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broadband market require regulatory intervention.⁴ In response to the NoI, the National Association of State Utility Consumer Advocates (“NASUCA”)⁵ submits these comments to assist the Commission in understanding the importance of enacting policies that guarantee an open Internet.

B. Preliminary Recommendations

As discussed in more detail below, NASUCA recommends that the Commission adopt a fifth broadband principle, which would protect net neutrality. NASUCA urges the Commission to establish the net neutrality requirement through a rulemaking proceeding to strengthen the Commission’s ability to enforce the principle, including the adoption of fines and threat of license withdrawals. NASUCA encourages the Commission to recognize the economic incentive and the potential for providers of the basic Internet infrastructure – as broadband service providers – to engage in anticompetitive behavior by limiting access, or by degrading service that they offer, to Internet application providers whose products compete with their products. In an earlier Commission proceeding, NASUCA addressed the dire consequences of network discrimination, stating: “Such discrimination against network content or services is not

⁴ *Id.*

⁵ NASUCA is a voluntary association of advocate offices in more than 40 states and the District of Columbia, incorporated in Florida as a non-profit corporation. NASUCA’s members are designated by the laws of their respective jurisdictions to represent the interests of utility consumers before state and federal regulators and in the courts. See, e.g., Ohio. Rev. Code Chapter 4911; 71 Pa.Cons.Stat. Ann. § 309-4(a); Md. Pub.Util.Code Ann. § 2-205; Minn. Stat. § 8.33; D.C. Code Ann. § 34-804(d). Members operate independently from state utility commissions as advocates primarily for residential ratepayers. Some NASUCA member offices are separately established advocate organizations while others are divisions of larger state agencies (e.g., the state Attorney General’s office). NASUCA’s associate and affiliate members also serve utility consumers but are not created by state law or do not have statewide authority.

sound public policy and will inhibit the numerous innovations and consumer benefits associated with broadband networks.”⁶ NASUCA reiterates this concern.

NASUCA also urges the Commission to require Internet access providers to provide consumers with clear information about any limits that the providers may have on downloading, as well as about pricing practices and time limits on introductory rates. Such information is necessary for the public interest. Finally, during this period of time, while the Commission is investigating broadband industry practices, NASUCA urges the Commission to monitor the practices of broadband providers, to analyze consumer complaints carefully, and to collaborate with state regulators to assess the status of the market.

II. BACKGROUND

The Commission has previously considered broadband policy and practices. In 2005, the Commission issued a Policy Statement, which propounded four principles for broadband regulation:

- To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to access the lawful Internet content of their choice.
- To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement.
- To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to connect their choice of legal devices that do not harm the network.

⁶ *In the Matter of Consumer Protection in the Broadband Era*, WC Docket No. 05-271, NASUCA Comments (January 17, 2006) at 9.

- To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to competition among network providers, application and service providers, and content providers.⁷

More recently, in March 2007, the Commission conditioned its approval of the merger of AT&T and BellSouth upon a commitment that the merged company would not only refrain from behavior contrary to the principles set forth in the Commission's existing *Policy Statement*,⁸ but also, more significantly, would abide by a "net neutrality" condition. According to this condition, AT&T agreed "not to provide or to sell to Internet content, application, or service providers, including those affiliated with AT&T/BellSouth, any service that privileges, degrades or prioritizes any packet transmitted over AT&T/BellSouth's wireline broadband Internet access service based on its source, ownership or destination."⁹ The Commission described the commitment, which has a sunset clause, in the following manner:

This commitment shall apply to AT&T/BellSouth's wireline broadband Internet access service from the network side of the customer premise equipment up to and including the Internet Exchange Point closest to the customer's premise, defined as the point of interconnection that is logically, temporally or physically closest to the customer's premise where public or private Internet backbone networks freely exchange Internet packets.

This commitment shall sunset on the earlier of (1) two years from the Merger Closing Date, or (2) the effective date of any legislation enacted by Congress subsequent to the Merger Closing Date that substantially addresses "network neutrality" obligations of broadband Internet access providers, including, but not limited to,

⁷ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, FCC 05-151, Policy Statement, 20 FCC Rcd 14986, 14988 (2005) ("*Policy Statement*"), ¶ 4.

⁸ *Id.*

⁹ *NoI*, ¶ 3. See also *In the Matter of AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, WC Docket No. 06-74, rel. March 26, 2007 ("*AT&T/BellSouth Merger Order*"), at Appendix F, at 154.

any legislation that substantially addresses the privileging, degradation, or prioritization of broadband Internet access traffic.¹⁰

This condition is significant for several reasons. To NASUCA's knowledge, the provision is the first and only government-mandated directive for net neutrality in the United States,¹¹ and, therefore, represents significant progress for consumer protection in the emerging broadband era. This protection should be extended to all consumers.

The sunset provision means that the protection will be relatively short-lived, however. Therefore, timely action in this proceeding, or in a separate rulemaking proceeding, is essential to provide more long-lasting net neutrality. Also, because the condition protects only AT&T's consumers, timely action is essential to provide comparable protection for consumers beyond AT&T's footprint.¹²

Finally, the divergent opinions expressed by the Commissioners in their statements accompanying the *AT&T/BellSouth Order* underscore the precarious future of net neutrality. As Commissioner Copps stated:

Perhaps most important, we have taken steps that will preserve and encourage the truly transformative openness and power of the Internet. The Internet is surely this generation's most transformative technology – perhaps as transformative as any technology in history. It was conceived and nurtured in freedom and it empowered not those who controlled the pipes but those at

¹⁰ *Id.*

¹¹ As a condition of the Commission's approval of the Verizon/MCI merger, Verizon is subject to the following provision: "Effective on the Merger Closing Date, and continuing for two years thereafter, Verizon/MCI will conduct business in a manner that comports with the principles set forth in the FCC's Policy Statement, issued September 23, 2005 (FCC 05-151)." *In the Matter of Verizon Communications Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, WC Docket No. 05-75, *Memorandum Opinion and Order*, rel. November 17, 2005, Appendix G. Although these conditions are enforceable, they lack the fifth, "net neutrality" principle that applies to AT&T.

¹² Although the network neutrality merger condition currently protects AT&T's customers, consumers elsewhere lack this fundamental protection, and, therefore, are vulnerable to the practices of their broadband access providers. There is no net neutrality commitment protecting customers of Qwest, Verizon, other incumbent local exchange carriers, and the various cable operators.

the edges – consumers, you and me. I know there are some who still believe that the government has no business overseeing any aspect of the Internet (ignoring, of course, government’s formative role in creating the Internet in the first place). Their theory is that technology mandates from on high will inevitably stifle innovation and are antithetical to the de-centralized, non-hierarchical genius of the Internet. My response is that in an age when the Internet is increasingly controlled by a handful of massive private network operators, the source of centralized authority that threatens the Internet has dramatically shifted. The tiny group of corporations that control access to the Internet is the greatest threat to Internet freedom in our country today. If left unchecked, the merged entity resulting from today’s decision would have gained the ability to fundamentally reshape the Internet as we know it – in whatever way best serves its own profit motives, rather than preserving the integrity and the effectiveness of the Internet.

The condition builds upon the four principles of net neutrality unanimously adopted by this Commission and made enforceable in the context of the Bell mergers completed last year. In addition to the company’s compliance with these four principles, the condition agreed to by the merged entity includes a fifth principle that requires the company to maintain a “neutral network and neutral routing” of internet traffic between the customer’s home or office and the Internet peering point where traffic hits the Internet backbone. The company is prohibited from privileging, degrading, or prioritizing any packets along this route regardless of their source, ownership, or destination. This obligation is enforceable at the FCC and is effective for two years. It ensures that all Internet users have the ability to reach the merged entities’ millions of Internet users – without seeking the company’s permission or paying it a toll. The next Drudge Report, Wikipedia, Craigslist, Instapundit, or Daily Kos should not have to seek a massive corporation’s blessing before it can begin reaching out to the American public, and we can take considerable comfort from the fact that today’s condition prohibits such behavior. While I might have preferred a longer duration, prior mergers resulted in similar time periods for the net neutrality conditions and it is in my view sufficient to allow Congress to take longer-term network neutrality action if it chooses to do so.¹³

¹³ *AT&T/BellSouth Merger Order*, at 171, Concurring Statement of Commissioner Michael J. Copps. *See also* Concurring Statement of Commissioner Jonathan S. Adelstein stating, among other things, “One hallmark of this Order is that it applies explicit, enforceable provisions to preserve and protect the open and interconnected nature of the Internet, including not only a commitment to abide by the four principles of the FCC Internet Policy Statement but also an historic agreement to ensure that the combined company will maintain a neutral network and neutral routing in its wireline broadband Internet access service. Together,

In sharp contrast, however, Chairman Martin and Commissioner Tate stated:

Other conditions, however, are unnecessary and may actually deter broadband infrastructure investment. The conditions regarding net-neutrality have very little to do with the merger at hand and very well may cause greater problems than the speculative problems they seek to address. These conditions are simply not warranted by current market conditions and may deter facilities investment. Accordingly, it gives us pause to approve last-minute remedies to address the ill-defined problem net neutrality proponents seek to resolve.¹⁴

The explicit reference in the AT&T/BellSouth conditions to the possibility of legislation (incorporated in the sunset provision of the merger condition for net neutrality) recognizes the possibility of Congressional action in this area. But legislation has not yet been forthcoming, which further elevates the importance of addressing net neutrality in this proceeding. Indeed, although the Commission's NoI raises various questions, the most important issue concerns the future of net neutrality.

The net neutrality condition is significant because of the importance of maintaining open pathways from Internet users, through their Internet service provider, to the content providers, and vice versa. NASUCA urges the Commission to afford significant weight to the perspective of Sir Tim Berners-Lee, known as the inventor of the World Wide Web, who stated: "It's better and more efficient for us all if we have a separate market where we get our connectivity, and a separate market where we get our content. Information is what I use to make all my decisions. Not just what to buy, but

these provisions are critical to preserving the value of the Internet as a tool for economic opportunity, innovation, and so many forms of civic, democratic, and social participation." *Id.*, at 176.

¹⁴ *Id.*, at 167, Joint Statement of Chairman Kevin J. Martin and Commissioner Deborah Taylor Tate.

how to vote.”¹⁵ In another forum, Berners-Lee stated, “When I invented the Web, I didn’t have to ask anyone’s permission. Now hundreds of millions of people are using it freely. I am worried that that is going end [sic] in the USA.”¹⁶ NASUCA shares this concern that the control of consumers’ access to information should not reside with those companies that provide the “pipes” over which information flows.

III. PACKET MANAGEMENT PRACTICES

Packet management practices are rules designed to manage the efficient flow of data packets over the networks that form the Internet. The Commission requests that commenters describe packet management practices in use today. The Commission asks, “Do providers treat different packets in different ways? How and why?”¹⁷ In addition, the Commission requests comments on whether or not such packet management protocols are consistent with the Commission’s Policy Statement.

As a preliminary matter, NASUCA notes that packet management policies are largely invisible to the average consumer. The effect of such policies, when they work properly, is that the Internet functions in a “normal” manner, meeting customers’ expectations. It is only when something goes wrong that consumers might be alerted to underlying network traffic discrimination.

¹⁵ Jonathan Bennett, “Berners-Lee Calls for Net Neutrality,” C/Net News.com, May 23, 2006. http://news.com.com/2100-1036_3-6075472.html.

¹⁶ “Net Neutrality: This is serious,” submitted by timbl on June 21, 2006; <http://dig.csail.mit.edu/breadcrumbs/node/144>.

¹⁷ *NoI*, ¶ 8 (footnote omitted).

NASUCA recognizes the importance of managing network traffic through various engineering practices, including packet management, in an effort to keep the Internet robust. The open nature of the Internet means that a great variety of protocols and standards exist, each one designed to fulfill its own particular purpose. Without these standards (which have generally been agreed upon by international governing bodies¹⁸), the Internet as we know it today would not exist.¹⁹

In particular, time-sensitive applications, such as voice calls, video, and gaming, require packets engineered differently than time-insensitive applications, such as text-based e-mail. Each type of application requires packets built to the application's own set of protocols. Effective use of the Internet requires that time-sensitive packets receive priority over time-insensitive packets. For example, an online video conference system whose packets go missing for several minutes would be extremely cumbersome to use and unproductive. Likewise, missing or delayed packets during a voice call over the Internet would degrade the quality of the call to such an extent that consumers would never adopt such technology. These applications, and others, require packet management techniques to ensure proper performance. On the other hand, a slight delay in e-mail transmission is not likely to be detected or to be important.

¹⁸ According to the Internet Society, "At the technical and developmental level, the Internet is made possible through creation, testing and implementation of Internet Standards. These standards are developed by the Internet Engineering Task Force. The standards are then considered by the Internet Engineering Steering Group, with appeal to the Internet Architecture Board, and promulgated by the Internet Society as international standards. The RFC Editor is responsible for preparing and organizing the standards in their final form. The standards may be found at numerous sites distributed throughout the world, such as the Internet Engineering Task Force." See <http://www.isoc.org/internet/standards>. The World Wide Web Consortium ("W3C") describes its mission as: "the creation of Web standards and guidelines. Since 1994, W3C has published more than ninety such standards, called W3C Recommendations." See <http://www.w3.org/Consortium>.

¹⁹ According to W3C, "To achieve the goal of one Web, specifications for the Web's formats and protocols must be compatible with one another and allow (any) hardware and software used to access the Web to work together." See <http://www.w3.org/Consortium/technology>.

A. The danger of unrestrained packet management

There is a risk, however, associated with allowing broadband service providers a free hand in packet management. The danger is that broadband providers might use legitimate packet management techniques for illegitimate reasons, such as selective service degradation aimed at achieving strategic business goals.

A financial incentive is associated with such behavior. A broadband access provider that owns a voice over Internet protocol (“VoIP”) service, for example, seeks to increase the customer base for its service. An illegitimate way to achieve this would be to monitor, slow, and choke off traffic to competitors’ VoIP services. When consumers experience inferior service from competitors that are handicapped relative to the VoIP service of the access provider (even though they may not know why), consumers likely will migrate away from competitors and toward the access provider’s product. The broadband access provider then will gain customers for its VoIP service by virtue of being the bottleneck provider in a position to degrade its competitors’ services.

This danger is not theoretical. The threat to an open Internet, in which consumers make the choice as to which application providers prosper, has already been openly expressed. In December 2005, *BusinessWeek* quoted former AT&T CEO Edward Whitacre’s now-famous “pipes” quip: “What [Google, Vonage, and others] would like to do is to use my pipes free. But I ain't going to let them do that.”²⁰ The article explains that network providers are no longer content simply to provide the infrastructure. They now:

²⁰ “At Stake: The Net as We Know It,” Catherine Yang, Roger O. Crockett, and Moon Ihlwan, *BusinessWeek Online*, December 26, 2005.

also want to peddle more lucrative products, such as Internet-delivered TV programs, movies, and phone calls.... But selling those extras puts the phone and cable companies in competition with Web services big and small. The network operators could block consumers from popular sites such as Google, Amazon, or Yahoo! in favor of their own. Or they could degrade delivery of Web pages whose providers don't pay extra. Google's home page, for instance, might load at a creep, while a search engine backed by the network company would zip along.²¹

The Commission must be vigilant to prevent network operators from exercising their control in this way.

B. Examples of packet management for strategic business reasons

Even if network providers do not block competitors completely, they might use their market power to extort higher fees from competitors, to the detriment of consumers. The Commission has already found the need to address complaints regarding broadband access providers' limiting access to VoIP applications. In November 2004, a customer of Madison River Communications, LLC ("Madison"), a broadband access provider, found that he could no longer access his Vonage VoIP account. When he complained to Madison, he was told that the company had begun blocking calls through Internet phone companies such as Vonage. After an investigation by the FCC, Madison agreed to pay a \$15,000 fine and to refrain from blocking Internet telephone activity.²²

The Commission's recognition of the potential for harm in this early case of traffic blocking provides clear precedent for a general policy of nondiscrimination. The fact that early enforcement quickly stemmed the problem underscores the compelling

²¹ *Id.*

²² *In The Matter of Madison River Communications, LLC and affiliated companies*, File No. EB-05-IH-0110, *Consent Decree*, Rel. March 3, 2005.

need for the Commission to establish rules to set forth the range of unacceptable behavior; it does not make such rules unnecessary.

As another real-world example, Canadian cable company Shaw Cable charges a \$10 premium for third party VoIP service; otherwise, Shaw's own VoIP service is prioritized. This is a clear example of a broadband service provider using its position in one business line (broadband access) to disadvantage competitors in another business line (VoIP service), in a jurisdiction where such action appears to be permitted. Shaw's website describes this "Quality of Service Enhancement":

Shaw is now able to offer its High Speed Internet customers the opportunity to improve the quality of Internet telephony services offered by third party providers. For an additional \$10 per month Shaw will provide a quality of service (QoS) feature that will enhance these services when used over the Shaw High Speed Internet network. Without this service customers may encounter quality of service issues with their voice over Internet service.²³

The implied threat is clear: If you use our service, you must pay an extra fee or risk poor quality of service. Although the example involves a Canadian company, the principle and its potential impact on consumers apply equally in the United States. During this period of time, while the Commission is investigating broadband industry practices, NASUCA urges the Commission to monitor the practices of broadband providers, to analyze consumer complaints carefully, and to collaborate with state regulators to assess the status of the market.

C. A proposal for nondiscrimination

NASUCA recommends that the Commission consider different approaches to preventing non-discrimination. One such solution might be to require broadband access

²³ <http://www.shaw.ca/en-ca/ProductsServices/Internet/ServiceEnhancement.htm>, accessed May 24, 2007.

providers to treat all packets of a certain type, for example all VoIP traffic, or all video conferencing traffic, the same. This way no provider of VoIP service, for example, is disadvantaged relative to other VoIP service providers. A broadband access provider that owns a VoIP product would not be able to slow the traffic to its competitors. Consumers, not the access providers, would then decide which service best suits their needs.

This solution is technically feasible because a portion of each packet sent over the Internet is assigned the task of declaring its purpose, just as another portion is dedicated to declaring the destination address. As long as standard protocols (a mainstay of the proper functioning of the Internet) are used, then all traffic of a particular type can be treated in a consistent manner. It would be up to network engineers to determine the proper relative priority of different types of traffic. However, the potential for an onslaught of complaints from customers *should* provide the discipline necessary to ensure that access providers get the relative priority scheme correct.

D. Other reasons for packet management

The Commission asks whether providers manage packets for safety- and security-related applications such as health monitoring, home monitoring, and emergency calls. NASUCA considers that these uses of the Internet fall under the category of “time-sensitive” applications. As such, network engineers should put into place policies that expedite the flow of these types of packets. NASUCA looks forward to reviewing the information that the industry submits in this proceeding regarding their ability to prioritize safety- and security-related applications with minimal disruption to other Internet traffic.

The Commission also asks whether access providers utilize packet management techniques as parental controls. NASUCA recommends that parental controls should be left to the end-use subscriber. In terms of technical feasibility, offensive content can appear the same, from the packet perspective, as innocuous content. The Commission should not attempt to police content through this proceeding, but rather should simply ensure that all material can be made available via the Internet on an equal basis.

IV. PRICING FOR BROADBAND AND RELATED SERVICES

A. Pricing and speed

The Commission requests information on pricing and speeds of broadband access plans.²⁴ First, the Commission asks whether providers charge different prices for different speeds or capacities. Based on research that NASUCA has conducted, it appears that prices vary significantly, for DSL and cable modem service – the most widely used technologies for consumer Internet access²⁵ – based on access speed and the company offering service. The following table includes examples of current pricing for broadband access.²⁶

²⁴ *NoI*, at ¶ 9.

²⁵ FCC, Wireline Competition Bureau, Industry Analysis and Technology Division, *High-Speed Services for Internet Access: Status as of June 30, 2006*, January 2007 (“High Speed Services January 2007 Report”), at Table 1.

²⁶ It should be noted that the speeds in the table are those claimed by the provider, not necessarily the speed usually seen by customers.

Survey of Broadband Internet Access Pricing²⁷

Provider	Speed of Service	Price
Verizon	768 kbps	\$14.99
	3 mbps	\$29.99
AT&T (BellSouth)	1.5 mbps	\$32.95
	3 mbps	\$37.95
	6 mbps	\$42.95
Qwest	1.5 mbps	\$44.99
	7 mbps	\$54.99
Time Warner Cable	5 mbps	\$44.95
Cox	1.5 mbps	\$26.95
	7 mbps	\$41.05
	12 mbps	\$56.95
Comcast	6 mbps	\$57.95
	8 mbps	\$67.95

B. Premium for downloading material

The Commission asks whether end-users pay a premium to download a particular amount of material, and specifically asks: “Do [broadband access providers] offer

²⁷ Prices contained in this table are available at:
<http://www22.verizon.com/content/consumerdsl/plans/all+plans/all+plans.htm>;
<http://www.bellsouth.com/consumer/inetsrvcs/index.html>;
<http://www.qwest.com/residential/internet/pricing.html>; <http://www.rr.com/rdrun/>;
<http://www.cox.com/gulfcoast/highspeedinternet/pricing.asp>;
<http://www.comcast.com/shop/buyflow/default.ashx>. Comcast’s prices are for consumers who do not subscribe to Comcast cable service. Comcast cable subscribers can receive 6 Mbps service \$29.99 for the first three months, and \$42.95 per month thereafter.

subscribers the option to purchase extra bandwidth or specialized processing?”²⁸ In contrast to the early days of the Internet, end-users generally no longer pay by the kilobyte of data downloaded. The exception to this is in the market for mobile broadband service, where service plans often include a specific quantity of data usage per month and exceeding the predetermined quantity results in additional fees.²⁹

While not the result of a contractual limit imposed by the service provider, consumers face an effective limit on downloading, which is a consequence of the connection speed of consumers’ particular broadband service. For example, at any given connection speed, a large file (such as a film) requires more time to download than a small file. Therefore, some consumers may face a practical limit on their capacity to download material. Consumers often have the option, however, to improve download capabilities by purchasing a faster connection.

In addition to permanent service upgrades, some consumers are able to take advantage of temporary speed boosts that are available from some providers. For example, Cox Communications includes its “PowerBoost” product with its two top tiers of broadband service. Cox describes the service as follows:

Get an extra burst of speed when you need it most. PowerBoost is a new technology that allows you to temporarily experience download speeds that are significantly faster than our already blistering fast high-speed Internet speeds.³⁰

²⁸ *NoI*, ¶ 9.

²⁹ For example, Sprint Nextel offers the “Blackberry 5MB Email and Web” plan, which includes 5 megabytes of data transfer each month for a fixed price. There is an additional charge of \$0.01 per kilobyte of data usage over 5 megabytes. See http://nextelonline.nextel.com/NASApp/onlinestore/en/Action/DisplayPlans?filterString=Individual_Plans_Filter&id12=UHP_PlansTab_Link_IndividualPlans.

³⁰ <http://www.cox.com/gulfcoast/HighSpeedInternet/Power-Boost/default.asp>.

According to Cox, the service recognizes when the user is moving large files, and automatically “kicks in when there is extra bandwidth to handle video, photos, and music faster.”³¹ Comcast also offers a similar “PowerBoost” service.³² According to Comcast, the subscriber does not need to do anything to take advantage of PowerBoost. The service is free to Comcast broadband subscribers.³³

By contrast, some consumers have encountered ambiguous and ill-specified limits on the volume of information that they can download using their Internet access. As one newspaper article reported earlier this year, customers have received telephone calls from Comcast warning them that they were “using the Internet too much,” and, for one customer, “ordering her to curtail her Web use or lose her high-speed Internet connection for a year.”³⁴ According to the same newspaper article, when a customer, who apparently had been using the same broadband connection for years without encountering any problem, asked Comcast what the download limit was, “she was told there was no limit, that she was just downloading too much.”³⁵ As one consumer stated, this is “like if you’re driving down [sic] freeway, and there’s nothing to say what the speed limit is.”³⁶

³¹ *Id.*

³² <http://www.comcast.com/shop/buyflow/default.ashx>. Comcast states that PowerBoost allows temporary speeds up to 12 Mbps.

³³ <http://www.comcast.com/customers/faq/FaqDetails.ashx?ID=3699>.

³⁴ “Not so fast, broadband providers tell big users; Firms impose limits even as demand rises,” Carolyn Y. Johnson, *Boston Globe*, March 12, 2007. http://www.boston.com/business/personaltech/articles/2007/03/12/not_so_fast_broadband_providers_tell_big_users?mode=PF

³⁵ *Id.*

³⁶ *Id.*

The anecdotal evidence of Comcast shutting off consumers' service without informing consumers about the company's specific download limit raises several consumer protection concerns. First, Comcast's ability to direct customers to curtail their use or lose their service is evidence of Comcast's market power and the increasing control that a cable-telecommunications duopoly possesses over consumers' day-to-day access to electronic information. Second, even if there were legitimate reasons to limit consumers' use of the Internet, consumers are entitled to clear, unambiguous information from well-trained customer representatives about download policies. Comcast's actions do not give such information. NASUCA acknowledges that technology and applications are evolving quickly. But consumers nonetheless deserve to have guidelines about the acceptable use of Internet connections, even if such guidelines evolve.

C. Priority access to end-users

The Commission asks whether broadband providers charge upstream application providers for priority access to end users, a key question that directly addresses the ultimate purpose of this proceeding. Broadband providers do not currently charge upstream application providers for priority access to end-users, nor should they be allowed to do so in the future. Application providers already pay for a connection to the Internet, just as consumers do. Application providers, however, pay far more than do end-use consumers, and in return get far more capacity, which they need in order to provide material requested of them over the Internet. Forcing application providers to bid for priority access is a clear use of bottleneck monopoly power to extract additional fees from application providers. This would, in effect, amount to allowing access providers to auction off something they do not and should not own: exclusive access to end-users.

As discussed earlier in these comments, some instances of anti-consumer practices have already occurred (and have been threatened). NASUCA urges the Commission to anticipate and identify likely market failures, and to set consumer protection measures in place before such problems occur. NASUCA recommends proactive action by the Commission so that consumers are not harmed by industry practices. As seen in the Madison River case discussed above, early enforcement is vital and the Commission should establish rules to set forth unacceptable industry practices earlier, rather than later.

D. Price-discrimination

The Commission asks whether providers currently discriminate in the prices they charge to end-users and upstream application providers.³⁷ Currently, service providers price-discriminate among end-users in several ways. First, broadband access providers segment the market by offering higher levels of service to those consumers who are willing to pay more. Second, consumers are often able to obtain a better deal on broadband access when they buy several services bundled together. Comcast, for example, offers broadband Internet access for an ongoing rate of \$42.95 per month if the customer also purchases Comcast cable television. When purchased as a stand-alone product, however, the price for broadband access is \$57.99 per month, a 35% mark-up.³⁸ A third method of segmenting the market is to divide residential customers from business customers. For example, while Verizon offers 3 Mbps broadband service to residential

³⁷ *NoI*, ¶ 9.

³⁸ <http://www.comcast.com/shop/buyflow/default.ashx>.

customers for an ongoing rate of \$29.99 per month, business customers must pay \$39.99.³⁹ These appear, however, to be reasonable forms of discrimination.

E. Charging users for access to content

The Commission asks whether policies should differentiate between those content providers that charge users for access to content, and those that do not. NASUCA's initial view is that the policies should not so differentiate. NASUCA intends to consider this issue further, however, as it reviews others' initial comments. At first blush, the relationship between the content provider and the customer is just like any other service-oriented relationship – e.g., the relationship between a customer and a dry cleaner, a house painter, or a dog groomer. NASUCA perceives no benefit to monitoring transactions between these willing parties. Furthermore, many content providers provide a substantial amount of content for free, and charge only for exclusive features. In addition,³⁹ due to the vast and ever-evolving landscape that makes up the Internet, it would be difficult, if not impossible, for the Commission to determine which content providers charge for access.

F. Disclosure of pricing and packet management policies

The Commission asks whether packet management and pricing policies are disclosed to customers.⁴⁰ Based on the research of broadband access rates (as shown in the table above⁴¹), it appears that most providers adequately disclose their rates to consumers on their web sites, but that their policies regarding downloading volumes are

³⁹ <http://www22.verizon.com/content/businessdsl/packages+and+prices/packages+and+prices.htm> and <http://www22.verizon.com/content/consumerdsl/plans/all+plans/all+plans.htm>.

⁴⁰ *NoI*, ¶ 9.

⁴¹ As previously noted, if the speeds actually supplied are measurably less than those actually achieved, then the accuracy of the pricing information is seriously undermined.

ill-specified. Regarding these prices, however, NASUCA is concerned that many service plans have introductory rates which last for three months, for example, before rising to a higher rate.⁴² Unless the industry clearly advertises this practice, the burden inappropriately falls to consumers to be wary of such offers, and must carefully review the fine print to determine exactly the price of the service. NASUCA urges the Commission to remain vigilant to potential abuses from misleading advertising, and, as appropriate, to collaborate with state consumer advocates and regulators to identify and correct any patterns of deceptive consumer practices. This should specifically include monitoring whether providers' download and upload speeds are as advertised to consumers.

Packet management policies are less obvious to consumers than are pricing practices, and are not well-documented by access providers. NASUCA urges the Commission to ensure that broadband access providers clearly describe their packet management policies (e.g., whether they are the industry "norm," or entail degrading or prioritizing certain services). Providers must adequately inform consumers of their non-discrimination policies.

G. Real prices for broadband access

The Commission asks whether real prices (i.e., price per Mbps) paid by broadband consumers are falling. According to surveys conducted by the Pew Internet & American Life Project, the average price for broadband access dropped from \$39 per month in February 2004 to \$36 per month in December 2005. Pew's survey respondents reported DSL prices dropping from \$38 to \$32 over the period, while cable modem prices

⁴² See footnote 27, *supra*.

were essentially unchanged.⁴³ These rates continue to be high, however, and certainly exceed significantly the \$10 monthly rate that AT&T has agreed to charge for DSL as a condition of its merger with BellSouth.⁴⁴ NASUCA is concerned that broadband rates are not yet affordable for many Americans.⁴⁵

Furthermore, as broadband becomes more integrated into all aspects of life, consumer expectations inevitably increase. For example, in 1992, the dial-up modem was an acceptable access method for most Americans connecting to the Internet from home. Dial-up technology is no longer acceptable for many Americans. It is simply too slow to adequately handle dynamic websites and advanced graphics, not to mention VoIP or video applications. Thus, while NASUCA agrees that the price per Mbps has probably declined in recent years, higher speeds (more Mbps) are necessary to take full advantage of the Internet, so that consumers may not be saving money. Among other things, various types of business and government agencies now utilize web interfaces, which consumers are expected to use to obtain access to information, to pay bills, and to file forms. Furthermore, broadband access is still unaffordable for many Americans; the Commission should not become complacent with respect to monitoring the price of access. Instead, the Commission should enact policies that help to spread the benefits of a more connected community to all Americans.

⁴³ Horrigan, John, *Broadband Adoption 2006*, Pew Internet & American Life Project, May 28, 2006, at iv.

⁴⁴ *AT&T/BellSouth Merger Order*, Appendix F.

⁴⁵ NASUCA addresses broadband deployment more comprehensively in its comments filed on May 16 and May 31, 2007 in WC Docket No. 07-52.

V. AMENDING THE POLICY STATEMENT

The Commission asks whether specific packet management practices by broadband service providers are helpful or harmful to consumers.⁴⁶ NASUCA submits that the intentional degradation by broadband service providers of traffic to or from a particular upstream application limits the usefulness of the Internet, negatively impacts consumers, and jeopardizes the innovative and free exchange of information and ideas that the Internet has historically supported. Further, consumers' decisions about which application to use, whether for VoIP, video, or web searching, should be based on the quality and price of that application, not whether the application provider has a special relationship with the broadband access provider.

The Commission asks whether it should incorporate a principle of nondiscrimination into its policies.⁴⁷ NASUCA urges the Commission to adopt such a principle. Indeed, although this proceeding raises several issues that bear directly on consumers, net neutrality, in NASUCA's view, is the most critically important issue raised in this proceeding. To those who would argue (incorrectly) that a nondiscrimination principle is unnecessary because no misbehavior has yet been reported, NASUCA responds that, under those circumstances, adopting the proposed principle would cause no harm to any broadband access provider. Such a principle can only serve to increase the trust of the general public in the Internet, a trust which benefits broadband access providers as well as consumers.

⁴⁶ *NoI*, ¶ 10.

⁴⁷ *Id.*

The principle of nondiscrimination has been referred to in the general media as “net neutrality,” or “network neutrality.” As a *New York Times* editorial described it, net neutrality is what “keeps the Internet democratic.”⁴⁸ The editorial continues:

One of the Internet’s great strengths is that a single blogger or a small political group can inexpensively create a Web page that is just as accessible to the world as Microsoft’s home page. But this democratic Internet would be in danger if the companies that deliver Internet service changed the rules so that Web sites that pay them money would be easily accessible, while little-guy sites would be harder to access, and slower to navigate. Providers could also block access to sites they do not like.⁴⁹

NASUCA recommends that the Commission assert a principle of nondiscrimination, where nondiscrimination is defined as the uniform treatment of all packets of the same type. This policy would allow packets of *different types* to be treated in different ways, as demanded by network engineering requirements, but would require that *similar* packets be treated the same, especially with regard to the source of the packet. No packet of a certain type could be prioritized over another packet of the same type. Broadband access providers would not be able to decide what upstream application provider is advantaged relative to its competitors. This definition of nondiscrimination will allow third-party application providers to compete on their technical, price, and quality of service merits.

The Commission asks whether a principle of nondiscrimination would allow any exclusive or preferential arrangements between infrastructure providers and content

⁴⁸ Editorial, “Keeping a Democratic Web,” *New York Times*, May 2, 2006.

⁴⁹ *Id.*

providers.⁵⁰ A principle of nondiscrimination would not allow for exclusive or preferential arrangements between infrastructure providers and content providers. Such preferential arrangements are contrary not only to the principles guiding the development of the Internet, but also contrary to the guidance given by Congress to the Commission. The instructions for the Commission “to preserve the vibrant and competitive market that presently exists for the Internet” and “to encourage the deployment of technologies which maximize user control”⁵¹ expressly prohibit the Commission from allowing any party to acquire effective editorial control of the Internet. If access providers were allowed to determine what content is made available to users, or if they were allowed to make preferential agreements with service providers, then the access providers would have control. Indeed, instead of serving as access *providers*, such companies would become access deniers or disablers, shutting off consumers from the ever-increasing diversity of content currently available to them.

The Commission asks how a principle of nondiscrimination would “affect the ability of content and access providers to charge their customers different prices, or to charge them at all?”⁵² Currently, each subscriber to broadband access pays the broadband provider for access to the (whole) Internet. Much of the content on the Internet is available without charge, but some content providers require a paid subscription, e.g., full access to the *Wall Street Journal Online* or the *New York Times*. Nondiscrimination would not affect the ability of any party to collect fees from end users,

⁵⁰ *NoI*, ¶ 10.

⁵¹ 47 U.S.C. § 230(b).

⁵² *NoI*, ¶ 10.

whether for providing access, or for providing content. The issue in this proceeding is the ability of an intermediary (the broadband access provider) to discriminate among content providers.

The Commission asks whether it has “the legal authority to enforce the Policy Statement in the face of particular market failures or other specific problems.”⁵³ In particular, the Commission asks what situations would give rise to such problems. NASUCA urges the Commission to set forth nondiscrimination/net neutrality requirements in rules for the purpose of increasing the industry’s accountability and the Commission’s options for enforcement. Open access to the Internet is too important to leave to chance. The Supreme Court has recognized the Commission’s jurisdiction to regulate Internet access providers.⁵⁴ As stated in the NoI:

- Broadband services are “wire communications” or “radio Communications,” as defined by the Act.
- The Act gives the Commission jurisdiction over “all interstate and foreign communications by wire or radio.”
- Section I of the Act imposes on the Commission the responsibility to ensure “a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges.” Included in this responsibility are the tasks: “to promote the continued development of the Internet”; “to preserve the vibrant and competitive market that presently exists for the Internet”; and “to encourage the deployment of technologies which maximize user control over what information is received by ... [users] of the Internet.”⁵⁵

⁵³ *Id.*, ¶ 11.

⁵⁴ *Id.*, ¶ 4, citing *National Cable & Telecomm. Ass’n v. Brand X Internet Services*, 545 U.S. 967, 976 (2005).

⁵⁵ *NoI* at ¶ 4-7; see 47 U.S.C. Sections 153(33), (52), 152(a), and 230.

NASUCA urges the Commission to use its regulatory authority, as validated by the Supreme Court, to ensure that the Internet continues to develop in a way that benefits all consumers. To that end, NASUCA encourages the Commission to consider the provision of broadband access in light of the concept of common carriage. As expressed by Professor Eli M. Noam of Columbia University, “Common carriage ... is of substantial social value. It extends free speech principles to privately-owned carriers. It is an arrangement that promotes interconnection, encourages competition, assists universal service, and reduces transaction costs.”⁵⁶ Continuing, he stated:

The common carrier system has served telecommunications participants well: it has permitted society to entrust its vital highways of information to for-profit companies, without the specter of unreasonable discrimination and censorship by government or private monopolies; it was an important element in establishing a free flow of information, neutral as to its content; it reduced the administrative cost and the burden of liability of a carrier, since it needed not, at least in theory, inquire as to a user's background and intended use; and it protected the telephone industry from various pressure groups who would prevent it from offering service to their targets of protest or competition.⁵⁷

Columbia University Law Professor Tim Wu also compares the Internet infrastructure to traditional applications of the common carriage concept. He explains:

What we're ultimately asking is a question that Adam Smith struggled with. Is there something special about “carriers” and infrastructure—roads, canals, electric grids, trains, the Internet—that mandates special treatment? Since about the 17th century, there's been a strong sense that basic transport networks should serve the public interest without discrimination. This might be because so much depends on them: they catalyze entire industries,

⁵⁶ “Beyond Liberalization II: The Impending Doom of Common Carriage (working paper),” Eli M. Noam, Columbia Institute for Tele-Information, March 15, 1994, (available at <http://www.columbia.edu/dlc/wp/citi/citinoam12.html>), at Introduction.

⁵⁷ *Id.*, at Section 2.

meaning that gratuitous discrimination can have ripple effects across the nation.⁵⁸

Professor Wu uses a simple example to illustrate one discouraging implication of discrimination over the Internet – that application providers will be forced to turn their efforts to courting infrastructure providers rather than focusing on developing innovative products:

Now, let's think about the nation's highways. How would you feel if I-95 announced an exclusive deal with General Motors to provide a special "rush-hour" lane for GM cars only? That seems intuitively wrong.... And if highways really did choose favorite brands, you might buy a Pontiac instead of a Toyota to get the rush-hour lane, not because the Pontiac is actually a good car. As a result, the nature of competition among car-makers would change. Rather than try to make the best product, they would battle to make deals with highways.⁵⁹

The Commission asks whether "increasing broadband competition prevents such problems from occurring."⁶⁰ NASUCA respectfully disagrees with the Commission's reference to "increasing broadband competition." In a significant portion of the U.S., consumers have little if any choice in the provision of broadband access. Typically, if even two choices are available, one is the incumbent telephone service provider, and the other is the cable television provider. Thus the "competition" is based on two different products – DSL service and cable modem service – with differing requirements, service

⁵⁸ Wu, Tim, "Why You Should Care About Net Neutrality," *Slate*, May 1, 2006 (accessed at www.slate.com/id/2140850).

⁵⁹ *Id.*

⁶⁰ *NoI*, ¶ 11.

qualities, and prices.⁶¹

Even where there is competition, consumers could potentially face a choice of subscribing to “partial Internets” if the Commission allows infrastructure providers to become content gatekeepers. In a marketplace operating without requirements of nondiscrimination, each broadband service provider would be allowed effectively to run its own Internet, choosing which content providers to prioritize, and which to degrade, based on which content provider is most willing to pay for access to end-users. Subscribers to each broadband access provider would have unfettered access only to the websites and services allowed by that provider. Clearly, this is not the “vibrant and competitive” market for broadband access that the Supreme Court demands.

The Commission asks how it should target rules to address these specific problems, and whether such regulations further the mandate to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans”⁶² NASUCA urges the Commission to design rules to prevent a segmentation of the Internet. Specifically, the Commission should require that all packets of the same type, and thus all services of the same type, be treated equally. No Internet traffic should be degraded or prioritized based on its origin or destination.

⁶¹ See Susan M. Baldwin, Sarah M. Bosley and Timothy E. Howington, “The Cable-Telco Duopoly’s Deployment of New Jersey’s Information Infrastructure: Establishing Accountability,” White Paper prepared for the Public Advocate of New Jersey Division of Rate Counsel, January 19, 2007 (“Cable-Telco Duopoly White Paper”). The Cable-Telco Duopoly White Paper was prepared on behalf of the Public Advocate of New Jersey Division of Rate Counsel and submitted as Attachment A to the Comments of the New Jersey Division of Rate Counsel in the proceeding *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, GN Docket No. 07-45, May 16, 2007.

⁶² *NoI*, ¶ 11.

Ensuring the continued vitality and usefulness of the Internet makes it a more valuable resource for all Americans. This, in turn, creates additional demand for Internet access, which in turn stimulates continued investment in infrastructure and services. In short, a principle of nondiscrimination would serve as the necessary catalyst for moving our deployment of advanced technology to the next level, an issue which the Commission is investigating more broadly in GN Docket No. 07-45. Nondiscrimination benefits consumers, content providers, and ultimately, access providers, as well as the US economy and welfare.

The Commission asks what might cause regulations to be necessary in the future, if they are not necessary now. NASUCA encourages the Commission not to wait for proof that incumbent carriers can stifle innovation: The incentives for broadband access providers are clear; without nondiscrimination, those who control access will be able to control content. American consumers will suffer if the Commission fails to require neutrality in the treatment of content.

As Professor Wu has explained, the development of the Internet has thus far proceeded in an evolutionary fashion, with a “survival of the fittest” mechanism -- consumer demand -- determining what applications and services survive, and which fail.⁶³

A communications network like the Internet can be seen as a platform for a competition among application developers. Email, the web, and streaming applications are in a battle for the attention and interest of end-users. It is therefore important that the platform be neutral to ensure the competition remains meritocratic.⁶⁴

⁶³ Wu, Tim, “Network Neutrality, Broadband Discrimination,” *Journal of Telecommunications and High Technology Law*, Vol. 2, 2005, at 145-147.

⁶⁴ *Id.*, at 146.

The Internet is too complicated, and evolves too quickly, as Professor Wu argues, to allow any one party to become a force directing its development. In terms of net neutrality, this means that *operators* of the “network of networks” that is the Internet should not be allowed to become the *editors* of Internet content.

VI. CONCLUSION

While NASUCA recognizes that the Internet delivers packets utilizing many protocols, intended for many different applications, facing a wide range of latency and quality of service requirements, the Commission should enact policies that prevent the prioritizing (or degrading) of packets strictly for strategic business reasons. NASUCA recognizes also that some broadband service providers may be tempted to hide illegitimate prioritization schemes under the guise of legitimate prioritization. NASUCA urges the Commission to consider this possibility in its policy design, and to take steps to prevent such behavior through the threat of serious fines and license withdrawals.

NASUCA recommends that policies and rules be put in place to protect consumers from facing an Internet effectively censored by those few companies that control the basic infrastructure of the Internet. Any party that controls both the transmission infrastructure (e.g., lines, electronic equipment, etc.), and access to content effectively controls all information traveling via the Internet. The Commission’s responsibilities, as given above in Section I of the Act, are “to promote the continued development of the Internet”; “to preserve the vibrant and competitive market that presently exists for the Internet”; and “to encourage the deployment of technologies which maximize user control over what information is received by ... [users] of the

Internet.”⁶⁵ These responsibilities can be carried out by adopting NASUCA’s recommendations as described in these comments.

Respectfully submitted,

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⁶⁵ *NoI*, ¶¶ 4-7.