Chairmen. Moreover, under Chairman Martin the Commission issued the two highest dollar amount consent decrees in its history. (Univision \$24 million consent decree and XM radio \$17.4 million consent decree.)

**Monetary Forfeitures Assessed and Payments Negotiated through Consent Decrees,
Calendar Years 2003 through 2008
Dollars in millions**

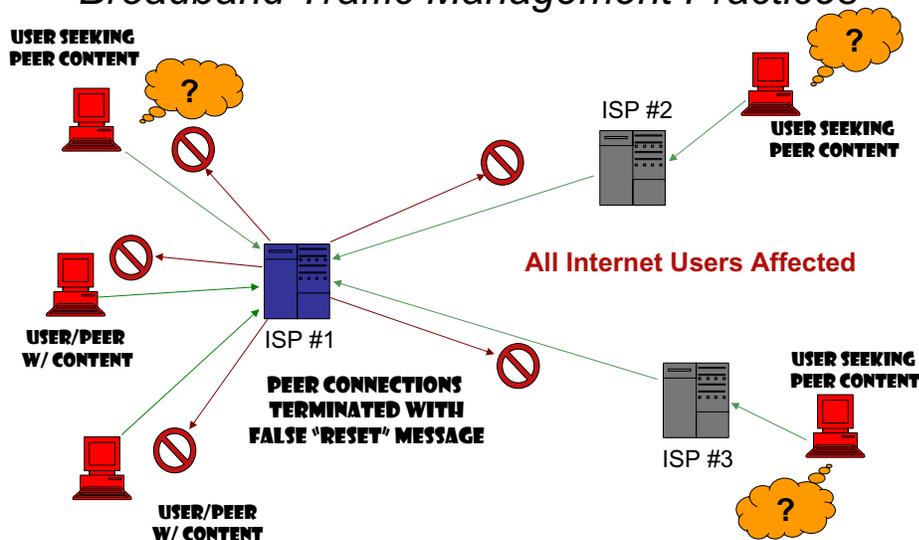


Protecting Consumers from Harm

Protecting the Open Internet

Spearheaded by Chairman Martin, the Commission affirmed its willingness to enforce the rights of any consumer to access any content or application on the Internet. Responding to complaints from broadband subscribers, the FCC in 2008 ordered Comcast to stop arbitrarily delaying subscribers' downloads and blocking their uploads when using certain peer to peer applications. After an extensive investigation the Commission concluded that these practices were discriminating among applications rather than treating all applications equally. Specifically, it found Comcast's network management practices were arbitrarily focused on individual peer to peer applications rather than on the amount of congestion in the network or size of a particular file. The FCC required the company to change its network management practices and to start disclosing these practices to the FCC and customers.

FCC Protects Consumers from Unreasonable Broadband Traffic Management Practices



The Commission announced its intention to adjudicate future disputes regarding federal Internet policy on a case-by-case basis, using an established framework. Specifically, if legal content is arbitrarily degraded or blocked, and the defense is “network management,” the broadband operator must show that its network management practice is reasonable. The Commission will look at whether such practice furthers an important interest and is carefully tailored to serve that interest. Finally, the Commission concluded-

Protecting Consumers from Harm

ed that network management practices should be disclosed to consumers so that they can make informed decisions when purchasing broadband service.

Protecting Children

E*nforcement of Indecency Rules.* Families have a right to expect that broadcasters will not expose children to harmful programming by carrying indecent, obscene or profane material at times when children are likely to be watching or listening. Congress therefore prohibits stations from airing indecent or profane programming at any time between the hours of 6 a.m. and 10 p.m. The Commission has taken significant steps both in its own decisions and in the courts to enforce this law. Responding to hundreds of thousands of viewer complaints about more than 50 television programs, the Commission took action against several broadcast licensees for airing material that was deemed indecent. Specifically, the Commission has issued an Omnibus Television Order (deciding 48 separate cases) and orders imposing fines relating to the broadcast of several shows including Without A Trace, Super Bowl XXXVIII, NYPD Blue and Married by America.

Violence Report. During Chairman Martin's tenure, the Commission used its expertise on children's television issues to examine the impact of excessively violent television programming and its impact on children. The Report found that evidence indicates exposure to violence in the media can increase aggressive behavior in children, at least in the short term. The Commission offered several recommendations to Congress, including ways in which the industry could address violent programming, such as providing consumers greater choice in how they purchase their programming.



Childhood Obesity Taskforce. During Chairman Martin's tenure, the FCC used its expertise in children's television issues to examine the impact of the media on the rise in childhood obesity. To build consensus on voluntary steps to combat childhood obesity, the Commission, along with Senators Harkin and Brownback, formed the Joint Task Force on Media & Childhood Obesity. The task force is composed of representatives from the media, advertising, food and beverage industries, along with consumer advocacy groups and health experts.



Protecting Consumers from Harm

The Task Force succeeded in producing some significant voluntary commitments aimed at reducing the negative impact of the media on children's eating habits and increasing its positive influence on their behavior. For example, fifteen of the nation's largest food and beverage manufacturers including Kraft Foods and Kellogg agreed to curtail advertising of "unhealthy food" to children under age twelve, and others are reformulating current products.

Children's Programming. Under Chairman Martin's tenure, the FCC made clear that it takes seriously the public interest obligations of broadcasters. While reviewing a planned transfer of Univision to Broadcasting Media Partners in 2007, it came to the Commission's attention that Univision was not properly meeting a requirement that it air programs to educate and inform children. The programs Univision had aired to meet this requirement on 24 of its stations for more than two years were telenovelas similar to teen soap operas and not educational in nature. In a consent decree with the FCC, Univision agreed to make a contribution of \$24 million to the U.S. Treasury and follow a compliance plan designed to ensure that the needs of children and families are better served in the future.

Safeguarding Consumers' Privacy

Consumer Calling Records. Telephone companies have a lot of personal and private information about their customers and the law requires the companies to protect the confidentiality of that information. In 2007, the Commission strengthened its rules governing the disclosure of consumers' telephone records. Specifically it moved from an "opt-out" approach that allowed a carrier to disclose a customer's phone records unless that customer had expressly directed that the records not be disclosed, to an "opt-in" approach, prohibiting a carrier from disclosing a customer's phone records unless that customer has given express consent to such disclosure. The new measures also prohibit carriers from releasing, over the phone, sensitive personal data or call detail records unless the customer provides a password; requires providers to notify customers immediately when changes are made to a customer's account; and requires providers to notify their customers in the event of a breach of confidentiality. Finally, service providers also must annually certify their compliance with these regulations, inform the Commission of any actions they have taken against data brokers, and provide a summary of the complaints they receive regarding the unauthorized release of CPNI.



Protecting Consumers from Harm

In order to further enhance customers' privacy protections, the Commission extended its telecommunications privacy rules to interconnected VoIP service, which many customers use as an alternative to traditional voice services. To enforce these protections, the FCC has proposed 25 forfeitures, totaling \$2.1 million, and has reviewed more than 5,000 certifications from companies concerning their compliance with these privacy requirements.

National Do-Not-Call Registry. Almost everyone has had their privacy disturbed by a telephone call from someone trying to sell them something. And these calls often come at very inconvenient times, like during dinner or while the family is watching TV. To prevent these intrusions, Congress passed a law that lets people join the "National Do-Not-Call Registry." When their registrations were due to expire in June 2008, 172 million telephone consumers would have been left without the protections they had come to rely on. The Commission therefore stepped in and made registrations with the Do-Not-Call Registry permanent. In addition, the FCC has proposed forfeitures and entered into consent decrees totaling nearly \$900,000 and has issued over 850 citations for do-not-call violations. The actions the Commission has taken to ensure compliance with the Registry and enforce the do-not-call rules, in addition to the sheer volume of telephone numbers added to the Registry, are strong indicators that the Registry has been successful in curbing the number of unwanted telemarketing calls.

Fax Advertising. Just like unwelcome sales calls, unsolicited fax advertisements are intrusive. In 2005, the Commission adopted an order implementing the Junk Fax Prevention Act of 2005 to protect the public from the costs of unwanted fax advertising. The rules make it unlawful to send unsolicited advertisements to any fax machine without the recipient's prior express permission, unless the sender has an "established business relationship" with the recipient. Moreover, even senders of permissible fax advertisements must include notice and contact information on the fax so recipients have a way to "opt-out" of future faxes. The Commission has been vigilant in enforcing its Junk Fax rules, proposing almost \$19 million in penalties for violations of this prohibition. It has also issued 1140 citations for such misconduct.

Addressing Consumers' Needs and Concerns

Early **Termination Fees.** When the imposition of early termination fees (ETFs) on wireless subscribers emerged as a significant source of concern for many consumers, the Commission initiated a proceeding to consider the interrelated policy and legal implications associated with the use of ETFs. At that time, the nationwide wireless providers imposed significant flat or fixed charges if a subscriber canceled his or her wireless service before the end of the contract period, even if the contract was due to expire soon. In 2008, the Commission held a public hearing that brought many interested parties – from industry and consumer perspectives – together to discuss the complex jurisdictional and policy issues relating to the use of ETFs. As a

Protecting Consumers from Harm

result of the Commission's efforts, AT&T, Sprint Nextel, T-Mobile and Verizon Wireless all announced that they were discontinuing the use of fixed ETFs and adopting ETFs that diminish over the term of a contract for wireless service.

Cable Services. The Commission is investigating whether various cable operators may have unlawfully reduced the service they provide to some of their subscribers without also reducing the rates they charge for that service. The Commission has also investigated whether cable companies have provided the necessary notice to local governmental authorities when they have changed their service offerings. The Commission has already proposed forfeitures totaling \$67,500 against cable operators for apparent violations in these areas.

Greater Choice in Packaging and Sale of Video Programming Services. Since Congress enacted the 1996 Act, cable rates have increased every year, while the prices for other services the Commission regulates have decreased. The Commission has challenged cable and satellite operators to offer more cost effective alternatives, encouraging them to make family-friendly programming packages available and to offer networks in a more a la carte manner. The Media Bureau's 2006 Further Report on Packaging and Sale of Video Programming Services to the Public found that themed tiers and a la carte could provide consumers the opportunity to reduce their cable bills by purchasing fewer channels or smaller packages. Moreover, the Media Bureau found that some type of a la carte option could prove better than today's bundling practices in fostering diverse programming responsive to consumer demand.

Long Distance Usage and Cost. The Commission acted to protect customers who make relatively few interstate long distance calls. Specifically, the Commission required AT&T, Qwest, and Verizon to offer rate plans tailored to the needs of these customers. These rate plans, which the carriers must maintain for several years, have either no monthly fee or only a minimal charge. A consumer who makes few interstate long distance calls can realize substantial savings by subscribing to one of these plans in lieu of a plan imposing a relatively large monthly fee.

Informing Consumers

Enhanced Disclosure. In 2007, the Commission adopted the Enhanced Disclosure Order, requiring TV broadcasters to file a standardized form on a quarterly basis that specifically details the type of programming that they air and how that programming serves their local community. This form will describe a host

Protecting Consumers from Harm

of programming information including local civic affairs, local electoral affairs, public service announcements and independently produced programming. With a standardized form and Internet access to it, the public and government officials will now be able to engage broadcasters directly in a discussion about what local commitments they are and/or should be fulfilling. This Order also requires that much of a television station's public inspection file be placed on the station's website, if they have one. Alternatively, it allows stations to place their public files on the website of their state broadcasters association. This action will further increase the public's access to this important information.

Payola Consent Decree. The Commission in 2007 reminded broadcasters that it won't tolerate payola because it believes the public should know when someone is seeking to influence them or the types of music they hear on the radio. As a result of an FCC investigation into possible payola violations, four broadcast companies agreed to make significant contributions to the U.S. Treasury totaling \$12.5 million and institute business reforms to insure their stations and employees do not violate the sponsorship identification laws in the future.

Choosing Long Distance Plans. The Commission recognized that consumers who make extensive use of the interstate long distance network may not have all the information they need to make informed choices among alternative long distance plans. To address this concern, the Commission required AT&T, Qwest, and Verizon to provide customers subscribing to certain types of rate plans (e.g., AT&T's rate plans that charge a single monthly rate for unlimited local and long distance usage) with information regarding their monthly long distance usage. This information should help consumers subscribing to these rate plans evaluate whether the plans are cost-effective given the consumers' calling patterns.

Facilities-Based Competition

Competition for facilities-based voice service has increased substantially since June 2005. Much of this increase has come from the cable companies. Data filed with the Commission show that the number of coaxial cable telephone lines in service in the United States grew from approximately 5.1 million lines at the end of 2005 to approximately 8.4 million lines at the end of 2007.²² These numbers likely understate the extent of cable company penetration into the voice telephone market. The Commission expects to have more concrete data in the future after changes it recently implemented to its data gathering efforts take effect.

Competitive Networks Order. During Chairman Martin's tenure, the Commission saw that long-term exclusive contracts between owners of residential multi-tenant buildings and incumbent cable or telephone operators posed a barrier for new entrants in the provision of video and voice services. The Commission's Competitive Networks Order recognized the importance of eliminating barriers to infrastructure investment while creating regulatory parity among entities seeking to provide communications services in residential multiple tenant environments (MTEs), such as apartment buildings, condominiums, and co-operatives. Specifically, the Commission prohibited carriers from entering into contracts that would make them the exclusive provider of telecommunications services in residential MTEs. The Commission also barred carriers from enforcing any existing contract to provide exclusive service in residential MTEs. This order placed essentially the same restrictions on telecommunications carriers as the Commission's MDU Access Order had placed on cable operators, and so brings regulatory parity among competitors seeking to serve MTE residents, including those seeking to provide a "triple play" of voice, video, and broadband Internet access service.

Incumbent LEC Inside Wiring Order. The Commission also made it easier for competitive telecommunications and cable companies to gain access to "inside wiring" owned incumbent LECs in these apartment buildings in a consistent fashion, further ensuring that all consumers – including those in apartment buildings – benefit from competition in the provision of communications services.

Local Number Portability. The Commission also acted to remove a roadblock that had been inhibiting many consumers from switching telephone service providers. Local Number Portability (LNP) gives telephone customers the ability to keep their telephone number when changing service providers. The availability of LNP thus eliminates a major disincentive to switch carriers, helping to facilitate the successful entrance of new ser-

Facilities-Based Competition

vice providers and competition between such new service providers and existing wireline and wireless carriers. Consumers have ported more than 78 million phone numbers from one carrier to another during Chairman Martin's term. The average number of ports per month where customers moved their number from one carrier to another has increased from 1.6 million in 2004 to about 2.4 million in 2007, with the average number of such wireline to wireline ports increasing from about 750,000 per month to about 1.3 million per month during that period.

In 2007, the Commission took steps to facilitate greater competition among telephone providers by extending LNP obligations to interconnected VoIP providers. This measure ensures that interconnected VoIP customers have the same ability as customers of traditional telephone service to keep their telephone numbers when changing telephone service providers. Enabling customers to port their numbers reliably and expeditiously when changing carriers – whether that carrier is a traditional wireline provider, wireless carrier, or interconnected VoIP provider – gives customers flexibility in the quality, price, and variety of services they can choose to purchase, which in turn enhances competition.

Interconnection Issues. The pro-competitive framework that Congress established in the 1996 Act provides that the state commissions shall arbitrate any disputes that arise when telecommunications carriers request interconnection agreements with incumbent carriers. In the Time Warner Order, the Wireline Competition Bureau addressed a situation in which state commissions had issued conflicting interpretations of federal law in arbitrating interconnection agreements between local phone companies and requesting telecommunications providers seeking to provide services wholesale to other service providers, specifically VoIP providers. Acting on delegated authority, the Bureau affirmed the Commission's existing policy that "telecommunications service" can be either a wholesale or retail service. The Bureau went on to make clear that regardless of whether a third-party provider's retail VoIP service is considered an information service or a telecommunications service, the wholesale common carrier has the right under section 251 of the Act to interconnect with the incumbent local phone company.

Localized Regulatory Relief. As a result of increased competition for voice services between telephone companies and cable companies, the Commission has been able to scale back some of its regulations in targeted locations where such "intermodal" competition is most pronounced. Most notably, the Commission conditionally forbore from

Facilities-Based Competition

applying certain network unbundling requirements and dominant carrier rules that apply to the incumbent wireline carrier, but not the incumbent cable operator, in portions of the Anchorage study area and the Omaha Metropolitan Statistical Area (MSA). The Commission granted even more regulatory relief in Terry, Montana in recognition of the unique factual circumstances there.

Regulatory Relief for Long Distance. In the Section 272 Sunset Order, the Commission established a new framework to govern the provision of in-region, long distance services by the BOCs and their independent incumbent LEC affiliates. This framework, which is consistent with the relief granted Qwest in the Qwest Section 272 Sunset Forbearance Order, replaced unnecessarily burdensome regulation with less intrusive measures that protect important customer interests while allowing AT&T, Qwest, and Verizon to respond to marketplace demands efficiently and effectively. This framework has increased the BOCs' ability to develop and deploy innovative long distance services that meet their customers' needs.

The prior regime had forced each BOC to choose between two different regulatory regimes in providing in-region, long distance services, both of which imposed significant burdens and costs: the BOC could provide these services on a nondominant carrier basis through a section 272 separate affiliate; alternatively, it could provide these services directly or through an affiliate that is not a section 272 separate affiliate subject to dominant carrier regulation, including rate regulation and tariff-filing requirements. The new framework recognizes that this regime imposed unnecessary costs and allows each BOC to provide in-region, interstate, long distance services through the corporate structure it deems best, as long as it complies with certain targeted safeguards and other continuing obligations.

Addressing Public Safety Needs

It is the Commission's highest obligation to promote the safety of life and property through the use of communications. Meeting the needs of public safety has remained a consistent priority for the Commission over the past several years. This responsibility is particularly critical when the market would not otherwise produce these benefits, and where the social benefit of regulation takes precedence over the unencumbered functioning of the marketplace. This includes ensuring consumers have access to help during emergencies, ensuring all Americans have access to emergency information in times of crisis, and that the public safety community and citizens have access to reliable communications during and after disasters, whether natural or manmade.



Consumer Access to Emergency Services and Information

Ensuring *Reliable 911/E911 Access Across Platforms*. Consumers appropriately expect to receive emergency help when they dial 911 regardless of whether they are using a wireline, wireless or VoIP phone. Under Chairman Martin's leadership, the Commission has made a priority of ensuring that consumers have access to 911 and E911 emergency services across various communications platforms.

In May of 2005, the Commission extended 911 requirements to providers of interconnected Voice over Internet Protocol, or "VoIP" services. This action ensured that interconnected VoIP consumers would be able to dial 911 and receive help. Prior to this order, when a person dialed 911 from an interconnected VoIP service, that emergency call might be delayed or misrouted, and in some cases might never reach emergency responders. Now, when an interconnected VoIP customer dials 911, that call is delivered to the appropriate local emergency operators along with the caller's telephone number and location information, facilitating a more rapid response and enabling emergency responders to call back if the 911 call is disconnected. More recently, the Commission implemented the NET 911 Act to provide interconnected VoIP providers rights of access to network elements necessary to provide 911 and E911 service.

The Commission has long recognized the importance of ensuring that persons with disabilities can both promptly contact emergency personnel through the telephone system and have access to emergency information broadcast on television. As a result, the

Addressing Public Safety Needs

Commission has adopted new TRS rules to ensure that consumers using the Internet-based forms of Telecommunications Relay Services (TRS) can call emergency services through a relay provider and have the call automatically routed to the appropriate emergency personnel. Similar to interconnected VoIP service, the rules require Video Relay Service (VRS) and IP Relay providers to obtain from consumers a “registered location” at which the service will be used, and the provider will use that location to determine the appropriate emergency services to call. The rules also require providers to answer 911 calls before non-emergency calls. In addition, the VRS interoperability rules are intended to ensure that consumers can make an emergency call through any provider’s service, regardless of the equipment used to make a call, and therefore that consumers are not limited to the services of a single provider in the event of an emergency.

The Commission’s extension of 10-digit numbering to Internet-based TRS, such as VRS, has also increased 911 access for persons with hearing or speech disabilities. Now, these 911 calls can be routed directly to appropriate emergency services operators, along with location information, which can save critical time in an emergency. This gives Internet-based TRS users access to the same kinds of enhanced 911 protections that voice telephone customers enjoy.

The Commission has also diligently pursued improvements in the accuracy of the location information transmitted to Public Safety Answering Points (PSAPs) when consumers place 911 calls from their mobile phones, as well as extending location information requirements to VoIP 911 calls. In this regard, three of the largest wireless carriers have already committed to meet the accuracy requirements on a county basis.

Since March 2005, the Commission has taken enforcement action against eight carriers, proposing more than \$4 million in fines for failing to upgrade their E911 capabilities to provide information about the location of wireless 911 callers to 911 dispatch centers, thus ensuring that the benefits of the Commission’s rules are realized by the public safety community and consumers, where compliance can literally be a matter of life and death.

Enhancing the Emergency Alert System. In the past three years, the Commission has been proactive in both extending the reach of the Emergency Alert System (EAS) to consumers, and in laying a foundation for the roll-out of next generation EAS technology. Thus, in addition to ensuring that the public will continue to receive emergency alerts from traditional radio and television broadcasters, the Commission has also extended EAS requirements to a variety of new communications platforms, such as over-the-air digital TV, satellite radio, satellite TV, and cable TV.



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In a 2007 Order, the Commission required communications providers to use a common protocol for transmission of emergency alerts once the protocol is approved by the Federal Emergency Management Agency (FEMA). The Commission also required communications providers to transmit state and local alerts so long as the Commission has reviewed and accepted the state's EAS plan. This will encourage states to adopt next generation technologies for their EAS networks.

Finally, to expand the scope of persons receiving EAS alerts, the Commission has encouraged EAS stakeholders to provide for multi-lingual EAS alerts, and to enable EAS to better reach persons with disabilities.

Establishing Commercial Mobile Alert Services for Mobile Devices. In 2008, the Commission successfully implemented the Warning, Alert and Response Network Act (WARN Act) which required the Commission to take a number of steps to facilitate the voluntary transmission of emergency alerts by commercial mobile service providers to their subscribers.



For example, as required by the WARN Act, the Commission established and managed the Commercial Mobile Service Alert Advisory Committee (CMSAAC). This advisory committee, comprised of representatives of the commercial wireless industry, public safety agencies, Federal government agencies, manufacturers and other experts, was tasked with recommending technical requirements to facilitate the voluntary transmission of emergency alerts by commercial mobile service providers.

Based in large part on the CMSAAC's recommendations, the Commission adopted three orders establishing the Commercial Mobile Alert System (CMAS) that will enable consumers to receive emergency alerts over their mobile handsets. With the CMAS, consumers, including those with hearing and vision disabilities, will be able to receive timely Presidential, Imminent Threat (e.g., hurricane) and Amber alerts over their mobile devices.

To date, over 140 commercial wireless mobile carriers, including the major nationwide carriers, have elected to participate in whole or in part in the CMAS.

With this comprehensive wireless mobile alerting system, consumers on the go will be able to receive emergency alerts in a short timeframe, even where they do not have access to broadcast radio and television or other sources of emergency information. The CMAS complements the EAS and other sources of emergency information by ensuring that Americans have the ability to receive emergency alerts and other information over a wide variety of technologies.

Addressing Public Safety Needs

Launching the Public Safety and Homeland Security Bureau

Under Chairman Martin's leadership, the Commission launched a new Bureau on September 25, 2006, dedicated to supporting the needs of the public safety community and consolidating Commission functions that address issues that impact consumer access to emergency services and communications during personal or community crises. The Bureau's mission is "To collaborate with the public safety community, industry and other government entities to license, facilitate, restore and recover communications services used by the citizens of the United States, including first responders, before, during and after emergencies by disseminating critical information to the public and by implementing the Commission's policy initiatives." Through the Public Safety and Homeland Security Bureau, the Commission's pursuit of this mission is one of its highest goals.



Preparing For and Responding to Emergencies



H*urricane Katrina and the FCC's Rapid Hurricane Response Activities.* Since 2005, the Commission has made tremendous strides in its disaster recovery preparation, procedures, and implementation. In 2005, Hurricane Katrina created a communications crisis so widespread that the Commission operated on an unprecedented 24/7 basis to address widespread communications outages and assist the communications recovery efforts of public safety providers, commercial carriers, and other federal agencies. The Commission received almost unanimous praise

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for its efforts and was cited in the White House’s “lessons learned” report for its quick actions “to facilitate the resumption of communications services in the affected area and to authorize the use of temporary communications services for use by emergency personnel and evacuees in shelters.”

Since the 2005 hurricane season, the Commission has taken significant steps to develop improved procedures for responding to hurricanes and other disasters.

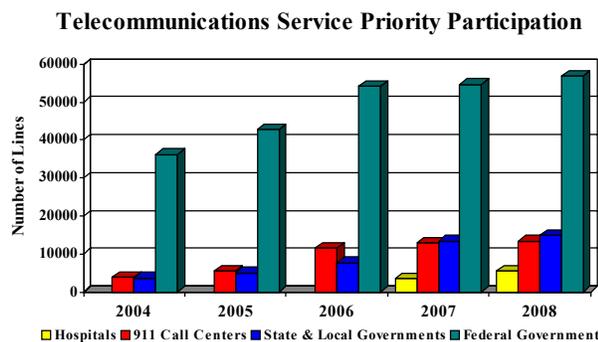
For example, during the 2008 season, FCC personnel were assigned to the field to assist in communications restoration efforts for Tropical Storm Fay and Hurricanes Gustav and Ike. In addition, the FCC developed a novel system, dubbed Project Roll Call, which was deployed for the first time during 2008. Project Roll Call uses spectrum analyzing equipment in conjunction with special software and FCC databases to analyze the spectrum environment before and after a storm to determine which systems are up and operating and which are not. This tool is particularly effective for broadcasters and public safety radio communications networks.

Finally, since Katrina, the Commission has developed and implemented the Disaster Information Reporting System (DIRS), a voluntary reporting system that provides the federal government with daily situational information about communications systems during crises. DIRS was activated for the first time in 2008 and proved very useful to our federal partner agencies.

Promoting Telecommunications Service Priority and the Wireless Priority System

The Commission has established two priority communications programs -- telecommunications service priority (TSP) and wireless priority system (WPS) -- that are designed to ensure that the public safety community has reliable access to public communications systems at all times, especially during disasters and other emergencies.

TSP helps ensure priority installation and restoration of telecommunications services and WPS ensures priority access to wireless services. These programs greatly improve the ability of the emergency response community to conduct the



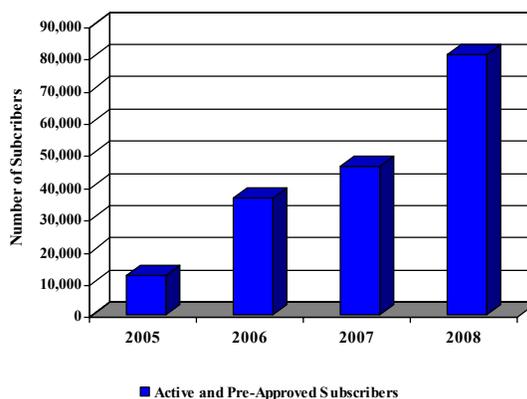
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communications they need to protect the American public.

Because of the benefits these programs provide to participating public safety providers, Bureau personnel have worked over the past four years to increase enrollment by 911 call centers, hospitals, and state and local emergency operations centers. As a result, enrollment in TSP has risen by 180% and enrollment in WPS

has risen by 220%. However, while considerable progress has been made, many public safety agencies still have not enrolled in these programs and we therefore plan to continue our outreach to improve their enrollment.

Wireless Priority Service Subscribers



One-Stop Shopping for Authoritative Public Safety Communications Information

Through the Public Safety and Homeland Security Bureau, the Commission has developed a comprehensive approach to interfacing with the public safety community and the general public to provide information on emergency planning and timely information during disasters. In August 2007, the Public Safety and Homeland Security Bureau created a Clearinghouse on its website to collect, evaluate, and disseminate the most current communications information for the public safety community. The Clearinghouse includes documents generated by both Bureau staff and outside parties, which focus on such topics as Best Practices, Communications and Interoperability Plans, and Emergency Guidelines. The Clearinghouse also provides links to other federal, state and local government resources, such as FEMA, the National Communications System (NCS), and the Centers for Disease Control (CDC). The importance of the website to the Bureau's outreach efforts is highlighted by the heavy usage it has received. Since its creation, the Clearinghouse has had over 96,000 hits from users. Overall, the website has had over 2 million hits since its creation in 2006.

Addressing Public Safety Needs

Managing Public Safety Spectrum and Devices

Licensing and Interference Resolution. Licensing serves a critical role in ensuring that public safety agencies will continue to have access to spectrum for their growing communications needs, both during routine public safety operations and in times of major emergencies. The Commission's Public Safety and Homeland Security Bureau currently administers over 150,000 public safety licenses in multiple spectrum bands. In the past four years, licensing staff has processed a total of 173,476 public safety radio applications to keep pace with the requests of state and local public safety entities across the country to expand or modify their spectrum use.

Since March 2005, the FCC's Enforcement Bureau has investigated and resolved approximately 850 complaints of harmful interference to public safety communications, ensuring that our Nation's first responders can communicate effectively and efficiently without the worry of missing vital information.

700 MHz. The past four years has seen significant developments in the opening of the 700 MHz band to public safety use. After Congress allocated 24 MHz of spectrum in the band for public safety, the Commission designated 10 MHz for broadband use to address public safety's demonstrated need for access to advanced wireless broadband technology.

Absent alternatives to fund a nationwide public safety broadband network, the Commission acted to create a public/private partnership between a single nationwide public safety licensee and a commercial licensee partner that would be awarded an adjacent 700 MHz spectrum block at the same time. However, because the auction did not produce a winning commercial partner, the Commission has since issued two further notices seeking the best path to ensure successful deployment of a nationwide, fully interoperable public safety broadband network. This proceeding remains an important priority for the Commission, as development of this network is critical to the ability of our nation's first responders to protect the safety of the American public during emergencies.

800 MHz. Over the past three years, the Commission has made significant progress in the 800 MHz rebanding effort. Although the process has taken longer than originally



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anticipated, 97 percent of Channel 1-120 licensees and 33 percent of NPSPAC and Expansion Band licensees in non-border areas have completed rebanding of their systems, and 82 percent of NPSPAC licensees have rebanding agreements with Sprint Nextel.

To ensure the safety of citizens living in border communities, the Commission worked with colleagues in Canada and Mexico to protect U.S. public safety operations from interference. The Commission negotiated with both countries on coordination of vital public safety operations and the development of agreements to govern public safety operations, including those in the 700 MHz and 800 MHz bands.

In October 2008, the Commission initiated the rebanding process in the U.S.-Canada border area, and we have also made significant progress in international negotiations with Mexico to enable rebanding to proceed along the U.S. - Mexico border. These developments have improved the ability of 800 MHz public safety systems to operate free from harmful interference. In addition, rebanding is now yielding new spectrum for licensing to public safety. In the past year, we have established a mechanism for Sprint to relinquish all of its Interleaved Band channels to public safety by March 2010, and the first wave of these channels will become available for public safety licensing later this month.

Encouraging Innovative Public Safety Devices. Over the past several years, the Commission has worked with innovators seeking to advance the state of public safety technology and to put advanced communications tools in the hands of our first responders. These tools have the potential to save civilian lives, and to make the jobs of the public safety community safer.

For example, the Commission has granted a number of waivers and approved equipment authorizations for devices such as the Remington Eyeball, an imaging sensor that provides live audio and video feeds to law enforcement agencies and can be thrown like a baseball into a remote or confined and potentially hazardous location, thus mitigating danger to police personnel. This and other devices, such as the SafeScout imaging device, the Quick Reaction Perimeter Intrusion Detection (“QUPID”) fixed surveillance ultra-wideband (“UWB”) imaging system, the Sapphire DART real-time identification and tracking system and the UltraVision surveillance system may provide unique technological solutions to protect life and property.

Overseeing the Digital Transition

A successful completion of the digital transition depends upon minimizing the burdens placed on consumers and maximizing their ability to benefit from it. The Commission's highest priority is protecting the American consumer. The conversion to digital television promises movie quality picture and sound as well as potentially new programming choices. It also will allow us to significantly improve public safety communications and usher in a new era of advanced wireless services. To prepare for the digital transition, the Commission has worked both on its own and in coordination with industry, other governmental agencies, and consumer groups to advance the transition and promote consumer awareness. Our efforts have been three-fold. First, we have been focused on getting the right policies in place to facilitate a smooth transition. Second, we have been actively enforcing our rules to protect consumers. And, third, we have been promoting awareness of the transition through our consumer education and outreach efforts. Through all of our activities, the Commission is committed to ensuring that no American is left in the dark.

Policy Proceedings and Minimizing the Burden on Consumers

The Commission's first priority was to prepare full-power broadcasters for the transition by putting in place the necessary technical rules to allow broadcasters to construct digital facilities. And, the Commission has initiated numerous policy proceedings designed to facilitate the nation's transition to digital and promote consumer awareness of the transition. These are described below.

Broadcaster Readiness. Today, approximately 98 percent of stations have either completed construction of their digital facilities or are well on their way to completion. Specifically, as of the end of 2008, about 90.3 percent of full power television stations are either fully operational with digital service or are on track to have their full digital service operational by February 17, 2009. Another 7.5 percent of all full power stations will be serving at least 85 percent of their population by February 17, 2009, with final operations beginning sometime soon thereafter.

Final DTV Table of Allotments and Review. In 2007, the Commission adopted the final DTV table of allotments. This order provided virtually all full power television stations with their final channel assignments for broadcasting in digital.

In 2007, the Commission also completed a proceeding establishing deadlines for broadcaster construction of their final, post-transition facilities.

Overseeing the Digital Transition

DTV Transition Status Reporting (Form 387). The Commission also adopted a requirement that all full power stations complete, file, and update a FCC Form 387, as needed, to keep the Commission and the public apprised of stations' progress in meeting the transition deadline on February 17, 2009.

Distributed Transmission Systems. The Commission adopted rules for the use of distributed transmission system ("DTS") technologies in the digital television service. DTS will provide broadcasters with an important tool for providing optimum signal coverage for their viewers. For some broadcasters that are changing channels or transmitting locations for their digital service, DTS may offer the best option for continuing to provide over-the-air service to current analog viewers, as well as for reaching viewers that have historically been unable to receive a good signal due to terrain or other interference. Furthermore, DTS may be a useful tool for stations to prevent some loss of service to existing analog viewers resulting from changes to the station's service area in the transition to digital service.

Translator Replacement Service. The Commission initiated a Notice of Proposed Rulemaking that proposes the creation of a new "replacement" digital television translator service to permit full-service television stations to continue to provide service to loss areas that have occurred as a result of their digital transition. This proposal would also allow broadcasters to apply for special temporary authority to use such translators during the pendency of the rulemaking.

Viewability Order. Chairman Martin led the Commission in taking action to make sure cable operators continued to make signals of all broadcast stations viewable after the transition. Specifically, under Chairman Martin's leadership, the Commission ensured that all Americans with cable – regardless of whether they are analog or digital subscribers – are able to watch the same broadcast stations the day after the digital transition that they were watching the day before the transition. In this manner, the Commission made sure analog cable subscribers were not shortchanged after the digital transition. Under the Commission's "Viewability Order" cable operators must ensure that all "must carry" local broadcast stations carried are "viewable" by all cable subscribers. Enforcement was stepped up to make sure consumers did not unknowingly buy televisions that would not receive broadcast stations following the transition.

Labeling Order. The Commission imposed a television labeling obligation that required sellers to alert consumers if they were selling TV equipment with only an analog tuner to make sure consumers did not unknowingly buy televisions that would not receive broadcast stations following the transition.

DTV Consumer Education Order. The Commission adopted a DTV Consumer Education Order to require broadcasters, MVPDs, manufacturers, and others to convey information on the digital transition to consumers on a regular and continuing basis through the end of the transition.

Overseeing the Digital Transition

Analog Nightlight Order. The Commission has moved swiftly to implement the Short-Term Analog Flash and Emergency Readiness Act. This legislation and the Commission's implementing rules allow and encourage broadcasters to provide emergency and transition information to viewers for up to 30 days after February 17. To the extent that any viewers remain unaware of or unprepared for the transition, this temporary continuation of analog service should help alleviate customer confusion and ensure that these viewers have access to emergency information.

DTV Enforcement Activities

The Commission's DTV-related enforcement efforts are focused on protecting consumers from the unknowing purchase of television equipment without integrated digital tuners. DTV-related enforcement actions are centered on four areas: (1) the labeling requirement for equipment with analog-only tuners; (2) the prohibition on the importation and shipment of television receivers without integrated digital tuners; (3) the obligation of various industry segments to inform consumers about the transition; and (4) V-Chip requirements.

Labeling Requirement. The Commission actively enforced its rules requiring stores to place warning labels on any analog television they sell. The labels notify consumers that these televisions generally will not be able to receive over-the-air television signals without additional equipment. Not long after this rule was adopted, the Enforcement Bureau began inspecting thousands of stores and websites across the country to assess their compliance. Although most retailers complied with the DTV labeling rule, the Enforcement Bureau has issued over 350 citations warning retailers of labeling violations in their stores. Where we found repeat violations, we took stronger enforcement action. Since adoption of the rule in the Spring 2007, the Commission released over \$4.7 million in enforcement decisions against 22 retailers for apparent violations of the DTV labeling rule. After we began issuing these citations and enforcement actions, retailers improved their compliance with the rule, and the number of new violations dropped dramatically.

DTV Tuner Requirement. The Commission actively enforced its rules barring importers from bringing analog televisions into the United States. By prohibiting the importation of those televisions, the rules ensure that consumers will be able to buy televisions capable of receiving digital signals. The Enforcement Bureau reviews U.S. Customs data and complaints to identify potential violations of this requirement. During Chairman Martin's tenure, the Commission has taken more than \$3.7 million in enforcement actions against eight companies for possible violations of this rule. As the digital transition date approaches, we have seen a significant decrease in the number and scale of such violations.

Overseeing the Digital Transition

Consumer Education Requirements. The Commission actively enforced its rules requiring broadcasters, cable operators, telecommunications companies and others to educate the public about the digital television transition. Because of the importance of the transition, we initiated investigations of companies in several industries to assess their compliance with these rules. Those investigations have generated a number of enforcement actions. For example, one telecommunications company recently paid \$51,000 after receiving an Enforcement Bureau order regarding the company's apparent failure to notify its customers of the transition as required under our rules. The Commission is considering an Enforcement Bureau order proposing \$11.25 million in fines against seven companies for the same type of violation. The Enforcement Bureau is reviewing additional information submitted by broadcasters, cable operators, and telecommunications carriers to determine their compliance with the DTV consumer education rules.

V-Chip Requirements. As the Commission has encouraged the availability of digital televisions, we have worked hard to ensure that those devices comply with Commission rules relating to safety and other requirements. One important requirement is the "V-Chip" rule, which requires all digital televisions to include technology allowing consumers to program their devices to block offensive or objectionable programming based on the broadcaster ratings for offensive language, sexual content, and violence. That rule also requires that digital televisions be able to update their blocking software to future ratings systems, which might include issues like smoking, drug use, or other activities. When the Enforcement Bureau investigated whether manufacturers were complying with these rules, we learned that many companies were not complying with the updating requirement. As of the end of 2008, the Commission has released enforcement decisions imposing more than \$12.6 million in fines against 11 manufacturers.

DTV Consumer Education and Outreach

Chairman Martin guided the Commission through one of the most massive projects the agency has faced, that of preparing consumers for the nationwide transition from analog to digital broadcasting on February 17, 2009, as mandated by Congress. In particular, the Commission's outreach and education efforts are focused on the 82 markets with the highest over-the-air populations. In these and other markets, the Commission is actively partnering with local government (e.g., libraries, senior centers, social services, school districts); local broadcasters; community and grassroots organizations; charitable organizations; faith-based organizations; professional, semi-professional and collegiate sports teams; and other community and regional stakeholders to educate consumers about the transition, and specifically, how to order converter box coupons and install converter boxes.

Overseeing the Digital Transition

Consumer Awareness and Preparedness. Awareness of the digital transition has been growing. The Commission’s focus has been on ensuring that as many Americans as possible – and in particular, those segments of the population that are predominantly over-the-air viewers including the elderly, people with disabilities, and minorities – are aware of the upcoming transition.

The consumer outreach and education activities that the Commission and other industry members have undertaken appear to have been effective. The National Association of Broadcasters (NAB) reported in October 2008 that the national awareness level is at 92 percent. This is up from 79 percent in January of 2008. And recent NAB polling also indicates that minorities are increasingly aware of the upcoming transition. Specifically, NAB reported that 92 percent of Hispanic respondents were aware the broadcast television signals will be switching to an all-digital format, a four point jump since NAB’s May 2008 survey. This number equals the national awareness number. The poll also found that African-American awareness of the DTV transition is at 86 percent, up one point from May 2008.

It is critical that people are not just aware of the transition but they must also be prepared for it. In December 2008, Nielsen issued a survey that found that “Unreadiness among U.S. households continues to decline, and the pace at which U.S. households are getting ready has increased. Between November 2008 and December 2008, the penetration of completely unready households in the U.S. declined by six-tenths of a percentage point – one of the largest drops we have seen since we began reporting readiness status in May 2008.”

Wilmington Test. On September 8th, Wilmington, North Carolina became the first market in the country to transition from analog to digital television. The early switch to digital in Wilmington was instrumental in helping the Commission identify, understand, and hopefully prevent some future problems when the rest of the nation transitions on February 17, 2009.

The majority of Wilmington viewers were aware of and prepared for the transition. Importantly, the consumer education campaign that was conducted appears to have been effective. Prior to the transition on September 8th, NAB released a survey indicating that 97 percent of Wilmington residents were aware of the switch to digital. Consumer calls received by the Commission at its call center also indicated that the vast majority of



Overseeing the Digital Transition

the 400,000 television viewers in the Wilmington-area were aware of the transition and prepared for it.

The measure of success in Wilmington is not what happened on September 8th, September 15th or October 15th. Rather, it is how we are going to take what we learned in Wilmington and apply that knowledge to the rest of the country.

Nationwide 82-Area Tour. In August 2008, Chairman Martin announced a nationwide initiative to increase awareness about the upcoming transition to digital television. As part of our efforts to prepare consumers for the transition, the Commission identified television markets in which the largest number of viewers will have to take action to be prepared for the transition. Specifically, 82 target television markets were identified for specific DTV outreach, including all those markets in which more than 100,000 households or at least 15 percent of the households rely solely on over-the-air signals for television. Within these markets, we are aiming to educate those groups most vulnerable to the transition such as senior citizens and non-English speakers. Chairman Martin and the Commissioners, as well as other Commission staff, are fanning out to these markets to raise awareness and educate consumers in the days leading up to the digital television transition on February 17, 2009. At each stop, there is a public event, such as a town hall meeting, workshop, or roundtable to highlight the digital transition. In coordination with these visits, the Commission is working with local broadcasters and radio stations to increase the broadcasts of Radio and TV DTV PSAs and run stories about these visits.

As part of this nationwide tour, the Commission is also coordinating with the broadcasters to explore whether at the same time these stations may participate in a temporary turn off of their analog signals. During these so-called “soft tests” analog customers would see a message on their screens informing them of the transition and how to become prepared. Two nationwide soft tests have also been conducted.

Grassroots Bid. The Commission selected 12 grassroots organizations and local agencies to help over-the-air viewers prepare for the digital transition. These selections are worth up to \$8.4 million and are the culmination of a full and open procurement process. The Commission sought proposals to conduct outreach in all parts of the country, with a particular focus on the 82 markets with the highest over-the-air television populations. In particular, the FCC selected organizations dedicated to serving across populations across the country most at risk in the digital transition including senior citizens, people with disabilities and Spanish-speaking households. Specifically, the FCC sought the assistance of local, regional and national organizations with converter box procurement and installation, establishment and staffing of local call centers, educating consumers about the transition and other local grass roots efforts.

U.S. Postal Service Partnership. We are displaying DTV education posters in all 34,000 post offices across the country. We have worked with the U.S. Postal Service to install updated posters beginning December 1, 2008 running through the end of the tran-

Overseeing the Digital Transition

Information Distribution. A key part of the Commission's education and outreach efforts has been the development and distribution of consumer literature. These tools are a cost-effective means to provide information about the transition. As of the end of 2008, over 14 million pages of DTV-related publications and over 111,286 posters have been distributed. In addition, the six most popular DTV publications have been translated into 29 languages in addition to English. The language including Spanish, Amharic, Arabic, Cambodian, Chinese, Creole, Farsi, French, Greek, Hmong, Italian, Japanese, Korean, Kurdish, Laotian, Navajo, Polish, Portuguese, Romanian, Russian, Somali, Taiwanese, Tagalog, Vietnamese, and Yupik. The publications include the one-pager, Frequently Asked Questions, and information sheets on converter box set-up, antennas, troubleshooting, and recycling. In addition, the entire website is available in Spanish.

Speakers Bureau. In August 2008, the Chairman also announced that the Commission has launched a Speakers Bureau for groups throughout the country to request speakers to discuss the upcoming digital transition. As of the end of 2008, we have received 184 requests for speakers. The requests are being handled by staff traveling for conferences and events, as part of the outreach for our town hall meetings, and by our field agents.

Other DTV Activities

Converter Box Testing. The Commission's laboratory in Columbia, Maryland, part of OET, has tested DTV converter boxes in support of NTIA's coupon eligible converter box program. The laboratory has tested more than 200 converter boxes and is turning its attention under NTIA's guidance to compliance of DTV converter boxes that are on the market.

DTV Mapping. The Commission released two reports that show changes in the coverage of the nation's full-power television (TV) stations as they prepare to transition from analog to digital broadcasting on February 17, 2009. The first report provides maps showing the analog and digital coverage areas for each of the 1749 full-power TV stations in the United States. The vast majority of TV stations throughout the country will experience a significant increase in the population that can receive their signals. Some stations, however, are expected to experience some losses in the population that will be served by digital service as compared to their existing analog service. The second report contains maps and other information for the 319 stations where more than two percent of

Ensuring Access to Communications by All Citizens

Every American, regardless of physical location or physical condition, should have access to our nation's communications technologies. As the communications landscape evolves, we must ensure that all Americans continue to have access to the economic, educational, and health care opportunities available on the communications network. Because market forces alone may not ensure equal access to communications, the Commission must be prepared to play a role to make sure this important social goal is met.

Congress charged the Commission with implementing universal service and telecommunications relay service – programs that are designed to expand access to communications services. During the tenure of Chairman Martin, the Commission has advanced the goals of these programs, and put the Commission on a path toward strengthening and modernizing them, while implementing safeguards to ensure that these programs continue to operate as Congress intended. The Commission also promoted disability access by updating and enforcing its closed captioning and hearing aid compatibility rules.

Connecting Health Care Providers and Schools and Libraries



Improving Access to Health Care. In 2006, the Commission adopted a pilot program to facilitate broadband deployment to health care providers, bringing the benefits of innovative telehealth and, in particular, telemedicine services to those areas of the country where the need for those benefits is most acute.

In 2007, the Commission selected 69 participants covering 42 states and three U.S. territories to be eligible to receive funding for up to 85 percents of the costs associated with: (1) the construction of a state or regional broadband network and the advanced telecommunications and information services provided over that network; (2) connecting to Internet2 or National LambdaRail (NLR); and (3) connecting to the public Internet. The networks will connect over 6,000 health care providers across the country, including hospitals, clinics, public health agencies, universities and research facilities, behavioral

Ensuring Access to Communications by All Citizens

health sites, community health care centers, and others. Many of these health care providers are located in insular areas and isolated regions, where transportation costs are high and health care specialists are concentrated in distant urban centers.



All of the networks will construct innovative and highly efficient regional broadband networks, either by building new, comprehensive networks or upgrading existing ones. All of these networks, as discussed above, will be able to connect to the public Internet as well as to one of the nation's dedicated Internet backbones: Internet2, or National LambdaRail. When the projects funded through the Pilot Program are completed, this is what the National Health Care Network will look like.

The Commission has worked closely with Pilot Program participants to ensure the success of this program. Changes to initial applications, through aggregation of projects, upgrading, replacing technology, or adding eligible health care providers to networks without increasing the underlying cost of the projects, have increased the benefits that health care providers and consumers will receive under the Pilot Program. For example, the California Telehealth Network has been able to work within its awarded Pilot Program funding amount of \$22 million to more than double the health care providers it plans to connect – increasing from 300 facilities to over 700 facilities.

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Bringing Broadband to Schools and Libraries. The E-rate program provides schools and libraries with discounts on eligible telecommunications and Internet access services up to a total amount of \$2.25 billion each funding year. This funding has enabled schools and libraries to dramatically increase their access to broadband services. In a 2007 study, the National Center for Education Statistics (NCES) found that access to the Internet is ubiquitous in public schools.²³ NCES found that nearly 100 percent of public schools in the United States had Internet access, and 97 percent of these schools used broadband connections to access the Internet.



Preserving Universal Service

Congress created the universal service fund to ensure that all Americans, regardless of where they live, have equal access to communications services. In many parts of rural America however, it is cost prohibitive for one, let alone multiple, phone companies to provide service at a reasonable cost to consumers. It is only through direct grants from the universal service fund that consumers in those high-cost areas can have the same phone service enjoyed by consumers in more urban areas. The universal service fund also provides discounts on telecommunications and Internet access services to rural health care providers and to schools and libraries, and helps low-income consumers obtain and pay for the costs of telephone service.



Stabilizing the High-Cost Fund. In 2008, the Commission reined in explosive growth in high-cost universal service support disbursements. The Commission imposed an interim cap on the amount of high-cost support available to those entities responsible for the most dramatic increases in high-cost support disbursements, competitive eligible telecommunications carriers. The cap will contain the growth of universal service in order to preserve and advance the benefits of the fund and protect the ability of people in rural areas to continue to be connected. In addition, the cap will help to prevent excessive contributions from consumers who support the fund. Contributions to the universal service fund are based on a percentage of carriers' interstate and international revenue.

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Since the cap has been put in place, this percentage has decreased approximately 17 percent, from 11.4 percent to 9.5 percent.

Broadening the Contribution Base. The Commission also acted to preserve universal service by expanding the base of contributions to the universal service fund in 2006. First, to better reflect the growing demand for wireless services, the Commission raised the “safe harbor” percentage used by wireless providers to estimate interstate revenue. Second, the Commission extended universal service contribution obligations to providers of interconnected voice over Internet Protocol, or VoIP, service. These actions stabilized the contribution base for the universal service fund in the near-term and minimized the effects of any changes on consumers, contributors, and universal service fund administration, while the Commission considers more fundamental reform of the contribution methodology.

Improving Program Administration. The Commission has strengthened its oversight and management of the current universal service fund administrator, the Universal Service Administrative Company (USAC). The Commission established memorandums of understanding (MOUs) with USAC to ensure greater clarity in administrative and management functions. In addition, the Commission established performance measures and goals for the universal service fund and USAC, and required USAC to develop customer service standards and to prepare, review, and report data concerning the quality of service USAC provides to universal service fund stakeholders. The Commission also adopted rules that establish rigorous document retention requirements for program participants. The Commission’s new rules also create additional penalties for bad actors; specifically, the Commission can now prohibit any party that defrauds any of the universal service disbursement programs from continued participation in the program. Moreover, the Commission continues to explore additional safeguards to protect the fund.

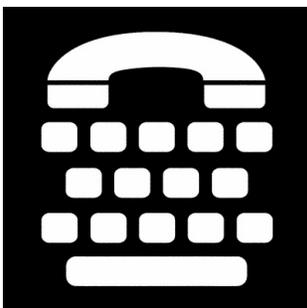
Auditing and Enforcing Program Rules. The Commission’s Inspector General has conducted 459 audits of universal service beneficiaries and contributors, and, based on the results of those audits, is now overseeing a second round of 650 audits. These audits have resulted in recovery of improperly disbursed funds and enforcement action against entities that apparently violated Commission rules. The Commission has followed-up on investigations by taking strong enforcement action against bad actors. The Commission has issued Notices of Apparent Liability and Consent Decrees totaling over \$21 million and recovered in excess of \$230 million in underpayments to the Universal Service Fund. The Commission has also issued suspensions and debarments against 14 individuals and four companies.

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Improving Access for Persons With Disabilities

Congress required the creation of a nationwide TRS program to allow persons with hearing and speech disabilities access to the nation's telephone network. TRS must be made available to the extent possible and in the most efficient manner. In addition, TRS must offer telephone system access that is "functionally equivalent" to voice telephone services. Functional equivalency means individuals with disabilities having access to the same services as everyone else. This equal access is vital to accessing jobs, education, public safety, and simple communications with family, friends, and neighbors.

Similarly, the Commission has adopted closed captioning and hearing aid compatibility rules to provide persons with hearing and visual disabilities with the same access to services and information as persons without such disabilities.



Improving TRS. The Commission recognizes many forms of TRS – from traditional TTY calls to more recent forms like Video Relay Service. Over the past several years, the Commission has continued to recognize other forms of TRS to meet the more specific communication needs of persons with disabilities. The Commission recognized ASL-to-Spanish VRS as a form of TRS so that persons who are deaf and communicate via ASL can make telephone calls to persons who speak Spanish. In addition, the Commission recognized IP Captioned Telephone Service so that persons with some residual hearing have more choices in how they make captioned telephone calls and are not tied to any particular equipment or technology.

The Commission also continues to adapt its rules to improve the quality of TRS and meet consumer needs. In a significant step forward, Internet-based TRS users can now obtain ten-digit telephone numbers that are the same as those used by voice telephone users to make and receive calls. The Commission also adopted speed of answer rules (so

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that consumers do not have to wait an unreasonable period of time to place a call) and interoperability rules (so that equipment can be used to make a call through any provider).

At the same time, the Commission has worked to protect the TRS program from waste, fraud and abuse. The Commission adopted new cost reimbursement methodologies for each form of TRS to ensure that the providers are compensated in accordance with the TRS rules. The Commission also prohibited certain incentive and marketing practices that have the intent or effect of encouraging consumers to make unnecessary calls – calls that the consumer does not pay for but for which the provider gets compensated. The Commission addressed the misuse of IP Relay by persons using that service to defraud merchants by making credit card purchases over the telephone. And the Commission has audited providers, including the minutes of use submitted for payment, to ensure the legitimacy of both the use of TRS and payments made from the Fund to providers.

Enhancing Closed Captioning. The Commission’s closed captioning rules ensure that persons with hearing disabilities can fully enjoy television programming by reading what is being spoken as text on the screen. Over the past several years, the Commission has improved captioning quality standards and adopted procedures to aid consumers when they have concerns about their closed captioning service. The Commission also addressed captioning issues raised by the transition to Digital Television and the use of converter boxes, to ensure that consumers continue to benefit from closed captioning after the transition is completed.



In addition, broadcasters must provide emergency information either through closed captioning or a visual presentation so that persons with hearing disabilities have access to potentially life-saving information. The Commission has fined TV broadcasters who failed to provide emergency information in an accessible format, proposing forfeitures of nearly \$125,000 against seven television stations for failing to provide persons with hearing disabilities timely visual access to the same emergency information the stations provided to their hearing audiences in connection with their coverage of various emergency events involving wildfires, tornado warnings, and hurricanes.

Ensuring Hearing Aid Compatibility. The hearing aid compatibility rules ensure that consumers with impaired hearing have access to handsets that function properly with hearing aids. In 2007, the Commission began a new proceeding to reexamine rules, as applied to wireless handsets. Building upon a “consensus plan” proposed by representatives of consumer groups and the wireless telecommunications industry, the Commission adopted significant revisions. The new rules are designed to ensure that consumers will have available to them an increasingly broader selection of hearing aid-compatible handsets, regardless of technology or frequency bands (including newly available frequency bands) used



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by their handsets. In addition, the Commission has issued NALs or consent decrees for violations of the wireless hearing aid compatibility handset and labeling requirements.

Increasing Access to Ownership

Access to *Capital Conference*. The Commission held an en banc hearing and conference on overcoming barriers to communications financing. This conference was designed to enhance the knowledge of the Commission and attendees about: (i) the present state of capital markets as those markets impact ownership diversity in the media and telecom industries and, particularly, the success of minorities and women entrepreneurs; (ii) how financing is secured for new, diverse, resource-limited ventures, focusing on actual problems encountered by women and minorities attempting to secure financing for media and telecom deals; and (iii) potential ways the Commission can help facilitate financing opportunities for minorities and women.



Ensuring Localism and Diversity in Broadcasting. The Commission took action to maintain the three long-standing core goals of Commission media ownership policy – competition, localism and diversity. Chairman Martin led the Commission in taking steps to increase diversification of ownership in the broadcast services by promoting opportunities for new entrants. In addition, the Commission completed a long-standing initiative to study localism in broadcasting and made proposals to ensure that local stations air programming responsive to the needs of their service communities.

Spectrum Sharing. As television stations transition from analog to digital, the Commission has a rich opportunity to foster the entry of many more new, independent and diverse voices on the air. One idea that takes advantage of the potential for digital technology to serve a more diverse array of consumers is spectrum sharing. Spectrum sharing is one of the most significant opportunities presented by the DTV transition, and is not a new idea. The Commission already has rules in place to allow spectrum-sharing arrange-

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ments for broadcast stations. In the digital environment, the ability to share spectrum, rather than having to purchase new stations or spectrum, provides an entry-level opportunity for new entrants to cut some overhead costs and get into the business of broadcasting. Chairman Martin proposed allowing broadcasters to create more diverse and locally oriented channels by sharing their digital spectrum with entities offering such programming.

Ion Media Networks recently joined with a minority-owned new entrant in the television broadcasting industry, Urban Television, with a share-time proposal that would launch targeted programming serving the needs and interests of African-American viewers. The proposal presumes that the share-time stations created by the arrangement would be entitled to mandatory carriage – without carriage, the proposal would not be feasible. By granting the applications for the Ion-Urban Television share-time arrangement, the Commission would give birth to the nation's first over-the-air African American television network. Groups such as the Rainbow PUSH Coalition, MMTC, the NAACP, and the Lawyers Committee for Civil Rights Under the Law have all encouraged the Commission to grant the proposal. This is an important example of the type of opportunity the Chairman has advocated to address the serious financial and logistical barriers – lack of access to capital and spectrum – that plague most new entrants.

Reforming Universal Service and Intercarrier Compensation

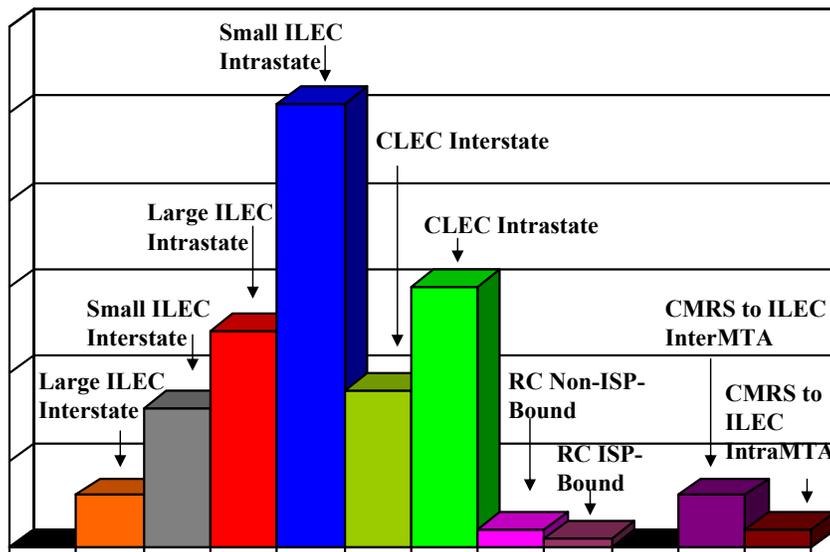
Although the Commission has taken interim steps to ensure the continued viability and affordability of the universal service fund for American consumers, further reform is needed. In moving to an IP-based world, consumers require access to broadband services. The Commission must explore ways to utilize universal service funds to provide broadband service to all Americans.

In November, the Commission sought comment on proposals to tie receipt of high-cost universal service support to a provider's commitment to offer broadband service ubiquitously throughout its service area. The Commission also sought comment on establishing a Broadband Lifeline/Link Up Pilot Program to examine how the low-income universal service support mechanisms (the Lifeline and Link Up programs) can be used to enhance access to broadband Internet access services for low-income Americans. Moreover, the Commission sought on proposals to reform the universal service contribution base by assessing contributions based, wholly or in part, on telephone numbers. Such reform will be necessary to broaden and stabilize our universal service contribution base as demand for new services strains the size of the fund.

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At the same time, the Commission sought comment on proposals to reform the inter-carrier compensation regime. Under the current regime, carriers assess different rates for different types of traffic exchanged via the public switched telephone network.

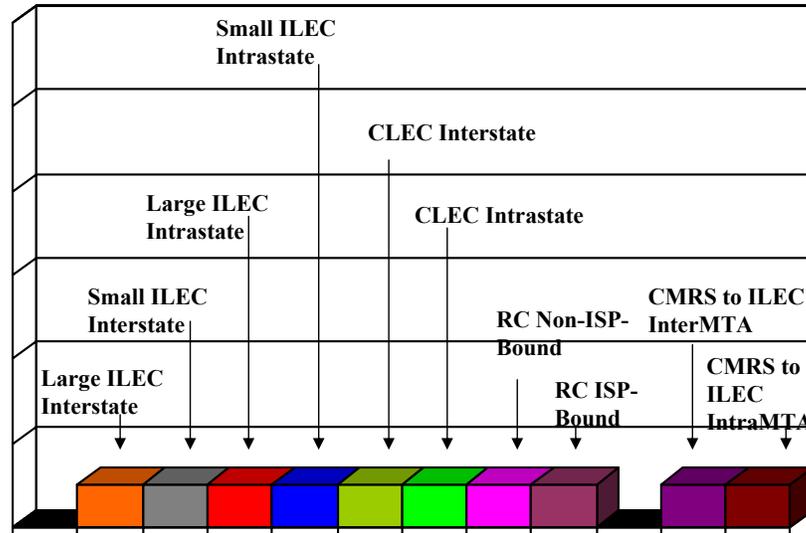
Disparate Rates



Evidence of increasing regulatory arbitrage, as well as increased competition and changes in technology, has led the Commission to consider comprehensive reform of intercarrier compensation. The differences in existing intercarrier compensation regimes impose significant inefficiencies on users and distort carriers' investment incentives, which can result in losses of billions of dollars in consumers and producers surplus. Possibly more important, these legacy regulatory regimes pose an obstacle to the transition to an all-IP broadband world. Because carriers currently can receive significant revenues from charging above-cost rates to terminate telecommunications traffic, they have a reduced incentive to upgrade their networks to the most efficient technology or to negotiate interconnection agreements that are designed to accommodate the efficient exchange of IP traffic, as both actions would likely lead to reduced intercarrier payments.

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Uniform Rates



To preclude these negative effects, intercarrier compensation rates must be transitioned to a regime where traffic is exchanged at the same rate, regardless of the technology used.

Conclusion

Technological advances, converging business models, and the digitalization of services have created unparalleled opportunities and considerable challenges. Under Chairman Martin's leadership, the Commission has produced meaningful results for consumers. It put in place the appropriate regulatory framework that achieves the twin goals of spurring investment and establishing open platforms to deliver choice and innovation to consumers. In almost all cases vigorous competition has enabled consumers to get newer and more innovative technologies and communications services at ever-declining prices. Television programs are sold on the Internet and streamed wirelessly to mobile devices; teenagers communicate over IM, SMS and MySpace, not the landline phone; DVRs mean you watch your TV when and where you want; mobile phones show movies, play songs, photograph your kids, and even send you emergency messages. The Commission's efforts in recent years have helped all Americans reap the rewards of convergence and the broadband revolution.

Footnotes

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- 4 Michael Render, US Fiber to the Home Market Update, at 12 (Dec. 15, 2008), available at <http://www.ftthcouncil.org/documents/176173.pdf> (last visited Jan. 13, 2009).
- 5 See FCC, HIGH-SPEED SERVICES FOR INTERNET ACCESS: STATUS AS OF DECEMBER 31, 2007, tbl.1 (2009).
- 6 See FCC, HIGH-SPEED SERVICES FOR INTERNET ACCESS: STATUS AS OF DECEMBER 31, 2007, tbl.1 (2009).
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- 8 USTelecom.org, Wireline Broadband Pricing 2001–2007, at 2, <http://www.ustelecom.org/uploadedFiles/Learn/Broadband.Pricing.Document.pdf> (last visited January 8, 2009).
- 9 Id.
- 10 HarrisInteractive.com, The Harris Poll—Four Out of Five Adults Now Use the Internet, http://www.harrisinteractive.com/harris_poll/index.asp?PID=973 (last visited January 8, 2009).
- 11 In addition, the Commission is continuing with its efforts to use an additional 10 megahertz of related spectrum (D Block) to foster a Public/Private Partnership creating a nationwide interoperable broadband network for public safety services.
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- 15 See, http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1237086.
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- 19 Critical Mass – The Worldwide State of the Mobile Web, Nielsen Mobile, July 2008, at 3; Sharon Armbrust, Wireless Investor: U.S. Mobile Wireless Projections: Data Dollars Outgrow Voice 8-to-1, WIRELESS INVESTOR, SNL Kagan, July 15, 2008, at 4.
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