

Democracy in the Age of the Internet:
An Analysis of the Net Neutrality Debate of 2006

By

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Abstract: In 2006, a major telecommunications bill failed because it did not include guarantees for something called “net neutrality.” The purpose of this paper is to describe and explain the politics behind the net neutrality debate of 2006 and to predict its likely future course.

Introduction

In 2006, a major telecommunications bill failed because it did not include guarantees for something called “net neutrality.” The political coalition in favor of net neutrality included an odd assortment of interests including the American Civil Liberties Union, the Christian Coalition of America, the Gun Owners of America, the American Library Association, and the Consumers Union, along with Internet businesses like Google, Amazon.com, and Yahoo!, and peak associations like the American Electronics Association and the Communications Workers of America.

The opposing coalition included the major telephone and telecommunications equipment companies, cable operators, and an assortment of technologists, conservative economists, and politicians who argued that net neutrality guarantees would constitute a new form of government regulation that could ruin the Internet by reducing incentives to build broadband infrastructure and giving unfair advantages to already large service providers like Google and Yahoo!

Those in favor of net neutrality argued for the necessity of regulating the actions of the owners of Internet infrastructure in order to preserve the Internet as a forum for free speech, prevent the potential abuse of market power by telephone and cable companies, and promote Internet-based economic innovation.

The purpose of this paper is to describe and explain the politics behind the net neutrality debate of 2006 and to predict its likely future course. The main questions to be addressed are:

1. To what extent did policymakers in Congress and the bureaucracy shape the politics of net neutrality through their power to privilege certain interest groups over others?
2. Did large telecommunications companies “capture” key governmental institutions that were supposed to regulate them?
3. To what extent was capture by telecommunications companies a function of which party controlled the White House and/or Congress?
4. Were relatively newer groups, such as Internet-based services like Google and Yahoo!, still learning how to lobby effectively and was there evidence that their influence was growing over time?

Origins of the Debate

The debate began with digitization: the progressive migration of everything that was once analog – text, symbols, audio, and video – toward creation, storage, and transmission in digital formats. The telephone networks were designed originally for the transmission of analog audio signals, but conversion of those signals to digital permitted more efficient use of telephone networks and hence less expensive services. Cable television networks were designed originally for the transmission of analog TV signals, but the same logic made it desirable for cable operators to switch over to digital formats (e.g., for fiber optic and satellite transmission) for transmission. The rise of the Internet, and particularly the broadband-capable Internet, made it possible to create, store, and transmit just about anything in digital formats. Although it was not yet feasible to transmit broadcast-quality video over the Internet, that day was soon approaching.

In the meantime, the federal government had regulated various communications services separately because of their initially different characters. Telephone networks were regulated, for example, to prevent the abuse of monopoly power, but more positively to assure that as many people as possible would have access to the telephone network despite the high costs of connecting people in remote locations (universal service).¹ A series of judicial decisions permitted independent companies to connect equipment to the telephone network to offer new services as long as that did not degrade the network.²

¹ The best single work on universal service is Milton L. Mueller, *Universal Service: Interconnection, Competition, and Monopoly in the Making of American Telecommunications* (Cambridge, Mass.: MIT Press/AEI Series on Telecommunications Deregulation, 1997).

² *Hush-A-Phone v. United States.*, 238 F.2d 266, (D.C. Circuit Court of Appeals, 1956); *Hush-A-Phone Corp. v. AT&T*, 22 FCC 112, 114 (1957); FCC Carterfone decision, 13 F.C.C.2d 420 (1968), <http://www.uiowa.edu/~cyberlaw/FCCOps/1968/13F2-420.html>.

Television broadcasting was regulated in a completely separate legal regime that focused on the idea of “common carriage” and the responsibility of broadcasters to serve the public in various other ways defined by legislation. Cable television was extensively deregulated during the Reagan Administration to promote the building and upgrading of cable networks. By the end of the 1990s, more than 70 percent of US households got their TV signals via the cable networks.

The Telecommunications Act of 1996 recognized the need to provide incentives to both telephone and cable companies to compete with one another to build their separate telecommunications infrastructures and, if possible, to offer competing telephone and telecommunications services. Initially, telephone companies stuck to telephone services and cable companies stuck to providing TV programming to customers. They both, however, began to experiment with offering data access services as a sideline to their main businesses. Dial-up access to the Internet was still the preferred method for consumers, while people in offices and universities began to have other and better means to access the Internet.

By the end of the 1990s, the cable companies were ahead of the telephone companies in offering broadband Internet connectivity to customers via cable modems. A few years later, the telephone companies began to offer DSL (digital subscriber line) services to compete with the cable companies. By 2005, most Americans who had broadband connections to the Internet were doing so via cable modems or DSL.³ Growth in telephony and traditional cable TV revenues for both telephone and cable companies had begun to flatten out by then, so both were pleased to see rapid growth in revenues for broadband services (see Table 1).

Table 1. Telecommunications Revenues by Sector, 2005

Type of Service	Total Revenues (in \$Billions)	Type of Growth
Enterprise Long Distance and Data	80	flat
Enterprise Local Voice	40	flat
Consumer Fixed Voice	80	shrinking
Consumer Broadband	15	growing rapidly
Wireless	100	growing rapidly
Video	50	growing

Source: Robert Gensler, T. Rowe Price, as cited in Robert M. Entman, *Reforming Telecommunications Regulation* (Washington, D.C.: The Aspen Institute, 2005), p. 9.

In the late 1990s, the issue of “open access” on the Internet arose as a result of proposed mergers between telephone companies and cable operators. In 1999, AT&T’s merger

³ According to Gigi Sohn, over 98 percent of home broadband users were connected to the Internet via cable or DSL modems in 2006.

with Telecommunications, Inc. (TCI) raised fears of a large and vertically integrated internet service provider. The acquisition of Time Warner by AOL in January 2000 raised similar concerns. Scholars wondered whether the unbundled access to telecommunications services at the “local loop” that applied to telephone companies should also apply to cable operators who were just then beginning to deploy broadband services over their networks.⁴

The Republicans who came to power in 2000 were not interested in preserving the benefits of universal service for telephone customers or requiring the telephone and cable networks to offer unbundled access to the local loop. Instead, they believed that the best way to build the broadband infrastructure was to foster competition between cable and telephone companies and to keep regulation of both to a minimum.⁵ One of the results of this new philosophy was the FCC’s decision in 2003 to release telephone companies from the obligation to share their digital infrastructure with other companies via the unbundling of DSL services, thus gravely undermining the principle of universal service. A similar decision was made when the FCC labeled cable-modem services “information services” that did not need to be regulated. The U.S. Supreme Court upheld the latter decision in 2005.⁶

The Birth of Net Neutrality

On November 18, 2002, a coalition of high-tech firms including Amazon.com, eBay, Yahoo!, Disney Corporation and Microsoft called the Coalition of Broadband Users and Innovators (CBUI) sent a letter to FCC Chairman Michael Powell urging the FCC to “assure that consumers and other Internet users continue to enjoy the unfettered ability to reach lawful content and services.” Members of the CBUI used the phrase “net neutrality” to refer to an idea originally discussed in an essay written in 2002 by Professor Tim Wu of Columbia Law School and published in 2003.⁷ The CBUI wanted the FCC to adopt “nondiscrimination safeguards” to guarantee net neutrality.⁸

⁴ Eli Noam, “Beyond Liberalization II: The Impending Doom of Common Carriage,” *Telecommunications Policy*, 18 (1994), 435-452; Francois Bar and Annemarie Munk Riis, “Tapping User-Driven Innovation: A New Rationale for Universal Service,” *The Information Society* 16 (2000), 1-10; and Mark A. Lemley and Lawrence Lessig, “The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era,” *UCLA Law Review*, 48 (2001), 925-972.

⁵ Milton Mueller, “The Mobile Internet and Vertical Tying: Networks, Handsets, and Content,” draft report to the OECD, no date but probably 2007.

⁶ U.S. Supreme Court, “National Cable and Telecommunications Association et al. v. Brand X Internet Services et al.,” No. 04-227, argued March 29, 2005, decided June 27, 2005, <http://www.law.cornell.edu/supct/html/04-277.ZS.html>

⁷ Tim Wu, “Network Neutrality, Broadband Discrimination,” *Colorado Journal of Telecommunications and High Technology Law*, 2 (2003), 11-12, 20-21.

⁸ Ex Parte Letter from CBUI to Michael K. Powell, FCC Chairman, CC Docket Nos. 02-33, 98-10 & 95-20, CS Docket No. 02-52, and GN Docket No. 00-186 (November 18, 2002).

Eli Noam has written that there are multiple possible meanings to the phrase “net neutrality:”

- no different quality grades (“fast lanes”) for internet service
- no price discrimination among internet providers
- no monopoly price charged to content and application providers
- nothing charged to providers for transmitting their content
- no discrimination [against] content providers who compete with the carrier’s own content
- no selectivity by the carriers over the content they transmit
- no blocking of the access of users to some websites⁹

Noam argues that the last two are important from the perspective of preserving freedom of speech and preventing censorship of unpopular ideas. Most advocates of net neutrality were not asking for free access to the Internet for users or service providers, however, so the essence of the concept was nondiscrimination by carriers (owners of the infrastructure) with respect to content, applications, and content/application providers.

Four Principles, Four Freedoms

In September 2003, the High Tech Broadband Coalition¹⁰ sent a document to the FCC entitled “Broadband Principles for Consumer Connectivity.” This document called for minimal regulation of broadband services to protect consumer and provider interests. It argued for four main principles:

1. Consumers should receive meaningful information regarding their broadband services plans.
2. Broadband consumers should have access to their choice of legal internet content within the bandwidth limits and quality of service of their service plan.
3. Broadband consumers should be able to run applications of their choice, within the bandwidth limits and quality of service of their service plan, as long as they do not harm the provider’s network.
4. Consumers should be permitted to attach any devices they choose to the broadband connection at the consumer’s premises, so long as they operate within the bandwidth limits and quality of service of their service plans, and do not harm the provider’s network or enable theft of services.¹¹

The phrase “within the bandwidth limits and quality of service of their service plan” was included to protect the providers against “bandwidth hogs” who might degrade the

⁹ Eli Noam, “A Third Way for Net Neutrality,” *Financial Times FT.com*, August 29, 2006.

¹⁰ This included the Consumer Electronics Association, the Business Software Alliance, the Telecommunications Industry Association, the Semiconductor Industry Association, the National Association of Manufacturers, and the Information Technology Industry Council.

¹¹ Ex Parte Letter from the High Tech Broadband Coalition to FCC Chairman Michael K. Powell, CC Docket Nos. 02-33, 98-10 & 95-20 and CS Docket No. 02-52 (September 25, 2003), <http://www.tiaonline.org/policy/initiatives/convergence/documents/ConnectivityPrinciples.pdf>.

service quality of others by engaging in activities that stretched the network beyond its capacity. Similarly, the providers wanted protection against consumer or service provider actions that threatened the integrity of the network and/or outright theft of services.

FCC Chairman Michael Powell delivered an address on February 8, 2004, in which he articulated his ideas for four “Internet Freedoms:”

1. freedom to access content
2. freedom to use applications
3. freedom to attach personal devices
4. freedom to obtain service plan information¹²

These four freedoms coincided closely with the four principles elaborated in the document prepared by the High Tech Broadband Coalition, with a slight change of order. The FCC adopted a policy statement in August 2005 that included four “principles” that were barely modified versions of Powell’s four freedoms:

1. consumers are entitled to access the lawful Internet content of their choice;
2. consumers are entitled to run applications and 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.¹³

The FCC’s fourth principle goes a bit beyond the Powell’s idea of fully informing consumers about their broadband plans. The next two sentences in the statement are a bit puzzling but clearly indicate the difficulty the Commission had in reconciling the conflicting views of its members:

Although the Commission did not adopt rules in this regard, it will incorporate these principles into its ongoing policymaking activities. All of these principles are subject to reasonable network management.¹⁴

In March 2005, before Michael Powell left office¹⁵, the FCC struck a blow for net neutrality by forcing a small DSL service provider, the Madison River Telephone

¹² Michael K. Powell, “Preserving Internet Freedom: Guiding Principles for the Industry,” speech delivered at the Silicon Flatirons Symposium on the Digital Broadband Migration, University of Colorado School of Law, Boulder, Colorado, February 8, 2004, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-243556A1.pdf.

¹³ “FCC Adopts Policy Statement: New Principles Preserve and Promote the Open and Interconnected Nature of Public Internet,” FCC press release, August 5, 2005.

¹⁴ Ibid.

Company based in Mebane, North Carolina, to stop blocking its customers from using Vonage's voice-over-internet-protocol (VoIP) service. The FCC negotiated a consent decree with the company that is now considered an important legal precedent for net neutrality.¹⁶ Nevertheless, the Madison River action was taken against a telephone company using existing laws that gave the FCC regulatory powers over telephone companies, whereas advocates of net neutrality wanted the FCC's powers to be extended to cable operators and other providers of broadband services.¹⁷

The Whitacre Interview

The net neutrality debate rose to a higher level of intensity after Edward E. Whitacre, Jr., CEO of SBC Telecommunications,¹⁸ was quoted in an October 2005 interview as follows:

How concerned are you about Internet upstarts like Google , MSN, Vonage, and others?

How do you think they're going to get to customers? Through a broadband pipe. Cable companies have them. We have them. Now what they would like to do is use my pipes free, but I ain't going to let them do that because we have spent this capital and we have to have a return on it. So there's going to have to be some mechanism for these people who use these pipes to pay for the portion they're using. Why should they be allowed to use my pipes?

The Internet can't be free in that sense, because we and the cable companies have made an investment and for a Google or Yahoo! or Vonage or anybody to expect to use these pipes [for] free is nuts!¹⁹

Suddenly what had been theoretical speculation about the potential for discrimination by infrastructure owners against service providers no longer seemed so theoretical.

¹⁵ Kevin Martin became Chairman of the FCC in April 2005.

¹⁶ "In the Matter of Madison River Communications LLC and Affiliated Companies," Consent Decree, Federal Communications Commission, DA 05-543, File No. EB-05-IH-0110.

¹⁷ Delan McCullagh, "Telco Agrees to Stop Blocking VoIP Calls," CNET News.com, March 3, 2005, http://news.com.com/Telco+agrees+to+stop+blocking+VoIP+calls/2100-7352_3-5598633.html; Lawrence Lessig, "Voice-Over-IP's Unlikely Hero," *Wired*, Issue 13:05, May 2005, <http://www.wired.com/wired/archive/13.05/view.html?pg=4>;

¹⁸ When SBC purchased AT&T Corporation to form AT&T Inc. in August 2005, Whitacre was named Chairman and CEO of the new entity.

¹⁹ Patricia McConnell, "At SBC It's All about Scale and Scope," *Business Week*, October 7, 2005. The online version of the interview is dated November 7, 2005.

Vint Cerf Weighs In

One of the founding fathers of the Internet, Vint Cerf, sent a letter to Representatives Joe Barton (R-Texas) and John Dingell (D-Michigan) on November 8, 2005, defending the idea of net neutrality:

The remarkable social impact and economic success of the Internet is in many ways directly attributable to the architectural characteristics that were part of its design. The Internet was designed with no gatekeepers over new content or services. The Internet is based on a layered, end-to-end model that allows people at each level of the network to innovate free of any central control. . . Enshrining a rule that broadly permits network operators to discriminate in favor of certain kinds of services and to potentially interfere with others would place broadband operators in control of online activity. Allowing broadband providers to segment their IP offerings and reserve huge amounts of bandwidth for their own services will not give consumers the broadband Internet our country and economy need. Many people will have little or no choice among broadband operators for the foreseeable future, implying that such operators will have the power to exercise a great deal of control over any applications placed on the network.²⁰

At the time, Cerf was employed as “Chief Internet Evangelist” for Google. Nevertheless, he was there at the creation of the Internet and for many years chaired the Internet Activities Board. The major arguments he mustered in his letter were to appear again and again in subsequent statements by net neutrality advocates so it might be helpful to review them in some detail.

*End-to-End Architecture*²¹

One of the most important ideas behind the Internet is packet switching. Packet switching permits messages to be sent from origin to destination via whatever paths are available on the network. The original message is divided into packets to take advantage of the possibility of sending parts of the message via different routes, thus using the network efficiently and allowing it to deliver a message even though a specific path may not be functioning. Packet switching requires that each node in the network have a unique identifier that is accessible to all the other nodes via dedicated computers called root servers.²²

²⁰ Letter from Vint Cerf to Joe Barton and John Dingell, November 8, 2005, <http://googleblog.blogspot.com/2005/11/vint-cerf-speaks-out-on-net-neutrality.html>.

²¹ See Jerome H. Saltzer, David P. Reed, and David D. Clark, *End-to-End Arguments in System Design*, MIT Laboratory for Computer Science, 1981, accessed at <http://web.mit.edu/Saltzer/www/publications/endoend/endoend.pdf>.

²² For a thorough discussion of these matters, see Milton L. Mueller, *Ruling the Root: Internet Governance and the Taming of Cyberspace* (Cambridge, Mass.: MIT Press, 2002), ch. 1.

In theory, the network sends packets from node to node independently of content. The packets are then reassembled in the correct order at the destination. In practice, however, not all packets are treated equally. It is possible to prioritize messages that are particularly time-dependent – such as audio files for telephony applications -- so that the end user does not experience delays in reception and other forms of signal degradation. The telephone companies have argued strongly for preserving their right to prioritize the delivery of certain types of content (mainly telephony-related audio and real-time video) in order to assure what they call “quality of service.”²³

For the packet switched network to operate efficiently it needs to have as much flexibility as possible in determining along which paths to convey packets. If the network discriminates against certain nodes, paths associated with those nodes might not be available when they are needed. A user at a node that is being discriminated against will experience slower than average speeds of transmission and reception and may not be able to communicate with other nodes at all. Thus one of the basic notions behind the value of communications networks (that all nodes can reach all other nodes) is put in jeopardy.

Similarly a network that prioritizes certain types of packets (especially packets of content owned by the network providers) is clearly discriminating against other service providers.

The end-to-end argument, to summarize, was that it was better not to prioritize packets but instead to upgrade the entire network to deal with quality assurance issues while maintaining the overall openness of the Internet. Opponents called this the “dumb network” approach as opposed to the “intelligent network” that they favored. Cerf’s end-to-end architecture argument proved to be highly controversial in the ensuing debate on net neutrality.

Discrimination by Broadband Service Providers against Other Service Providers

Discrimination by broadband service providers -- like AT&T, Verizon, Time Warner, or Comcast -- would be a problem both for other service providers -- like Google and Yahoo! -- and their users. The most egregious form of discrimination by broadband service providers would be denial of connection to the infrastructure, but a more subtle form of discrimination could occur if connectivity charges were too high for the content or application services providers to be able to compete with services offered by the broadband service providers.

Reservation of Bandwidth by Broadband Service Providers

It has been suggested that the telephone companies intended to reserve up to 80 percent of the total bandwidth in their networks for services that they intended to offer (mostly cable-TV-like video services) leaving only 20 percent available for other services. The telephone companies claimed that this would be necessary to provide broadcast-quality video services to customers so that they could compete on equal terms with cable operators. They said that they needed to do this in order to invest in future infrastructural

²³ For a good definition see “Quality of Service,” http://en.wikipedia.org/wiki/Quality_of_service.

improvements. But the fear of other service providers was that, unless they paid substantially larger connectivity fees, they would be relegated to the “slow lanes” of the broadband Internet, especially as overall traffic increased. The desire of telephone companies to compete directly with cable operators, in their view, meant that telephone companies would come to possess the same power to decide who got to offer what services to customers over the networks as cable operators.

Exercise of Market Power by Broadband Service Providers

Since 98 percent of all households who subscribed to broadband services in 2006 got them from telephone or cable service providers and approximately 40 percent of these actually did not have a choice between telephone and cable service providers, there was a concern that broadband service providers would use their monopoly or duopoly market power to extract rents (excessive profits) from customers and to exclude certain service providers or consumers for non-economic reasons. The latter would be particularly problematic from a freedom-of-speech perspective.

Tim Berners-Lee Weighs In

In late March 2006, Tim Berners-Lee, a chief architect of the World Wide Web and the inventor of the hypertext markup language (HTML) stated his support for the net neutrality movement in an interview with the *Toronto Star*:

It stops being the Net if a supplier of downloaded video pays to connect to a particular set of consumers who are connected to a particular cable company. It would no longer be an open information space... The whole point of the Web is when you arrive it's more or less the same for everybody. That integrity is really essential... I'm very concerned."²⁴

Berner-Lee continued to speak out in favor of net neutrality guarantees as did Vint Cerf. It was somewhat surprising to supporters, therefore, when David Farber and Bob Kahn, also Internet pioneer, came out against net neutrality (see below).

The Christian Coalition Weighs In

On May 17, 2006, Roberta Combs, President of the Christian Coalition of America, announced her organization's support for net neutrality:

Under the new rules, there is nothing to stop the cable and phone companies from not allowing consumers to have access to speech that they don't support. What if a cable company with a pro-choice Board of Directors decides that it doesn't like a pro-life organization using its high-speed network to encourage pro-life activities? Under the new rules, they could slow down the pro-life web site, harming their ability to communicate with other pro-lifers - and it would be legal. We urge Congress to move aggressively to save the Internet — and allow ideas rather than money to control what Americans can access on the World Wide Web. We urge all Americans to contact their

²⁴ Tyler Hamilton, “Battle for the Web,” *Toronto Star*, March 28, 2006.

Congressmen and Senators and tell them to save the Internet and to support “Net Neutrality.”²⁵

Freedom of speech was also a major concern of the American Civil Liberties Union, the American Library Association,²⁶ the Gun Owners of America,²⁷ and MoveOn.org in their support for net neutrality.

Opposing Views

One particularly strong statement in opposition to net neutrality came out in February 2006 from the US Internet Industry Association (USIAA).²⁸ In the first sentence a phrase destined to be repeated many times by opponents of net neutrality appeared: “Net neutrality is a solution in search of a problem.” The document went on to argue that the concept itself was vague and its definition was shifting constantly, that legislation banning tiered or selective service plans would “eliminate Christian-focused Internet services” and “would have the practical effect of forcing families to accept pornography into their homes...”²⁹

J. Gregory Sidak, a visiting professor of law at Georgetown University, testified in opposition to net neutrality at a Senate Committee on Commerce, Science, and Transportation hearing on February 7, 2006:

“Net neutrality” obligations would require a telecommunications carrier to operate its broadband network so that no packet of information is treated as inferior to others in terms of its urgency of delivery. Under “net neutrality” I can take comfort in knowing that my son’s Internet chatting about what agent Jack Bauer did on last night’s episode of *24* will receive the same priority of delivery as my file transfer of this testimony to the Committee’s staff. The practical effect of “net neutrality” obligations would be to require a telecommunications carrier to recover the full cost of its broadband network connection through a uniform flat-rate charge imposed on all end users.

²⁵ Christian Coalition of America, “Christian Coalition Announces Support for ‘Net Neutrality’ to Prevent Giant Phone and Cable Companies from Discriminating Against Web Sites,” press release, May 17, 2006, <http://www.cc.org/content.cfm?id=329&srch=neutrality>.

²⁶ “Net Neutrality,” American Library Association web site at <http://www.ala.org/ala/washoff/woissues/techinttele/networkneutrality/netneutrality.cfm>.

²⁷ Craig Fields, “What the Misguided Have Missed Regarding Network Neutrality,” May 2006, Gun Owners of America web site at <http://www.gunowners.org/op0618.htm>.

²⁸ See their web site at <http://www.usiia.org/>.

²⁹ US Internet Industry Association, *Network Neutrality and Tiered Broadband Services: a rational examination of the unintended consequences and detrimental effects of Network Neutrality legislation to prevent tiered broadband services*, Washington, D.C., February 5, 2006.

Companies like Google, eBay, and Yahoo! might believe that such an outcome works to their private economic advantage, but that short-run view would neglect the disincentive that “net neutrality” obligations would create for private investment in the very broadband infrastructure upon which these companies rely to deliver their content and applications to consumers.³⁰

Robert Kahn, who along with Vint Cerf pioneered the TCP/IP protocols, argued that net neutrality was a regulatory slogan that he opposed. He thought it would foreclose innovations in Internet technology that were very much needed.³¹

In June 2006, David Farber, a professor of telecommunications engineering who was a major participant in the building of the Internet, argued it would be against the interests of customers to restrict the ability of broadband service providers to manage their networks:

The current Internet supports many popular and valuable services. But experts agree that an updated Internet could offer a wide range of new and improved services, including better security against viruses, worms, denial-of-service attacks, and zombie computers; services that require high levels of reliability, such as medical monitoring; and services that cannot tolerate network delays, such as voice and streaming video. To provide these new services, both the architecture of the Internet and the business models through which Internet services are delivered may have to change.

Congress is considering several initiatives (known collectively under the banner of “network neutrality”) aimed at promoting continuing Internet innovation by restricting network owners’ ability to give traffic priority based on the content or application being carried or on the sender’s willingness to pay. The problem is that some of the practices that network neutrality would prohibit could increase the value of the Internet for customers.³²

As a result of Farber’s statement, the Center for American Progress staged a debate between Farber and Cerf on July 17, 2006, in which Cerf reiterated his major arguments (see above) and Farber backed away a bit from his criticisms of net neutrality guarantees, but continued to defend the idea that Congress was not capable of making good policy decisions in this area:

³⁰ Testimony of J. Gregory Sidak, Visiting Professor of Law, Georgetown University, before the Senate Commerce, Science, and Transportation Committee, February 7, 2006.

³¹ “Network Neutrality,” *Wikipedia*, http://en.wikipedia.org/wiki/Network_neutrality.

³² David Farber, “Common Sense about Network Neutrality,” June 2, 2006, <http://www.interesting-people.org/archives/interesting-people/200606/msg00014.html>.

The Congress seems to be very confused...They don't understand what the network does...They always pile stuff on, usually at the last minute, that can do harm.³³

Like Farber, Michelangelo Volpi, Senior Vice President of Cisco Systems, argued against net neutrality on the basis of the need for broadband providers to manage their networks intelligently and without Congressional interference:

The net neutrality debate comes down to this: content providers and aggregators want to regulate the Internet so that service providers cannot charge for different levels of service among their customers. The proposed rules would be akin to regulating that there cannot be carpool lanes on a highway. Broadband service providers who build the networks believe they should be able to manage the networks for efficiency, security and quality of service. Broadband providers believe they should be able to place intelligence in the core of their network as well as the edge, or the part that reaches consumers. The debates between these two camps centers on whether Congress should step in to create such regulation. It should not.³⁴

Volpi went on to argue that the next generation of Internet users would be increasingly accessing “high-bandwidth, time-sensitive services.” In order to provide a high quality online viewing experience for TV viewers, in particular, it would be necessary to charge higher fees to those users. If higher fees could not be charged, in Volpi’s view, that would make it impossible for the market to provide signals about what users really want. Thus, “a market-based approach is the correct way to go with the Internet.”³⁵

How the Interests Lined Up

Table 2 provides of summary of how different individuals and groups lined up for and against net neutrality. It does not include individuals and groups who took an in-between or third position. From a partisan political standpoint, there were clearly more Democrats than Republicans in favor of net neutrality. Business interests split with application and content providers for and broadband service providers and telecommunications equipment manufacturers against. Some conservative interest groups were supporters of net neutrality – like the Christian Coalition and the Gun Owners of America – but most opposing groups were conservative. Conservative think tanks and academics mostly opposed net neutrality.

³³ “The Great Debate: What is Net Neutrality,” featuring speakers Vint Cerf and David Farber and moderated by Carl Malamud, Center for American Progress, Washington, D.C., July 17, 2006.

³⁴ Michelangelo Volpi, “‘Neutrality’ Regulations Could Stifle Evolution of High-Speed Internet,” *San Jose Mercury News*, June 21, 2006.

³⁵ *Ibid.*

Table 2. Who Favored and Who Opposed Net Neutrality?

In Favor of Net Neutrality	Opposed to Net Neutrality
Large, Internet-based companies: Amazon.com eBay Google Microsoft	Large, broadband service providers: AT&T BellSouth Comcast Verizon
Consumer/civil liberties groups: American Civil Liberties Union Consumers Union Free Press Public Knowledge	Network equipment providers: Alcatel Cisco Corning Qualcomm 3M
Interest groups: American Library Association Christian Coalition of America Computer Professionals for Social Responsibility Gun Owners of America MoveOn.org TechNet Service Employees Intl. Union SavetheInternet.com Coalition	Interest groups: American Conservative Union Citizens Against Government Waste Communications Workers of America National Association of Manufacturers National Black Chamber of Commerce National Coalition on Black Civic Participation Hands Off the Internet US Internet Industry Association
Internet pioneers: Vinton Cerf Tim Berners-Lee Craig Newmark	Internet pioneers: David Farber Bob Kahn
Think tanks: The Benton Foundation The Media Access Project	Think tanks: The Cato Institute Center for Individual Freedom Competitive Enterprise Institute Progress and Freedom Foundation
Academics: Lawrence Lessig Tim Wu	Academics: Christopher Yoo George S. Ford Robert Litan

Source: Dan Tooley, "Net Neutrality in the Senate – Money, Self-Interest, and Social Responsibility," *Easy Street Business Blog*, July 10, 2006, http://blog.easystreet.com/index.php?tag=senator_ron_wyden; with modifications by the author.

It is worth noting that the cable companies and their trade association, the National Cable and Telecommunications Association (NCTA), were not particularly eager to support the video franchise bill because a national video franchise would make it easier for telephone companies to compete with them. According to NCTA spokesperson Rob Stoddard:

Our approach so far has been one of pragmatism and acknowledging that there is strong sentiment for a national video franchise... We haven't fully weighed in. It's a matter of seeing what the various committees do with it before it reaches the floor.³⁶

There were a number of individuals and groups who adopted an intermediate position, not agreeing entirely with either the pro- or anti- forces.³⁷ As a consequence of the vigorous debate over net neutrality, Congress began to consider embedding net neutrality guarantees in legislation.

The Internet Non-Discrimination Act

The Internet Non-Discrimination Act of 2006 (S. 2360)³⁸ was introduced by Senator Ron Wyden (D-Oregon) on March 2, 2006 in the Senate Committee on Commerce, Science, and Transportation. It never got out of committee.

The Internet Freedom and Nondiscrimination Act

The Internet Freedom and Nondiscrimination Act of 2006 (H.R. 5417), would have made it a violation of the Clayton Antitrust Act for broadband providers to "fail to provide access to its broadband network on reasonable and nondiscriminatory terms and conditions to anyone to offer content, applications or services at least equal to the broadband provider's own services (or its affiliate's services)..."³⁹ Introduced by Representatives F. James Sensenbrenner (R-Wisconsin) and John Conyers (D-Michigan) on May 18, 2006, it was approved by the House Judiciary committee on May 25, 2006 in a 20-13 vote (the fourteen Democrats were joined by six Republicans, the remaining 13 Republicans voted no). The bill was never taken up on the House floor and thus failed to be enacted.

³⁶ Mark Sullivan, "Video Franchise Gains Steam in DC," *Light Reading*, April 21, 2006.

³⁷ I will deal with these arguments in a separate paper on the politics of broadband infrastructure.

³⁸ The full text of the bill can be found at <http://www.publicknowledge.org/pdf/s2360-109.pdf>.

³⁹ Summary of the Internet Freedom and Nondiscrimination Act of 2006, H.R. 5417, by John Windhausen at the Public Knowledge site, <http://www.publicknowledge.org/node/358>. The full text of the bill can be found at <http://www.publicknowledge.org/pdf/hr5417-109.pdf>.

The Judiciary Committee's vote was affected somewhat by a turf battle between with the House Energy and Commerce Committee. While the former was considering the Internet Freedom and Nondiscrimination Act, the latter was considering the video franchise bill (see below). The Judiciary Committee wanted to make sure that antitrust matters remained under the jurisdiction of the Department of Justice. The video franchise bill would have given a sort of specialized antitrust enforcement authority to the Federal Communications Commission.⁴⁰

The Video Franchise Bill

The main purpose of the video franchise bill was to make it possible for telephone companies to offer cable-TV-like video services over the telephone infrastructure in competition with the cable operators. The telephone companies had argued that it would be impossible for them to compete effectively if they had to devote the time and energy already spent by cable companies winning the approval of state and local governments for video franchises, so the bill aimed to create national franchises instead of local ones for this purpose.

Representatives Joe Barton (R-Texas), Chairman of the House Energy and Commerce Committee, and Fred Upton (R-Michigan) sponsored and introduced the House's version of the bill, the Communication Opportunity, Promotion and Enhancement (COPE) Act of 2006 (H.R. 5252), on March 30, 2006.⁴¹ Senator Ted Stevens (R-Alaska), Chairman of the Senate Commerce Committee, sponsored and introduced the Senate's version of the bill, the Communications, Consumer's Choice, and Broadband Deployment Act (CCBD) of 2006 (S.2686), on May 1, 2006.⁴²

Both versions of the bill contained language corresponding closely to the FCC's four principles. The House version contained authority for the FCC to punish violators of broad Internet nondiscrimination principles with \$500,000 fines, but the authority was only to adjudicate complaints on a case-by-case basis and not to establish regulations mandating net neutrality.

Representative Ed Markey (D-Massachusetts) offered amendments to the House bill both in committee in April and during the floor debate on June 8, 2006 that included explicit net neutrality guarantees, but these amendments were defeated. The House version of the bill passed by a vote of 321-101 on June 8, 2006, and the Markey Amendment was defeated on the floor of the House by a vote of 152-269 (58 Democrats voted with 211 Republicans against the amendment; only 11 Republicans voted in favor).

One of the Democrats who voted for the bill was Eliot Engel (D-New York). Engel, who represented a New York City constituency said that in his district "competition in video

⁴⁰ Declan McCullagh and Anne Broach, "House Panel Votes for Net Neutrality," C/Net News.com, May 25, 2006, http://news.com.com/House+panel+votes+for+Net+neutrality/2100-1028_3-6077007.html.

⁴¹ The bill was also sponsored by Charles Pickering (R-Mississippi), and Bobby Rush (D-Illinois).

⁴² The full text of the bill can be found at <http://www.publicknowledge.org/pdf/s2686-109.pdf>.

service does just not exist...I have heard opposition to this bill, and I respect it. But on balance I have to support this bill.”⁴³ Another Democratic supporter, Bobby Rush (D-Illinois), said that his constituents in the Chicago area, many of them African-American, would benefit from the lower prices for cable services that the bill would provide.⁴⁴

When the Senate’s version of the bill was being considered in committee, Senator Olympia Snowe (R-Maine) proposed a net neutrality amendment entitled the Internet Freedom Preservation Act of 2006 (S. 2917)⁴⁵ that was defeated in an 11-11 vote on June 28, 2006. All 10 Democrats on the Committee voted with Senator Snowe. The video franchise bill passed in committee by a vote of 15-7. Senator Snowe was the only Republican voting against it. Senator Ron Wyden (D-Oregon) said he would try to block it on the Senate floor.⁴⁶

Senator Stevens made his famous statement about the Internet in a speech on June 28, 2006 while explaining his vote against the net neutrality amendment:

And again, the Internet is not something you just dump something on. It's not a big truck. It's a **series of tubes**. And if you don't understand those tubes can be filled and if they are filled, when you put your message in, it gets in line and it's going to be delayed by anyone that puts into that tube enormous amounts of material, enormous amounts of material.⁴⁷

Even though Stevens was simply trying to make a point, albeit ineptly, about bandwidth hogs, his statement was immediately picked up by net neutrality supporters as evidence of Stevens’ lack of knowledge about the Internet. Lampoons of the statement promptly appeared on Google Video and YouTube, Jon Stewart made fun of it on *The Daily Show*, and bloggers went wild.

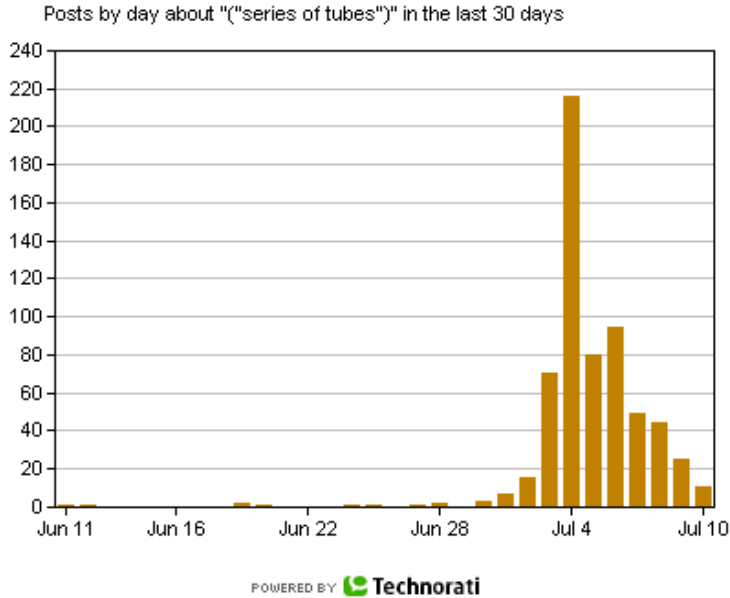
⁴³ Drew Clark, “House Panel Approves Telecom Bill: Rejects Democratic ‘Buildout’ Plan,” *National Journal’s Insider Update: The Telecom Act*, April 6, 2006, accessed at <http://www.njtelecomupdate.com/lenya/telco/live/tb-BKZH1144269035135.html>.

⁴⁴ John Eggerton, “Subcommittee Votes Down Build-Out Guarantee,” *Broadcasting and Cable*, April 5, 2006.

⁴⁵ For the text of the bill see <http://www.publicknowledge.org/pdf/s2917-109.pdf>.

⁴⁶ Drew Clark, “The Vote on ‘Net Neutrality’ Poses Obstacle in Senate,” *National Journal’s Insider Update: The Telecom Act*, July 6, 2006.

⁴⁷ “Series of Tubes,” *Wikipedia*, http://en.wikipedia.org/wiki/Series_of_tubes.



Stevens' constituents in Alaska were not too happy with his position on net neutrality. The *Anchorage Daily News* published an editorial in favor of net neutrality on September 4, 2006.⁴⁸ MoveOn.org targeted Stevens and other opponents of net neutrality for ads criticizing their views and publicizing the campaign contributions they had received from telecommunications interests.

Senator Wyden issued a statement on June 26, 2006 announcing his intention to place a "hold"⁴⁹ on a vote on the video franchise bill because it lacked net neutrality guarantees:

As a United States Senator who has devoted himself to keeping the Internet free from discrimination, from discriminatory taxes and regulations to assuring offline protections apply to online consumer activities as well, I cannot stand by and allow the bill to proceed with this provision. The inclusion of this provision compels me to inform my colleagues that I would object to any unanimous consent request for the United States Senate to move to consider this bill.⁵⁰

The video franchise bill was not put up for a vote in the Senate as a result of Wyden's hold and the implied threat of a filibuster. To break the hold, Senator Stevens needed 60 votes. He did not have them.

⁴⁸ "Net Neutrality: Congress Should Ensure Internet Providers Don't Play Favorites," *Anchorage Daily News*, September 4, 2006, <http://www.adn.com/opinion/view/story/8156657p-8049486c.html>.

⁴⁹ A hold is a parliamentary privilege accorded to all Senators under Senate rules and traditions.

⁵⁰ Statement by U.S. Senator Ron Wyden for the Congressional Record, June 28, 2006, http://wyden.senate.gov/media/2006/06282006_net_neutrality_holds_release.html.

Lobbying Efforts

Lobbying played a role in the defeat of the various efforts to amend the video franchise bill to include explicit net neutrality guarantees. Large sums were spent, in particular, by the telecommunications industry. Estimates of the total spent by cable, telephone, and Internet companies in the first half of 2006 were in the neighborhood of \$110 million (see Table 3). Perhaps this was the basis of published claims that firms were spending \$1 million per day.

Table 3. Money Spent by Telephone, Cable, and Internet Interests on Telecommunications Reform, First Half of 2006, in Millions of Dollars

Category	Specific Firms and Organization	Amount in \$ millions
Telephone Interests	AT&T, Verizon, BellSouth, and USTA	30.3
Cable Interests	Comcast, Time Warner, Cox, and NCTA	12.2
Internet Interests	Google, Yahoo!, eBay, Microsoft, Amazon.com	8.8
Total		51.3

Source: Ted Hearn, "Mad Money: Cable, Phone, Net Companies Have Spent \$110 this Year to Influence Telecom Reform. Was It Worth It?" *Multichannel News*, October 23, 2006, accessed via <http://www.multichannel.com/article/CA6383576.html>.

Hands Off the Internet (HandsOff.org) and NetCompetition.org were web sites funded primarily by the telephone companies that raised a total of \$9.1 million by July 2006. Most of these funds were spent on advertising.⁵¹

ItsOurNet.org, with funding from Microsoft, Google, Yahoo! and IAC/Interactive Corporation, SavetheInternet.com run by Free Press, a non-profit group, and MoveOn.org accounted for most of the pro-net-neutrality advertising and lobbying on the web.⁵² They collected a total of \$2.7 million by July 2006. They focused primarily on mobilizing activists in support of net neutrality legislation.⁵³ Over a million people signed an online petition to Congress that SavetheInternet.com posted on its web site.⁵⁴

In addition, telephone companies provided campaign contributions to certain Senators and Congressmen who they considered to be supporters (see Table 4). The

⁵¹ For examples of their anti-net-neutrality advertisements, see <http://www.handsoff.org/blog/>.

⁵² See the web site for Save the Internet at <http://www.savetheinternet.com/>.

⁵³ "Network Neutrality Legislation," *Congresspedia*, accessed at http://www.sourcewatch.org/index.php?title=Network_Neutrality_Legislation; "How We Got Here," illustration by Scott Roberts for the *Washington Post*, July 3, 2006.

⁵⁴ Craig Aron, "One Million Americans Urge Senate to Save the Internet," press release, June 14, 2006, <http://www.savetheinternet.com/=press11>.

Representatives in Table 4 were all co-sponsors of the House version of the video franchise bill.

Table 4. Campaign Contributions from Telephone Utilities to Representatives, as of May 9, 2006, in Thousands of Dollars

Representative	Contributions since 1989	Contributions since 2005
Joe Barton (R-TX)	257	30
Charles Pickering (R-MS)	361	44
Bobby Rush (D-IL)	103	8
Fred Upton (R-MI)	142	26

Source: "Network Neutrality Legislation," *Congresspedia*, accessed at http://www.sourcewatch.org/index.php?title=Network_Neutrality_Legislation.

In addition to the campaign contributions, there was a scandal over a \$1 million contribution in 2005 from the SBC Charitable Foundation to an Englewood, Illinois, community center founded by Bobby Rush.⁵⁵

Campaign contributions from the executives of the telephone and telecommunications equipment companies tended to go mainly to Republicans, reflecting the latter's generally more positive stance toward a national video franchise and their opposition to net neutrality.⁵⁶

Partisanship and the Role of Framing

The debate over net neutrality became largely a partisan debate, despite the fact that a few Republicans like James Sensenbrenner and Olympia Snowe favored net neutrality guarantees. The Republican Party had a pre-existing frame for other national issues that fit very well with opposition to net neutrality: government regulation is bad, markets are good. The problem was how to convince the public that net neutrality guarantees constituted bad government regulation. Proponents clearly wanted to give the FCC the power to enforce net neutrality principles. But to make the argument as strongly as possible, opponents of net neutrality had to paint the pre-existing regime for the Internet as non-regulatory (and therefore successful) and to find examples of poor regulatory decisions by the FCC. They used the example of the Telecommunications Act of 1996 to make the point that bad regulation had bad results (slow deployment of DSL by telephone companies). They turned frequently to the example of cable TV deregulation in the Reagan administration in 1988 to show that de-regulation had good results.

⁵⁵ Lynn Sweet, "Critics Blast SBC-Rush Relationship," *Chicago Sun-Times*, April 25, 2006, http://blogs.suntimes.com/sweet/2006/04/sweet_news_story_bobby_rush_co.html.

⁵⁶ See for example the campaign and PAC contributions of Edward Whitacre, CEO, and Randall Stephenson, COO, of AT&T, John Chambers of Cisco Systems, and Thomas Tauke of Verizon on <http://www.newsmeat.com>.

The relatively complicated concept of net neutrality originally put forward by proponents posed problems for supporters and opportunities for opponents. It was easy for opponents to criticize the idea as vague and shifting. Very few people understood what net neutrality meant. A public opinion survey conducted by the Glover Park Group and Public Opinion Strategies in September 2006 revealed that only 7 percent of respondents said that they had heard or seen anything about net neutrality. However, when the pollsters explained the concept many responded favorably.⁵⁷

The main problem for proponents of net neutrality was to find a way to explain the issue to a broader public. They had to do this in order to go beyond their core supporters: telecommunications experts and lawyers, civil rights organizations, and Internet-related businesses.

Prior to June 2006, proponents responded defensively to the arguments of opponents. Table 5 below summarizes the arguments of opponents and the counter-arguments of proponents.

Table 5. Arguments and Counter-Arguments Regarding Net Neutrality

Subissues	Opponents	Proponents
Role of the Market	Let the market do its magic	Enforce antitrust laws so the market can do its magic
Threat of discrimination	Net neutrality guarantees are unnecessary because there has been no discrimination by telephone and cable companies	Cite statement by Edward Whitacre and the Madison River case
Desirability of regulation	Undesirable (cite positive example of cable deregulation and negative example of Telecom Act of 1996).	Desirable (argue that net neutrality guarantees were in place until FCC removed them)
Need to prioritize packets	Necessary for intelligently managing future broadband networks	Not necessary or desirable because it undermines end-to-end architecture
Need to create incentives for telephone and cable companies to build future networks	Future networks cannot be paid for unless providers can charge content and application providers for prioritizing packets	Telephone and cable companies will discriminate against competitors and overcharge consumers
Need to create more competition	Best way to do this is to have telephone and cable companies compete	Best way to do this is to add wireless, municipal and public broadband providers

⁵⁷ Ken Fisher, "Poll: Americans Don't Want Net Neutrality (Or Maybe They Don't Know What it Is)," *ars technica*, September 18, 2006, <http://arstechnica.com/news.ars/post/20060918-7772.html>.

Proponents did not help their cause when they defined net neutrality in technological terms instead of in terms of issues like freedom of speech, economic development, job creation, and consumer choice that politicians and voters could understand. This began to change immediately after the defeat of net neutrality amendments in June 2006.

The Tide Begins to Turn

The mid-term elections in November 2006 resulted in new majorities for Democrats in both the House and the Senate. Democrats replaced Republicans as chairs of the committees in charge of telecommunications. Representative John Dingell (D-Michigan) replaced Joe Barton as Chairman of the House Committee on Energy and Commerce and Edward Markey (D-Massachusetts) became Chairman of the Subcommittee on Telecommunications and the Internet. Daniel Inouye (D-Hawaii) replaced Ted Stevens as Chairman of the Senate Committee on Commerce, Science, and Transportation. While the FCC remained under Republican control, and Kevin Martin – a strong opponent of net neutrality – became chairman after the departure of Michael Powell, the new Republican member of the Commission, Robert M. McDowell, soon began to disagree with Martin over a variety of issues (just as Martin had done earlier with Powell).

The AT&T-BellSouth Merger

In order to gain regulatory approval for its merger with BellSouth, AT&T agreed on December 29, 2006, to

...maintain a neutral network and neutral routing on its wireline broadband Internet access service. This commitment shall be satisfied by AT&T/BellSouth's agreement not to provide or to sell to Internet content, application, or services providers, including those affiliated with AT&T/BellSouth, any service that privileges, degrades or prioritizes any packet transmitted over AT&T/BellSouth's wireline Internet access service based on its source, ownership, or destination.⁵⁸

While this commitment was only for a two-year period, supporters of net neutrality viewed AT&T/BellSouth's move as an important precedent and a vindication of their efforts. If they had not been able to demonstrate that there was substantial political support for net neutrality, no such concession would have been forthcoming.

The AT&T agreement to the consent decree was a blow to FCC Chairman Martin, who had opposed it up to the last minute. Martin apparently cared more about preventing net neutrality than AT&T. Of course, there was a lot of money involved in the merger (\$87

⁵⁸ Robert W. Quinn, Jr., AT&T Senior Vice President, Federal Regulatory, to Marlene Dorch, Secretary, U.S. Federal Communication Commission, December 28, 2006, Re: In the matter of review of AT&T Inc., and BellSouth Inc. Application for Consent to Transfer Control, WC Docket No. 06-74, http://www.fcc.gov/ATT_FINALMergerCommitments12-28.pdf.

billion to be precise) and from CEO Edward Whitacre's point of view business came first.⁵⁹

In January 2007, Senators Snowe and Byron Dorgan (D-North Dakota) introduced yet another net neutrality bill in the Senate, the Internet Freedom Preservation Act (S.215).⁶⁰ Besides mandating nondiscrimination, the bill would require broadband operators to offer "naked" DSL and cable modem service that did not require the purchase of other services.

In 2007, the question of the relatively backward position of the United States in the global race to deploy broadband networks began to appear in Democratic criticisms of the Bush administration and the FCC. The Congress began to consider ways to address this, most notably in the form of proposed legislation to create a broadband inventory map of the nation. Senator Inouye sponsored a bill to do this called the Broadband Data Improvement Act of 2007 (S. 1482),⁶¹ which cleared the Senate Commerce Committee by a unanimous vote in July 2007.

Conclusions

To return to the questions posed at the beginning of this paper, there was clearly a strong relationship between the net neutrality debate and partisan politics. When the Republicans controlled Congress, net neutrality amendments were defeated. The defeat of the net neutrality amendments assured the failure of the video franchise bill and eventually resulted in the mobilization of large numbers of new supporters for net neutrality. After June 2006, but especially after the Democratic electoral victories in November, supporters were able to break the stranglehold on national broadband policy that the telephone and cable companies together with their mostly Republican allies possessed. Although there were some Republicans who supported net neutrality from the outset, most opposed it. Opposition to net neutrality fit with the pro-deregulation and anti-government frame that had allowed them to win control of the Presidency and Congress. Democrats, on the other hand, were not united in favor of net neutrality during the period of Republican control, but increasingly saw it as an issue (like stem-cell research) that could help them with the voters.

It seems rather unlikely that the U.S. government, no matter what party is in control, will allocate large amounts of public funds to construct the next generation broadband infrastructure. By the same token, however, it seems very likely that the Democratically controlled Congress will attempt to limit discriminatory practices by the telephone and cable companies as long as their duopoly persists. The newly introduced Senate bill

⁵⁹ Art Brodsky, "The Price of Net Neutrality," *Public Knowledge* web site, January 5, 2007, <http://www.publicknowledge.org/node/778>.

⁶⁰ The full text can be found at <http://www.publicknowledge.org/pdf/s215-110-20070109.pdf>.

⁶¹ The full text can be found at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:s1492is.txt.pdf.

incorporates a number of features that shows that the proponents of net neutrality were listening the objections of opponents during the 2006 debates.

This case illustrates the increasing use of the Internet in all its various forms in contemporary politics, but especially in politics involving the future of the Internet itself. Web sites, wikis, blogs, and other Internet tools were being used increasingly to get out the message and mobilize not just the activists but the public at large. Even though the Internet had not yet transformed electoral politics, but had only resulted in marginal and mostly tactical changes,⁶² the debate over net neutrality was essentially a debate about what role the Internet would play in the future of democracy.

⁶² Bruce Bimber, *Information and American Democracy: Technology in the Evolution of Political Power* (New York: Cambridge University Press, 2003).