DIGITAL DÉJÀ VU:

Old Myths in the Network Neutrality Debate

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Executive Summary

Federal Communications Commission Chairman Julius Genachowski's announcement that the FCC will soon consider new open rules to protect the open Internet on wired and wireless networks has reignited the public debate over Network Neutrality.

Chairman Genachowski intends to introduce a Notice of Proposed Rulemaking at the FCC's October meeting to prohibit discrimination of content or applications by Internet service providers and to ensure network management practices are transparent.

The response from Net Neutrality opponents has been fast and furious — but short on facts. The arguments and rhetoric being pushed by the phone and cable industry mostly consist of long-discredited arguments and myths.

Net Neutrality supporters welcome a debate about the design of policies that will ensure the Internet remains an open platform for innovation, speech and commerce. It falls to the FCC to determine the best path to reach that outcome. But this policy debate must be bound by facts and reality, not by misdirection and discredited falsehoods. We therefore offer this issue brief as a guide to separating fact from fiction in the Net Neutrality debate.

MYTH #1: ***"Network Neutrality is a solution in search of a problem."***

REALITY: This is a constant refrain from Internet service providers (ISPs). Yet, quixotically, the same ISPs also repeatedly have stated their intention to violate the principles of the open Internet to reap profits from discrimination. Which is it? Either there is no problem, and they will never discriminate, or they have to discriminate to be profitable. This blatant contradiction illustrates the reality that the "solution in search of a problem" argument is nothing but misdirection.

The real threat is that the technology that enables discrimination is finally available to ISPs. Comcast's secret blocking of BitTorrent is a concrete example of an anti-competitive use of this technology — which is being sold to ISPs as a method for profiting from discrimination. The examples of marketplace abuses that have occurred thus far are simply cautionary tales about the widespread, systemic change that would occur if ISPs were given a formal green light to control Internet content and applications.

MYTH #2: ***"This will be the first time the government has regulated the Internet."***

REALITY: The open Internet as we know it would not exist if not for regulation. More than 40 years ago, the FCC helped create an environment where the Internet could flourish by preventing phone companies from interfering with traffic flowing over their networks. These rules were safeguards that turned the monopoly telephone system into an open platform for competition and innovation.

But in 2005, just as the Internet was becoming an essential technology for the average American, the FCC removed nearly all of the important protections. This decision is what sparked the current debate over Net Neutrality, and it is why the FCC's pending move to protect the open Internet will be a *partial* restoration of rules — not "new" regulation.

Furthermore, Congress and the FCC have established numerous rules governing Internet use – including laws concerning spam, e-911, and interconnection. The notion that government does not or should not protect consumers and free markets on the Internet is demonstrably false.

MYTH #3: *"Network Neutrality rules will discourage investment."*

REALITY: The rhetoric about Net Neutrality discouraging investment is just a general outgrowth of the reflexive but misguided belief that any and all regulation discourages investment. The evidence does not support this theory. During the years following the Telecommunications Act of 1996, ISP investment rose dramatically as new regulations were being implemented. Investment declined, however, in the period following the FCC's dismantling of this regulatory regime.

Regulations have only a minor influence over investment decisions. More important are considerations about future growth potential and fear of competition eroding profits. The innovative and expanding market of content on the open Internet actually works to encourage investment. In fact, without Net Neutrality, ISPs will have an incentive to delay investment and profit from artificial scarcity.

MYTH #4: ***"Network Neutrality would prevent ISPs from effectively managing Web congestion from video streaming and other bandwidth-intensive activities that are clogging up the Web."***

REALITY: No one — neither the content and applications companies nor Net Neutrality advocates — is asking the FCC to foreclose ISPs' ability to manage their networks. Both the Network Neutrality legislation in Congress and the rules outlined by Chairman Genachowski leave ISPs completely free to address congestion via reasonable network management practices. And these management practices can vary to accommodate different technologies and networks.

But these network management techniques must be both transparent and narrowly tailored to preserve the Internet as an open platform for innovation. ISPs cannot be permitted simply to block applications in the name of network management, especially not when there are less onerous methods for dealing with congestion. Moreover, under the Recovery Act, the FCC is required to submit a national broadband plan to Congress that encourages "maximal utilization of broadband infrastructure." This means that the FCC must create a policy framework that encourages buildout and makes congestion a rare and avoidable event.

MYTH #5: ***"Network Neutrality rules will stifle the competition and innovation that the free market already provides."***

REALITY: It is simply wrong to suggest that the reinstatement of basic nondiscrimination safeguards governing ISPs will stifle innovation and competition *because they are designed to promote innovation and competition*. Net Neutrality is a very light form of regulation on the highly concentrated and uncompetitive Internet access market that enables the applications market to remain truly unregulated.

Without these protections, ISPs have a strong incentive to exert control over the content that flows across their networks in a manner that reduces competition and consumer choice. Net Neutrality is merely a firewall that prevents ISPs from acting on this incentive, and thus ensures that consumers continue to have access to the robustly competitive applications market that has produced some of the most remarkable innovations in modern history.

MYTH #6: ***"Content companies want Network Neutrality because it will give them a 'free ride' on the ISPs' networks."***

REALITY: The belief that content and applications companies get a "free ride" on the Internet is completely wrong. The simple fact is that content companies pay billions of dollars to transport their content on the Internet, and consumers spend even more for the ability to access that content.

The "free ride" argument also ignores the fact that it is the content which actually makes Internet access valuable. Consumers are willing to pay hundreds of dollars each year for Internet service solely so they can access content and applications. In other words, consumers don't place value on the connection; they place value on the content delivered by that connection.

MYTH #7: ***"This will be the first time the FCC's Internet Policy Statement is applied to wireless. Competition within the wireless industry has spurred innovation and investment, which will be undermined by Network Neutrality rules."***

REALITY: When the FCC adopted the Internet Policy Statement in 2005, it was applied to all providers of Internet access services, regardless of technology. Chairman Genachowski's recent speech merely pointed out that the belief that the *Policy Statement* only applies to wired technologies was incorrect.

Furthermore, some of the claims made by the wireless industry seem a bit hypocritical. When the government is handing out subsidies, the wireless industry speaks at length of the need for "technological neutrality." But when it comes to basic public interest protections, the industry hides behind the supposedly "robust competition" in the wireless sector. Contrary to industry claims, however, the wireless market is not remarkably competitive, and the carriers themselves have a poor track record when it comes to innovation.

MYTH #8: ***"Take away ISPs' ability to manage traffic, and you'll see them implement 'metering' and other price-gouging schemes to make consumers pay more."***

REALITY: This is a false choice argument that ignores the fact that all mobile wireless ISPs and some wired ISPs have already implemented Internet overcharging schemes. It also ignores the fact that there are many other economic factors that go into an ISPs' pricing decisions, chief among them potential consumer reaction. Comcast's own refusal to implement metering in the wake of the FCC ruling against its BitTorrent-blocking network management technique, and Time Warner Cable's retreat from its proposed Internet overcharging scheme, reveal that there are far more important factors influencing ISP pricing decisions.

The bottom line is that Internet overcharging and abusive network management techniques like application blocking are both bad for consumers. We should not accept either.

MYTH #9: ***"The Obama administration wants the government to become the Web's traffic cop, shutting down free speech on the Internet.***

REALITY: This argument is completely backward. Network Neutrality is the First Amendment of the Internet. It promotes free speech and consumer choice of content and applications. Network Neutrality ensures consumers – not the FCC, and not ISPs – are the ones determining how they want to use the Internet.

Without the FCC stepping in to prevent discrimination, the ISPs will be free to choose whose voices are more important on the Internet. It is simply disingenuous to suggest that by enacting rules to promote the widest dissemination of all forms of speech, the FCC is somehow going to act as a censor.

MYTH #10: ***The FCC's action against Comcast under its current Internet Policy Statement demonstrates that we need no further rules."***

REALITY: The Internet Policy Statement's principles are not rules; they are guidelines that indicate how the FCC will enforce existing statutory provisions. The existing policy statement does not contain the core principles of nondiscrimination and disclosure that will be necessary to guarantee a truly open Internet. And the only application of the Internet Policy Statement to date — a 2008 adjudication against Comcast — is being challenged by the cable company in court. In this context, it is both reasonable and necessary for the FCC to undertake a rule-making. These are important and necessary steps if the agency seeks a strong framework of law to protect the open Internet.

Introduction

When FCC Chairman Julius Genachowski announced his intention to begin a rulemaking process to codify open Internet principles into official rules, he outlined a very reasoned and thoughtful approach to finally putting this unnecessarily contentious issue of Network Neutrality to rest. His remarks reflected careful consideration of the intellectual and legal debates that have taken place over the past several years. He indicated that the Commission intends to protect the open Internet in a manner that recognizes both the need to provide applications innovators with certainty, as well as the need for ISPs to have the flexibility to reasonably manage their networks. But the responses to Genachowski's announcement by the phone and cable industry and others opposed to an open Internet indicate that the substantive debate has not moved very far from where it was three or four years ago. Opponents of Network Neutrality are offering the same tired arguments they did back then – even though their claims have long been discredited.[1]

We should encourage a debate about the appropriateness and design of an open Internet policy regime. But that debate must be bound by facts and reality, not by misdirection and long-disproven falsehoods. We offer this issue brief as a guide to separating fact from fiction in the Network Neutrality debate.

MYTH #1: ***"Network Neutrality is a solution in search of a problem."***

REALITY: ***The threat is real. ISPs have repeatedly stated their intentions to discriminate to maximize profit. And now the technology that enables discrimination is finally available to ISPs. The Comcast-BitTorrent case is a concrete example of an anti-competitive Network Neutrality violation, and the technology that made this violation possible is being sold to ISPs as a method for profiting from discrimination.***

A constant refrain from incumbent ISPs is that Net Neutrality is a "solution in search of a problem." But these very same ISPs have also repeatedly stated their desire to violate the principles of the open Internet to benefit from discrimination or to favor their own content over that of their competitors. They can't have it both ways. Either there is no problem, and they will not discriminate, or they have to discriminate to be profitable. Which is it?

This contradiction illustrates the reality that the "solution in search of a problem" argument is nothing but misdirection. Yes, there have only been a few high-profile violations of Net Neutrality, but this does not mean that rules protecting the open Internet are unwarranted. First, it is important to realize that because of conditions stemming from several merger agreements, major ISPs like Verizon, AT&T and even Comcast have been under strict rules to abide by FCC openness principles. Second, the ISPs for the most part have avoided any overtly offensive Net Neutrality violations for purely political reasons. Under the microscope because of the legislative battles over Net Neutrality, ISPs have been very careful not to give activists and regulators another example of bad behavior that needs correcting.

Third, and perhaps most important, the technology of discrimination is just now catching up with the most dangerous plans envisioned by the ISPs. The so-called deep-packet inspection (DPI) technology that enabled Comcast to secretly block BitTorrent is now being marketed to ISPs as a way to extract new revenues from discrimination -- and as a way *to avoid investing in new capacity*. For example, one DPI vendor states that "by shaping traffic at the subscriber-level [using DPI], bandwidth is made available for new revenue generating services. Rate limiting traffic allows network infrastructure build-out to be deferred, thereby reducing capital expenditures."[2]

1 *See e.g.* Ben Scott, Mark Cooper, Jeannine Kenney, "Why Consumers Demand Internet Freedom -Network Neutrality: Fact vs. Fiction," May 2006. *See also* S. Derek Turner, "Blocking vs. Metering: A False Choice," August 2008. *See also* S. Derek Turner, "Dismantling Digital Deregulation: Toward a National Broadband Strategy," May 2009, pp. 62-80.

2 *See* M. Chris Riley and Ben Scott, "Deep Packet Inspection: The End of the Internet as We Know It?" March 2009, at n. 51.

Indeed, there is real concern that what Comcast was doing may be the tip of the iceberg. DPI is already being used for other draconian net management practices about which consumers are completely unaware.[3] This is why Chairman Genachowski's "sixth principle" of disclosure is so important. Just because a problem is hidden from public view doesn't mean it doesn't exist.

Furthermore, in the presence of affirmative statements from ISPs that they intend to adopt business models that control Internet content, it is perfectly reasonable to move pre-emptively against this outcome. Waiting until after a rainstorm to build a roof is folly, particularly if we can already see the thunder clouds rolling in.

MYTH #2: ***"This will be the first time the government has regulated the Internet."***

REALITY: ***The open Internet as we know it would not exist if not for regulation. More than 40 years ago, the FCC helped create an environment where the Internet could flourish by preventing phone companies from interfering with traffic flowing over their networks.***

There is a widely held belief, particularly among D.C. policymakers and corporate lobbyists, that the Internet has never been regulated. In reality, the Internet as we know it likely would not exist were it not for regulation. Rules and regulations first imposed during the Internet's infancy turned the monopoly telephone system into an open platform for competition and innovation.

But in 2005, just as the Internet was becoming an essential technology for the average American, the FCC removed nearly all of the important safeguards. This decision is what sparked the current debate over Network Neutrality, and it is why the FCC's pending move to enact open Internet policies will be a *partial* restoration of rules -- not "new" regulation.[4]

Since the birth of the Internet, the FCC put in place clear rules of the road to ensure that it would grow and flourish into a competitive marketplace. This all started in the mid-1960s when computers began to "talk" to one another over the same infrastructure used to make telephone calls. At the time, the FCC was concerned that AT&T and other local monopoly phone companies might use their market power to stifle or unfairly control the emerging network computing industry. This concern was not without merit. To offer their services, network computing companies were completely dependent on phone companies for access to the phone network. So the FCC established a bold series of safeguards through the so-called Computer Inquiries to protect competition on the Internet.

Though the Commission would modify these safeguards over the following decades, its approach was always consistent: The FCC protected the free market online by prohibiting anti-competitive abuses by network owners. In other words, from the very beginning, the FCC made rules to prevent AT&T from controlling the Internet. This concern over network control and abuse is the same held today by Net Neutrality advocates. This open Internet policy framework — later codified into law by Congress in the 1996 Telecom Act — allowed dial-up ISP competition to flourish during the late 1990s. Without these regulations, it is almost certain that the phone companies would have made their Internet service the only game in town.

Finally, it is worth pointing out, there are many existing laws that protect consumers and open markets on the Internet. For example, there are laws restricting spam and other illegal activity online. There are laws governing 911 voice calls over Internet-based telephone networks. There are laws governing the licensing of the public airwaves for use by wireless broadband providers. There are laws to protect against price-gouging and to ensure network interconnection. The notion that government does not or should not protect consumers and free markets on the Internet is demonstrably false.

3 *See* Nate Anderson, "DPI Vendor Says 90 Percent of ISP Customers Engage in Traffic Discrimination," *Ars Technica*, Aug. 3, 2009.

4 We say "partial" because the original *Computer Inquiry* regulations also kept incumbent market power in check by requiring that they structurally separate their transport business from their access business. That is, the companies had to separate their retail ISP business from their infrastructure business, similar to how in the days of dial-up, consumers purchased Internet access from companies like AOL or Earthlink but connected via their Bell-owned telephone lines. Structural separation is a policy that promotes competition in the ISP market by recognizing that it is unlikely there will ever be enough "pipes" into every home. The proposed Network Neutrality rules do not even come close to this level of regulatory intervention, merely reinstating the nondiscriminatory access requirements that are at the heart of the Communications Act.

MYTH #3: *"Network Neutrality rules will discourage investment."*

REALITY: ***Without Network Neutrality, ISPs will actually have an incentive to delay investment and profit by selling access at a premium to artificially scarce bandwidth.***

Incumbent cable and phone companies have repeatedly claimed that without the ability to violate Net Neutrality, they will have no incentive to invest in their networks. Nothing could be further from the truth. The simple fact is that without Net Neutrality, ISPs will have a very strong incentive to delay network investment so they can profit from artificial scarcity.

The fallacy of the Net-Neutrality-deters-investment talking point is clearly exposed by the activities of AT&T, the company making this claim the loudest. AT&T routinely touts its investments before the FCC and in numerous advertisements targeted at policymakers. However, the company never mentions that this investment took place under a very strict regime of Network Neutrality.

In the final days of 2006, the FCC approved the merger of AT&T and Bell South only after the company agreed to operate a neutral network (by adhering to the four principles of the FCC's *Internet Policy Statement* as well as a fifth principle of nondiscrimination) for two years following the transaction.[5] A review of AT&T's investments over those two years shows quite clearly that a strict Net Neutrality rule did not in any way act as a deterrent to capital spending. AT&T's gross capital investment increased immediately following the imposition of the Net Neutrality merger condition and continued to rise over the following two years. Interestingly — though it did coincide with the destabilization of capital markets — when the neutrality condition expired on Dec. 29, 2008, there was a sharp *decrease* in the company's capital investment.[6]

The Net-Neutrality-stifles-investment argument centers on a hypothetical business model of "pay-to-play," whereby ISPs would speed up the content of affiliated Web sites for a fee.[7] Companies like Verizon argue that if they were free to discriminate, they could generate additional revenues that would be used to fund network upgrades.[8]

Linking of the need to discriminate with investment does not make sense. First, it assumes there is a substantial market for guaranteed prioritized delivery — one so large that these potential additional revenues will make the difference between network buildout and network neglect. But unless network owners are blocking certain Web sites outright (and thus extracting blackmail revenues), it isn't clear at all that content providers would be willing to pay for this form of accelerated delivery when services like local-caching are sufficient to deliver low-cost, quality streaming video.[9] Furthermore, since prioritization is a zero-sum game (i.e., the speeding up of some data by definition requires the slowing down of other data), the corresponding degradation in non-prioritized content could be substantial enough to devalue the utility of the broadband connection itself. In other words, consumers would be less willing to pay for broadband, and the revenue gains from prioritization arrangements might not be enough to offset the losses stemming from user defection.

Second, content providers only have an incentive to pay for prioritization if it makes a substantial difference in the quality of their product as delivered to the end-user. This incentive only becomes real when network congestion is the norm. Under this economic model, an ISP actually has every incentive *not* to upgrade its network — because if it did, it would undermine the entire rationale for prioritization. Thus, Network Neutrality

5 *See* Letter from Robert W. Quinn, Senior Vice President, Federal Regulatory, AT&T, In the Matter of *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, WC Docket No. 06-74 (Dec. 28, 2006).

6 *See* Figure 1, in Reply Comments of Free Press, *In the Matter of A National Broadband Plan for Our Future*, GN Docket No. 09-51, July 21, 2009.

7 AT&T COO Randall Stephenson once said, "We're going to control the video on our network. The content guys will have to make a deal with us." *See* Marguerite Reardon, "SBC denies It Will Block Video Traffic," *CNet News*, Oct. 24, 2005.

8 Verizon CEO Ivan Seidenberg once said, "We have to make sure that [application providers] don't sit on our network and chew up bandwidth. … We need to pay for the pipe." *See* Paul Kapustka, "Verizon Says Google, Microsoft Should Pay for Internet Apps," *InformationWeek*, Jan. 5, 2006.

9 Local content-caching services like those provided by Akamai Technologies are able to deliver content such as streaming video with a high degree of reliability because the content is hosted ("mirrored") in multiple locations, and end-users are able to pull content from servers that are geographically close to their location. This results in higher quality, as there are fewer network "hops" between the user and the server.

actually encourages deployment, because without it network operators would have a substantial incentive to delay upgrades in order to profit from artificial scarcity.

In short, why should network owners invest in more capacity if they have built their business model around selling deep-pocketed content companies guaranteed access to congested networks at a premium? This is not only a terrible path for incentivizing bigger and better broadband infrastructure for the country, it is also a disaster for the small businesses and individuals that depend on the Internet's level playing-field to do their work.

The rhetoric about Net Neutrality discouraging investment is just a general outgrowth of the reflexive belief held by some that *any and all* regulation discourages investment. This theory has little basis in reality. In network industries, regulations have only a minor influence over investment decisions. More important are considerations about future growth potential and fear of competition eroding profits. In fact, fear of potential regulations can actually encourage capital investment and counteract the most important factor discouraging investment: short-term shareholder concerns.

This mistaken belief about the relationship between regulation and investment is not supported by evidence from the past 13 years — a period that saw the imposition of substantial regulation followed by equally substantial deregulation. During the years following the implementation of the 1996 Telecom Act, incumbent phone companies' capital expenditures as a percentage of revenues rose dramatically. However, investment declined in the period following the FCC's dismantling of this regulatory regime.[10]

When a company undertakes the process of deciding how and when to make network investments, a multitude of factors are considered — but Net Neutrality really isn't one of them. Indeed, financial analysts have been unmoved by Chairman Genachowski's recent comments on Net Neutrality.[11] Even some ISPs are rejecting this stale claim. Mobile wireless companies Clearwire and Sprint — both of which are in the process of making massive new network investments — reacted to Genachowski's announcement by issuing statements of support for rules protecting the open Internet.[12]

But while the impact of Net Neutrality obligations on network investment is likely negligible — or even positive — the absence of nondiscrimination protections will have a substantial negative impact on investments made in the application and content markets. Currently, the Internet is an open platform that provides online innovators with a high degree of predictability about a major segment of their business. An innovator knows that she can develop a new idea or application, and that it will work on any end-user's Internet-connected device. Without Net Neutrality, this certainty is lost. Losing Net Neutrality could badly undercut the current investment in applications and services — a sector of our economy much larger than the network infrastructure itself.

MYTH #4: ***"Network Neutrality would prevent ISPs from effectively managing Web congestion from video streaming and other bandwidth-intensive activities that are clogging up the Web."***

REALITY: ***Nothing in the proposed FCC open Internet rules, or in congressional legislation, would prevent an ISP from using reasonable network management techniques to deal with congestion.***

Some Network Neutrality opponents have described efforts to maintain an open Internet as a "straitjacket on efficient network management … even under 'ordinary' circumstances."[13] This charge is disingenuous, designed to confuse the debate and make ISPs' draconian Internet discrimination plans seem more reasonable.

10 *See* Testimony of Blair Levin, Stifel Nicolaus & Company Inc., Before the United States Senate Committee on the Judiciary, on the matter of "Reconsidering Our Communications Laws: Ensuring Competition and Innovation," June 14, 2006.

11 Andrew LaVallee, "Telecom Analysts Downplay Net Neutrality Concerns," *Wall Street Journal Digits Blog*, Sept. 24, 2009.

12 After Chairman Genachowski's announcement, Sprint issued a statement stating that the company "agrees with Chairman Genachowski that consumers are well served by an open Internet. … Sprint wants customers to be able to access the applications and the Internet sites they want, when they want to." Clearwire issued a statement "applaud[ing] the Chairman's efforts to safeguard an open Internet and his desire to strike a balance between consumers' need for open, rich access to the Internet and appropriate network management practices." *See* Mike Dano, "Cheers, Jeers Greet Genachowski's Push for Net Neutrality," *Fierce Wireless*, Sept. 21, 2009.

13 *See* Comments of AT&T, Inc., In the Matter of *Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices, Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application Violates the FCC's Internet Policy Statement and Does Not Meet an Exception for "Reasonable*

No one — neither the content and applications companies nor Net Neutrality advocates — is asking the FCC to foreclose ISPs' ability to manage their networks. Both the Network Neutrality legislation in Congress and the rules outlined by FCC Chairman Genachowski leave ISPs completely free to address congestion via reasonable network management practices. And these management practices can vary to accommodate different technologies and networks.

But these network management techniques must be both transparent and narrowly tailored to maximize the usefulness of the Internet connection. ISPs cannot be permitted simply to block applications in the name of network management, not when there are less-sweeping methods to deal with the congestion. ISPs provide access to the Internet, but when they engage in behavior such as blocking applications, they alter the fundamental nature of the way the Internet is expected to work. Outright blocking of an application to guard against potential congestion should have to meet a high bar to be deemed "reasonable."

The FCC's order against Comcast, in which it ruled that the company had violated the *Internet Policy Statement* by blocking BitTorrent, makes it clear that there is nothing reasonable about blocking and restricting access to online content or technologies. Comcast was caught secretly blocking a specific application, regardless of the amount of data being used by that application and regardless of whether a local network was congested. Clearly, this management technique was not "reasonable." It was not narrowly tailored, and it did little to relieve congestion. Comcast's new management techniques — implemented only after the public backlash brought on by the FCC's investigation — are much narrower and targeted toward the individual users causing congestion, and do not unfairly discriminate against specific applications.

Simply put, carriers should be free to manage their networks to the benefit of their subscribers. But the "reasonable network management" clause should not be an excuse for ISPs to engage in *unreasonable* management practices. It should not be an excuse to block applications and content irrespective of actual congestion levels. And it certainly should not be an excuse to make congestion the normal state of affairs. Under the Recovery Act, the FCC is required to submit a national broadband plan to Congress that encourages "maximal utilization of broadband infrastructure." This means that the FCC must create a policy framework that encourages buildout and makes congestion a rare and avoidable event.

MYTH #5: ***"Network Neutrality rules will stifle the competition and innovation that the free market already provides."***

REALITY: ***The broadband Internet access market is one of the most uncompetitive sectors of our economy. Network Neutrality will ensure that anti-competitive behavior in the access market does not negatively affect the competitive content and applications market.***

It is plainly obvious that the current level of competition, innovation and investment in the U.S. broadband Internet access market does not even remotely resemble what should be expected from an actual "free market."

The facts are indisputable: This is a duopoly market in which incumbent phone and cable companies dominate and abuse their market power. It is a market where these incumbents control 95 percent of all high-speed Internet connections, leaving consumers with little or no choice of network providers. It is a market where the duopolists bundle their products to avoid competing head-to-head on stand-alone broadband service. It is a market where prices are steadily increasing, and consumers are locked into long-term contracts and unnecessarily expensive equipment-rental fees. It is a market where incumbents are slow to innovate and invest, or in some cases, steadfastly refuse to move beyond 20th-century technologies. And it is a market where incumbents use their control over the existing wired and wireless infrastructure to forestall any possibility of new competition.

Maybe the best way to illustrate the lack of adequate competition in this market is to compare the broadband ISP industry to one of America's most vilified sectors -- the oil and gas industry, a sector so despised for its supposed greed and excess that there have been repeated calls in Congress to impose "windfall profit" taxes on companies like Exxon Mobil and Chevron. Over the past several years, these big oil companies made far higher levels of net

Network Management," File No. EB-08-IH-1518, WC Docket No. 07-52, p. 23, n. 60 (2008).

investment than the broadband companies did, and also had far lower profit margins.[14] How is this possible? Though it may be hard to fathom, even the oil business is more competitive than the broadband business!

It is simply wrong to suggest that the reinstatement of basic nondiscrimination safeguards governing Internet access providers will stifle innovation and competition, because they are *designed to promote innovation and competition*. Without these rules, we should expect a world where third-party voice providers like Skype are nonexistent because the incumbents will favor their own voice services. Without Net Neutrality, we will not see lower cable TV prices brought by a market of "virtual cable TV" Internet-based providers, as the incumbents will certainly put a stop to this potential competition. And abandonment of Net Neutrality will stifle the innovation of applications not yet imagined, because tomorrow's entrepreneurs will not be able to afford to "pay-to-play," and will thus be unable to compete on a level playing field with today's Internet giants.

At its heart, Net Neutrality is designed to keep the inherent anti-competitive features of the Internet access market from infecting the competitive content and applications market. Net Neutrality is a very light form of regulation on the highly concentrated conduit market that enables the applications market to remain truly unregulated. Without these protections, ISPs have a strong incentive to exert control over the content that flows across their networks in a manner that reduces competition and consumer choice. Net Neutrality is merely a firewall that prevents ISPs from acting on this incentive, and thus ensures that consumers continue to have access to the robustly competitive applications market that has produced some of the most remarkable innovations in modern history.

MYTH #6: ***"Content companies want Network Neutrality because it will let them get a 'free ride' on the ISPs' networks."***

REALITY: ***No one is getting a free ride. Content companies pay massive fees for bandwidth. But this "free ride" rhetoric ignores the fact that it is the content that consumers value, not the conduit that delivers content.***

Former AT&T and SBC CEO Ed Whitacre infamously outlined his company's rationale for wanting to violate Network Neutrality like this: "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!"[15]

But he wasn't alone among ISP executives in feeling that content companies are nothing but leeches on the backs of the cable and phone companies. John Thorne, a Verizon vice president, made a speech in 2006 stating that "the network builders are spending a fortune constructing and maintaining the networks that Google intends to ride on with nothing but cheap servers."[16]

But the claim that content and applications companies get a "free ride" on the Internet is completely false, and reflects a serious misunderstanding about what actually gives Internet access services their value.[17] The simple

14 For example, during the 2005-2008 period, Chevron Corporation invested $1.86 for every dollar in assets that it depreciated (i.e., for every dollar value of assets that were depleted, the company invested $1.86 on new assets). Exxon Mobil spent $1.38 for every dollar of assets it depleted during this period. In contrast, during this same period, the major incumbent cable and telecom companies only invested $0.89 for every dollar of assets they depleted. In other words, while big oil was investing in their business, the broadband companies were *dis*-investing in their networks. With inadequate competition comes higher profit margins, so it's no surprise to see the broadband companies faring better than the big oil companies. During 2005-2008, Chevron's operating profit margin was 14.7 percent while Exxon Mobil's was 17.1 percent. But the major incumbent phone and cable companies enjoyed an average operating profit margin of 24.2 percent during this period. Overall, for the companies of the Dow Jones Industrial Average, the net investment ratio was $1.33:$1, and the operating profit margin was 17.2 percent -- indicating the relative lack of effective competition in the broadband sector. It is important to note, however, that these figures for the incumbent phone and cable companies are company-wide and include the cable TV, phone and wireless voice segments of their businesses. Data for the broadband-specific segments are sparse, but there is some evidence that cable companies like Comcast earn profit margins exceeding 80 percent from their broadband offerings. *See* Figures 4-6, in Reply Comments of Free Press, *In the Matter of a National Broadband Plan for Our Future*, GN Docket No. 09-51, July 21, 2009, pp. 21-25.

15 See "At SBC, It's All About 'Scale and Scope,'" *Business Week*, Nov. 7, 2005.

16 Arshad Mohammed, "Verizon Executive Calls for End to Google's Free Lunch," *Washington Post*, Feb. 7, 2006.

17 And though this talking point has been long discredited, so much so that the ISPs themselves have largely abandoned it, their proxies still use it. A Sept. 23, 2009, *Wall Street Journal* op-ed written by Holman W. Jenkins Jr. stated: "AOL's business model depended on free riding on the infrastructure paid for by phone users. … This is the basic pricing model the biggest Web companies (especially Google) seek to preserve on the Internet. Their business models are built on a Web that makes their services

fact is that content companies pay billions of dollars to transmit their content via the Internet, and consumers spend even more for the ability to access that content.

In the Internet world, unlike the long-distance telephone market, end-users have no direct financial relationship with the party in the middle transporting the "call" -- as there are potentially dozens of network owners in the middle routing the data to its final destination. Content companies like Yahoo pay large sums of money to telecommunications companies to serve their content "up to the Internet." Those telecom companies in turn have financial relationships with other carriers to transport data across the country.

So when Verizon receives traffic originating from Yahoo handed off by a long-haul network provider, it receives this data while also giving the long-haul provider data from Verizon customers to carry back out across the Internet. Sometimes this interconnection of traffic is unbalanced and fees are paid, while at other times, the traffic going back and forth is roughly equivalent, and there is no money exchanged. But the point here is that there is a financial structure in place at every point in the network. If Verizon feels it is losing money by receiving traffic on its network, then it should revisit its peering and transport agreements. But it is absurd to think that the content and applications companies merely set up "cheap servers" and call it a day.

The "free ride" argument also ignores the fact that it is the content itself that actually makes Internet access valuable. Consumers are willing to pay hundreds of dollars each year for Internet service solely so they can access content and applications. In other words, consumers don't place value on the connection; they place value in the content delivered by that connection.

MYTH #7: ***"This will be the first time the FCC's Internet Policy Statement is applied to wireless. Competition within the wireless industry has spurred innovation and investment, which will be undermined by Network Neutrality rules."***

REALITY: ***When the FCC adopted the Internet Policy Statement in 2005, it was applied to all providers of Internet access services, regardless of technology. Contrary to industry claims, the wireless market is not competitive, and the carriers themselves have a poor track record when it comes to innovation.***

When Chairman Genachowski delivered his speech announcing that the FCC would begin the process of enacting formal open Internet rules, he pointed out that the existing open Internet principles contained in the FCC's *Internet Policy Statement* apply to all Internet access technologies:

> Even though each form of Internet access has unique technical characteristics, they are all different roads to the same place. It is essential that the Internet itself remain open, however users reach it. The principles I've been speaking about apply to the Internet however accessed, and I will ask my fellow Commissioners to join me in *confirming* this.[18]

Despite the reaction from certain wireless incumbents to this speech, Genachowski was not announcing that the *Policy Statement* would be applied to wireless Internet access technologies for the first time. He was merely correcting false claims that the *Policy Statement* only applies to wired technologies.

Though the Commission did issue the open Internet principles in conjunction with its 2005 order deregulating DSL, the *Policy Statement* was intended to apply to any current and future forms of Internet access. Indeed, the *Policy Statement* was issued under six different proceedings dealing with various technologies. One of these proceedings was an "Inquiry Concerning High-Speed Access to the Internet Over Cable and *Other Facilities*" (emphasis added).[19] In this *Inquiry*, the FCC asked "whether uniform requirements for high-speed services provided using different platforms would facilitate the deployment of all such services." The agency also asked about the impact of "adopting a particular model of open access on other high-speed service providers, *including those using wireless*, satellite, broadcast and unlicensed spectrum technologies" (emphasis added).

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appear 'free' to users." Unlike Mr. Jenkins, we assume consumers fully recognize that accessing online content is not at all "free," because they have to pay their ISP a pretty hefty sum each month for Internet access.

18 Prepared Remarks of Chairman Julius Genachowski, "Preserving a Free and Open Internet: A Platform for Innovation, Opportunity and Prosperity," Sept. 21, 2009.

19 *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, GEN Docket No. 00-185, Notice of Inquiry, 15 FCC Rcd 19287 (2000).

The plain language of the 2005 *Policy Statement* itself makes clear that the FCC intended for it to apply to all technologies.[20] The Commission stated that with it, "the Commission offers guidance and insight into its approach to the Internet and broadband that is consistent with these Congressional directives," referring to Sections 230(b) of the Communications Act and Section 706 of the 1996 Telecom Act. This latter reference is important, as it directs the Commission to promote the universal availability of broadband, "*without regard to any transmission media or technology*" (emphasis added).

Furthermore, in the paragraph of the *Policy Statement* that immediately precedes the "four principles," the Commission stated that it "has the jurisdiction necessary to ensure that providers of telecommunications for Internet access or Internet Protocol-enabled (IP-enabled) services are operated in a neutral manner." This language unambiguously shows that the Commission produced the four principles to ensure that all forms of Internet access are operated in a neutral manner. Nowhere in the *Policy Statement* itself or in any other subsequent Commission actions do we see even the remotest hint that the four principles were only intended to apply to wired Internet access services. The only reason this is even a question is because the wireless industry has repeatedly and intentionally injected confusion into the regulatory debate. Genachowski's call for "confirmation" was a long overdue message from the top that the FCC is not confused.

But no sooner did Genachowski issue this proclamation than the wireless lobby sought to foment even more confusion. AT&T tried to portray the more detailed affirmative open devices conditions applied by the FCC to the C-block 700MHz spectrum auction as evidence that the *Policy Statement* never applied to the wireless sector.[21] This line of argument ignores the fact that the C-block conditions were merely a more detailed affirmative obligation on the spectrum holder that go above and beyond the general open Internet principles contained in the *Policy Statement*.

This aggressive pushback from the wireless industry is just another example of self-interested rhetoric when it comes to public policy. When the government is handing out subsidies, the wireless industry speaks at length of the need for "technological neutrality," but when it comes to basic public interest protections, they hide behind the supposedly "robust competition" in the wireless sector.

But the reality is that the wireless sector is highly concentrated and exhibits many of the same anticompetitive features seen in the wired sector. Of course, the wireless industry does not see it this way. They tout their "investment" and claim to be "perhaps the most competitive consumer market in America."[22] This claim suggests that the wireless industry has completely lost touch with the actual meaning of the word "competition." Clearly, when consumers go grocery shopping their local market doesn't force them to sign two-year exclusivity contracts, or charge them 7,000 percent markups as the wireless industry does for text messages.[23]

MYTH #8: ***"Take away ISPs' ability to manage traffic, and you'll see them implement 'metering' and other price-gouging schemes to make consumers pay more."***

REALITY: ***This is a false choice argument that ignores the fact that all mobile wireless ISPs and some wired ISPs have already implemented Internet overcharging schemes. Network Neutrality has no impact on the incumbents' desire to create new revenue streams through Internet overcharging.***

The FCC's action in the Comcast case, and its pending move to institute firm open Internet protections, sends a clear signal to the ISP market: Outright blocking of applications is not a reasonable way for ISPs to manage their

20 *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities,* CC Docket No. 02-33, Policy Statement, 20 FCC Rcd 14986 (2005) (Internet Policy Statement).

21 *See* "AT&T Statement on FCC Chairman's Brookings Institute [sic] Speech," AT&T press release, Sept. 21, 2009 (*AT&T Statement*).

22 In its statement in response to Chairman Genachowski's announcement of his intention to pursue a technology-neutral openness policy agenda, AT&T stated that it was concerned "that the FCC appears ready to extend the entire array of Network Neutrality requirements to what is perhaps the most competitive consumer market in America, wireless services." See *AT&T Statement*, *ibid.*

23 *See* Testimony of Srinivasan Keshav, Professor and Canada Research Chair in Tetherless Computing, School of Computer Science, University of Waterloo, before the Senate Committee on the Judiciary, June 16, 2009. Professor Keshav conservatively estimated the underlying cost of a SMS text message to be $0.003. Given that wireless companies charge $0.20 to send *or* receive an SMS text, this equates to a mark-up that is almost 66 times the cost, or 6,600 percent. If the recipient of the text is on the same network, the markup is over 132 times the cost, or 13,200 percent.

networks, especially when there are more effective and narrowly targeted ways to manage network congestion. But taking application blocking off the network management table has some observers speculating that this could have "unintended consequences."

The basic line of argument is that if application blocking is out of bounds, providers will be forced to use some type of "metering" or Internet overcharging to control network congestion. But this assertion is simply untrue. By stirring up fears of higher monthly bills, this line of argument gives consumers the false impression that they must choose between discrimination and the undesirable practice of metering.

This is a false choice. The simple fact is that the industry's interest in Internet overcharging is completely unrelated to Net Neutrality, and even to congestion itself. Furthermore, because of the economic realities behind Internet overcharging, it is a pricing option that in the long run most providers will likely consider unnecessary or impractical. In short, even if we accept the premise that there is last-mile congestion, flipping on the meter is by no means the "only viable" alternative to outright blocking.

If an ISP faces real congestion issues, then there are good and bad ways of managing this congestion. The good ways are those that are in the best interest of both the ISP and its customers, while the bad ways are those that overreach and that will have dire long-term consequences for the entire Internet ecosystem.

The outcome of the FCC's enforcement of the *Internet Policy Statement* against Comcast offers strong evidence of what likely outcomes to expect after the FCC firms up its Network Neutrality rules. Under the pressure of regulatory attention to its application blocking, the company switched to a much more targeted, application-agnostic approach to dealing with congestion. Comcast *did not* move to a system of Internet overcharging. Comcast obviously found the new management technique preferable to Internet overcharging, because it has a much more tangible impact on congestion during peak usage times. It only affects those who exceed the cap in a short time window, and it narrowly modifies the behavior of those few users that may be causing the congestion. The company also began to accelerate its long overdue deployment of the higher-capacity DOCSIS 3.0 cable modem technology.

Compared to Internet overcharging, reasonable network management also makes better financial sense for ISPs. Internet overcharging (especially with low caps) will modify the behavior of almost all users. With everyone watching the meter, this pricing model will inevitably lead even casual users to spend less time online or to avoid the applications that use higher amounts of bandwidth — the very applications that are responsible for the increases in the perceived value of broadband access by consumers. This pattern of changing behavior will inevitably cause the marginal customer to question the need for the connection in the first place, leading to a possible slowdown in the growth of new customers for ISPs.

Furthermore, ISPs that don't have congestion concerns will be able to differentiate their products by offering services free of limits and penalties. Together, these likely scenarios create a strong incentive for ISPs to avoid limitation pricing. If the high-speed Internet market had more than two competitors, these incentives would be even stronger.

Yes, it is true that some companies like Time Warner Cable have flirted with the idea of Internet overcharging. But the response to that toe in the water reveals why the scheme is a long-term loser for ISPs. Though the scheme was only trialed in a single market, when Time Warner Cable announced its intention to expand the trial, it was met with an unprecedented public backlash. This reflects the fact that consumers have a strong preference for simple, predictable billing. They don't like surprises; they don't like the trouble of "watching the meter"; and they certainly don't believe it when companies looking to dip further in their pockets make promises of cost-savings.

Time Warner Cable and other companies may still renew their flirtation with Internet overcharging (indeed, Time Warner itself has contemplated the action several times going all the way back to 2002).[24] But this particular flavor of corporate greed has nothing to do with Net Neutrality, or even with congestion itself. Every single wireless company already has in place a system of low 5 GB to 10 GB caps and steep overage charges, a feature

24 In 2002, Time Warner told reporters that the company was "planning" to charge all Internet users overage fees for exceeding monthly limits. There were no details as to what the caps or fees would be, but apparently the company must have decided the practice wasn't needed to combat heavy users, or that it was unworkable, because the plans were never put in place. See Michael Martin, "Time Warner: Bandwidth Hogs, Pay Up!" *NetworkWorld,* April 8, 2002.

that along with slow speeds and high prices keeps 3G from being a viable competitive alternative to wired Internet access options.

The bottom line is that Internet overcharging and abusive network management techniques like application blocking are *both* bad for consumers. We should not accept either. But we must ensure that these scare tactics are not allowed to deter the FCC from pursuing the policies we need to preserve a free and open Internet.

MYTH #9: ***"The Obama administration wants the government to become the Web's traffic cop, shutting down free speech on the Internet.***

REALITY: ***Network Neutrality is the First Amendment of the Internet. This fight is about promoting free speech and keeping ISPs from picking winners and losers in the Internet ecosystem.***

Network Neutrality is the First Amendment of the Internet. It promotes free speech and consumer choice of content and applications. Net Neutrality ensures that consumers — not ISPs — are the ones determining how they want to use the Internet. Without Net Neutrality, ISPs — not consumers — will be the ones picking winners and losers on the Internet. In the open Internet that we have come to know and treasure, all voices are equal. But without the FCC stepping in to prevent discrimination, ISPs will be free to choose whose voices are more important. It is simply disingenuous to suggest that by enacting rules to promote the widest dissemination of all forms of speech, the FCC is somehow going to act as a censor.

MYTH #10: ***"The FCC's action against Comcast under its current Internet Policy Statement demonstrates that we need no further rules."***

REALITY: ***The FCC is extending and codifying its open Internet principles into regulations. This is a necessary step to protect the open Internet.***

The Internet Policy Statement's principles are not rules; they are guidelines that indicate how the FCC will enforce existing statutory provisions. The existing policy statement does not contain the core principles of nondiscrimination and disclosure that will be necessary to guarantee a truly open Internet.

Chairman Genachowski has indicated that he intends to make the four principles of the existing Internet Policy Statement, as well as the two additional principles of nondiscrimination and disclosure, into rules. These are important and necessary steps if the agency seeks a strong framework of law to protect the open Internet.

Finally, the only application of the Internet Policy Statement to date — a 2008 adjudication against Comcast — is being challenged by the cable company in court. In this context, it is both reasonable and necessary for the FCC to undertake a rulemaking.