

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
) WC Docket No. 07-52
Broadband Industry Practices)

REPLY COMMENTS OF



THE NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION

Daniel L. Brenner
Neal M. Goldberg
Michael S. Schooler
Steven F. Morris
Counsel for the National Cable &
Telecommunications Association
25 Massachusetts Avenue, N.W. – Suite 100
Washington, D.C. 20001-1431
(202) 222-2445

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TABLE OF CONTENTS

INTRODUCTION	1
I. NETWORK MANAGEMENT IS A NECESSARY TOOL TO MAXIMIZE THE VALUE OF BROADBAND INTERNET SERVICE FOR ALL CUSTOMERS.....	2
II. THERE IS A CONTINUING NEED FOR FLEXIBILITY IN DETERMINING HOW BEST TO PREVENT CONGESTION FROM DIMINISHING THE VALUE OF THE INTERNET FOR ALL CONSUMERS.....	5
III. COMMISSION RULES AND REGULATION ARE NOT THE APPROPRIATE WAY TO PROTECT AGAINST ANY POTENTIAL THREAT OF ANTICOMPETITIVE CONDUCT	7
IV. REGULATING DISCLOSURE OF NETWORK MANAGEMENT PRACTICES IS UNNECESSARY AND UNWARRANTED	11
CONCLUSION.....	14

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The National Cable & Telecommunications Association (“NCTA”) hereby submits its reply comments in this proceeding regarding the petitions of Free Press *et al.* and Vuze Inc. on matters of network management.¹

INTRODUCTION

In its initial comments, NCTA opposed the requests of Free Press and Vuze that the Commission depart from its established – and successful – policy of “vigilant restraint” by imposing regulations and restrictions on network management practices. The cable industry has previously committed that cable operators will not deny its customers access to lawful content and applications on the Internet. There is no evidence in the petitions – or in the comments filed in this proceeding – that any such blocking has occurred.

What the petitioners seek to regulate and restrict is the ability of cable operators to manage the flow of Internet data on their networks in order to enable *all* their customers to access *all* of the lawful sites and use *all* of the lawful applications of their choice in a manner

¹ Reply comments were initially due on February 28, 2008. However, a joint motion for a two-week extension of time was filed by several parties on February 21, 2008. *See* Motion for Extension of Time of The Progress & Freedom Foundation, the Institute for Policy Innovation, and the U.S. Chamber of Commerce, http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519842537. Accordingly, pursuant to Section 1.46 of the Commission’s rules, reply comments are not due until, at the earliest, two days after the Commission acts on the motion. The Commission has not yet acted to grant or deny the motion.

that does not significantly diminish the quality of their service. Nobody disputes that such active management occurs and that the result of such management is, in some instances at some times, to delay or slow down temporarily the ability of users of applications that consume a disproportionate amount of a network's capacity to transfer files and data.

Moreover, hardly any of the commenting parties (other than the initial petitioners) dispute that such management is a reasonable and necessary tool for alleviating harmful congestion. Nor do they provide any support for petitioners' suggestion that network management techniques single out and are applied to content and applications for reasons other than the prevention of congestion. To the contrary, the overwhelming majority of the commenting parties confirm that, far from frustrating and inhibiting the growth and development of Internet services and applications, the network management techniques at issue in this proceeding – and the Commission's policy of regulatory restraint – *promote* such growth and enhance the broadband Internet experience for consumers.

I. NETWORK MANAGEMENT IS A NECESSARY TOOL TO MAXIMIZE THE VALUE OF BROADBAND INTERNET SERVICE FOR ALL CUSTOMERS

It is perhaps not surprising that virtually all providers of broadband Internet service oppose network management regulations and restrictions of the sort proposed by the petitioners. But the comments of these providers go far beyond merely expressing their opposition to such regulation. They explain at considerable length why network management is and has been a necessary (and content-agnostic) tool to prevent bandwidth-intensive applications and uses from consuming so much of a network's capacity that network performance is significantly degraded for all users. On these points, there is uncommon agreement among cable operators,² Bell

² See NCTA Comments; Time Warner Cable Inc. Comments; Comcast Corporation Comments.

Operating Companies,³ independent telephone companies,⁴ wireless providers,⁵ and Internet backbone providers.⁶

But it's not just the operators of broadband networks that recognize that network management is both necessary and beneficial to consumers. Equipment suppliers, for example, have an important stake in the growth and development of robust broadband networks and applications, not as operators of such networks but as producers of Internet facilities, services and devices used by providers of new applications and video services. Those entities would have no reason to support network management techniques if their purpose were, as the petitioners allege, to foreclose competition to the video and telephone services that historically comprised the core businesses of the network providers.

They recognize, however, that network management, as the Telecommunications Industry Association ("TIA") explains, "not only enhances the consumer experience, but in a very real way is a *necessary* component of that experience...."⁷

As the Information Technology Association of America ("ITAA") points out, active network management is not only necessary to "keep traffic moving even in times of extreme congestion"⁸ by temporarily deferring usage of bandwidth intensive protocols and applications, but it is also critical to those very same applications: "Reasonable network management, including a variety of innovative technologies, provides 'smart' networks that enable the Internet

³ See AT&T Comments; Verizon and Verizon Wireless Comments; Qwest Comments.

⁴ See Frontier Communications Comments; Embarq Comments; Independent Telephone & Telecommunications Alliance Comments; United States Telecom Association Comments.

⁵ See CTIA – The Wireless Association Comments; Wireless Communications Association International, Inc. Comments; Lauren Cebrett Glass d/b/a Lariat Comments; Amplex Electric, Inc. Comments.

⁶ See Global Crossing North America, Inc. Comments.

⁷ TIA Comments at 3.

⁸ ITAA Comments at 2.

to handle new bandwidth-heavy applications.”⁹ TIA similarly notes that “[w]ithout reasonable network management, use of high-bandwidth applications such as VoIP, streaming video, video conferencing, and gaming would be constrained or infeasible.”¹⁰

What these technology providers recognize is that rules and regulations that prohibit network operators from identifying and taking into account both the special needs and the congestive effects of particular applications would stymie the development of new applications – including services likely to compete with the core businesses of the current network providers. They, like the network operators, “believe the Commission’s historic restraint in this area has helped unleash a wave of dynamic Internet innovation.”¹¹ And, like the network operators, they urge the Commission “to proceed with extreme caution before imposing new restrictions on reasonable network management”¹² and “eschew calls for bright-line rules that would ‘lock-in’ assumptions based on current technologies and market structures, by anticipating every imaginable harm possible.”¹³

Others with an interest in developing and providing content and applications have also recognized the need for active traffic management to prevent congestion, facilitate new services and prevent unlawful activity. For example, NBC Universal, Inc. confirms that network management is essential “so that ISPs have the tools they need to protect consumers from the adverse effects of staggeringly high bandwidth consumption by P2P networks. . . .”¹⁴

⁹ *Id.*

¹⁰ TIA Comments at 3.

¹¹ ITAA Comments at 2.

¹² *Id.*

¹³ TIA Comments at 3-4.

¹⁴ NBC Universal, Inc. Comments at 4 (emphasis in original).

The United States Internet Industry Association (“USIIA”) provides an especially useful perspective on the central role of network management in enabling the Internet to adapt to new technologies and new services:

Effective management practices have always been an essential part of the Internet and the thousand or more individual private networks that comprise it. That is why every network operates a Network Operations Center (NOC). The purpose of these centers is to optimize the traffic flow of packets through the network in a manner that 1) attempts to assure delivery of all traffic even though different applications place different stresses on the network; 2) allows for the flow of all traffic with minimal disruption, packet loss, or other technical deficiencies; 3) enhances the security and integrity of the network against external attack or degradation; and 4) optimizes the Internet experience of all users without guaranteeing the experience of any particular user because of the shared nature of the network.¹⁵

II. THERE IS A CONTINUING NEED FOR FLEXIBILITY IN DETERMINING HOW BEST TO PREVENT CONGESTION FROM DIMINISHING THE VALUE OF THE INTERNET FOR ALL CONSUMERS

Commenting parties also confirm that, as NCTA noted in its initial comments, alternative means of attempting to deal with the congestion caused by usage of peer-to-peer applications may not be as effective or beneficial to consumers as network management. TIA explains, for example, that, although “network owners could simply construct more and more capacity,” this is hardly an optimal or complete solution: “The deployment necessary to meet current network needs in the absence of management tools would be exorbitantly expensive, and the associated costs would fall on end users, making broadband usage uneconomic for many.”¹⁶ TIA cites estimates that the cost of continually upgrading to accommodate network capacity constraints “would cost consumers *about \$9.3 billion annually.*”¹⁷

¹⁵ USIIA Comments at 2-3.

¹⁶ TIA Comments at 12.

¹⁷ *Id.* at 12-13 (emphasis added). See also AT&T Comments at 20.

As AT&T points out, such an approach would “compel the great majority of broadband users, who make moderate use of shared network resources, to subsidize the extreme bandwidth consumption of a few.”¹⁸ The result would be to depress broadband subscribership among the great majority of users – and especially “in those low-income communities where consumers are most sensitive to variations in price.”¹⁹

In any event, as we pointed out in our initial comments, demand and usage will always keep up with and exceed available capacity. Verizon notes that “[G]iven the number of would-be providers of bandwidth-intensive applications that are waiting in the wings and in light of the fact that the number of potential connections increases quadratically as the number of end users connected to the system increases,’ expanded capacity may not provide a complete solution to network congestion concerns.”²⁰ As the Institute for Policy Innovation (“IPI”) explains, expanded capacity *cannot* provide a complete solution to such concerns:

Because, like everything else, Internet bandwidth is a finite commodity, it is subject to Say’s Law, which says that “supply creates its own demand.” Thus, an abundant supply of bandwidth will create abundant demand, and thus there will NEVER be “enough” bandwidth. However much bandwidth we are able to bring on-line, there will always be a need to manage it efficiently.²¹

Like NCTA, AT&T acknowledges that some form of metered, usage-based fees may turn out to be an efficient approach, even though consumers – and net-neutrality advocates – have not always responded positively to such models.²² But at best, as AT&T notes, “this is only one

¹⁸ AT&T Comments at 20.

¹⁹ *Id.*

²⁰ Verizon Comments at 34 (*quoting* Yoo, *Economics of Congestion*, at 1883-84).

²¹ IPI Comments at 4.

²² AT&T Comments at 23. *See also* Verizon Comments at 39.

possible approach” to solving problems of congestion, “and regulators should not assume that it is the optimal solution for all networks at all times.”²³ AT&T explains that

[s]imply as a practical matter, most broadband networks are not set up to monitor customer-specific network usage for billing purposes today, and it would take several years before such networks could build that capability into their systems. In the short to medium term, therefore, any restrictions on efficient network management techniques would force broadband providers to recover the extra costs of the resulting *inefficient* network management from *all* end users.²⁴

It’s not clear from their comments whether those parties who urge the Commission to bar particular network management practices simply don’t care whether doing so will result in inefficiency, increased congestion, and diminished consumer satisfaction or whether they are confident that these undesirable results will not occur. In neither case should the Commission follow their lead. As the record makes clear, barring particular network practices will harm consumers. Moreover, there is no basis for confidence, even among those whose business depends on solving problems of congestion and maximizing the value of their service to consumers, that any particular technique will or will not always be effective.

III. COMMISSION RULES AND REGULATION ARE NOT THE APPROPRIATE WAY TO PROTECT AGAINST ANY POTENTIAL THREAT OF ANTICOMPETITIVE CONDUCT

In light of the legitimate interests served by network management and the need to adapt such management to particular and constantly evolving circumstances, it is critically important to afford network operators the flexibility to continue to adapt their network management tools to constantly evolving Internet applications and consumer demands. USIIA properly warns that the Commission “should not engage in second guessing the engineering and network management

²³ AT&T Comments at 22.

²⁴ *Id.* (emphasis in original).

decisions made by ISPs to respond to an ever-changing and dynamic Internet.”²⁵ And Verizon is right that “[g]iven the widely varying options currently available to different providers and the continuing development of new and better ways to address congestion concerns, regulation is inappropriate and could prevent practices and continued innovation that would benefit subscribers’ services.”²⁶

Numerous other commenting parties, including “think tanks,”²⁷ business organizations,²⁸ and individual experts,²⁹ have echoed this call for regulatory restraint. Many of these parties acknowledge that network management could conceivably be used in a manner that forecloses competition in a relevant market. But they also make clear that this hypothetical threat is not sufficient to justify prophylactic rules, which would stifle the tangible beneficial effects of network management.

As RIAA points out, merely engaging in traffic management “does not in and of itself establish any anti-competitive animus or effect.” A broad rule of the sort proposed by the petitioners “appears to extend beyond what would be reasonably necessary to police the line between anti-competitive network practices and network management practices that raise no competitive concerns.”³⁰ As some independent third parties confirm, the specific conduct engaged in by Comcast that gave rise to the petitions in this case clearly falls on the latter side of

²⁵ *Id.* at 2.

²⁶ Verizon Comments at 35.

²⁷ *See, e.g.*, Progress & Freedom Foundation Comments at 5-7; Institute for Policy Innovation Comments at 3; Comments of Randolph J. May; Reason Foundation Comments at 3; Competitive Enterprise Institute Comments.

²⁸ *See, e.g.*, U.S. Chamber of Commerce Comments at 8-9; National Black Chamber of Commerce Comments at 1; Fiber-to-the Home Council Comments at 32-35; Small Business & Entrepreneurship Council Comments.

²⁹ *See, e.g.*, Comments of George Ou; Comments of Richard Bennett.

³⁰ RIAA Comments at 7.

the line. For example, according to the Information Technology and Innovation Foundation (“ITIF”),

One ... could envision an ISP using network management tools to limit subscribers’ access to competing content. This does not appear to be the case with Comcast’s practices. On the contrary, it appears Comcast is using general network management tools to address the impact of certain high-bandwidth traffic on the network.³¹

But even those parties who do not address the specific conduct at issue in this case make clear that rulemaking is not the way to address potentially anticompetitive network management practices. Given the strong pro-consumer benefits of network management as a tool for preventing congestion and enhancing the Internet experience for all users, there is no way to determine by rule – or even in truncated agency declaratory rulings and adjudications – whether, in any particular case, there is an anticompetitive purpose and effect that outweighs these benefits.³² As Randolph J. May, President of the Free State Foundation points out, there are more appropriate forums than the Commission for the rigorous analysis and balancing of the alleged harms and benefits of specific network management practices:

For example, contract remedies may come into play because each subscriber has a contract with his broadband provider. The Federal Trade Commission has authority to remedy deceptive advertising, and the FTC and the Department of Justice have authority to remedy unfair or anticompetitive trade practices.³³

³¹ ITIF Comments at 3.

³² *See, e.g.*, AT&T Comments at 27; United State Telecom Association Comments at 13; Embarq Comments at 3; Wireless Communications Association International, Inc. Comments at 3.

³³ Comments of Randolph J. May at 8. *See also* AT&T Comments at 24 n.61 (“There are sound arguments ... that the types of concerns raised in these petitions are best addressed through traditional antitrust mechanisms and consumer-protection laws of general application); Telecommunications Industry Association at 18 (“[E]xisting state and federal antitrust and unfair competition laws *already* protect consumers from unreasonable management practices); Independent Telephone & Telecommunications Alliance Comments at 8.

Case-by-case, fact-based antitrust analyses, to be sure, consume more time and resources than the application of broad rules and truncated proceedings that presume that network management techniques are anticompetitive and harmful to consumers. But in the absence of case-by-case findings that any network management practices *are*, on balance, harmful and anticompetitive – much less that there is a recurring pattern of such anticompetitive conduct – there is no basis for establishing such a presumption.

To the contrary, the Commission should adhere to the “vigilant restraint” that has so far been so successful in fostering the growth and development of Internet facilities, applications, and services that were unimaginable only a short time ago. In that regard, it is important to clarify that the 2005 Policy Statement,³⁴ which is the centerpiece of the petitions in this proceeding, was meant to continue the policy of vigilant restraint and was not intended to provide a basis for regulation. It did not purport to subject Internet services to any regulatory constraints.

As Chairman Martin pointed out, policy statements “do not establish rules nor are they enforceable documents.”³⁵ The principles set forth in the Policy Statement simply – though importantly – “reflect core beliefs that each member of this Commission holds regarding how broadband internet access should function.”³⁶ Not only did the Policy Statement not establish enforceable rules, but they were not expected to provide a basis for future regulation. Thus, Chairman Martin expressed his confidence “that the marketplace will continue to ensure that these principles are maintained” and “that regulation is not, nor will be, required.”³⁷

³⁴ Policy Statement, 20 FCC Rcd 14986 (2005).

³⁵ “Chairman Kevin J. Martin Comments On Commission Policy Statement,” FCC Press Release, Aug. 5, 2005.

³⁶ *Id.*

³⁷ *Id.*

Moreover, the Commission's Policy Statement expressly recognized that even the four principles that it set forth were necessarily "subject to reasonable network management."³⁸ The Commission understood that network management is not, as the petitions at issue in this proceeding suggest, at odds with the Policy Statement's principles of an open and accessible Internet but, in fact, makes it possible to offer consumers access to the broadest possible array of services, sites and applications consistent with that Policy Statement. If, as noted, the Commission never viewed the four principles of Policy Statement themselves as enforceable rules,³⁹ it certainly never anticipated rules and enforcement proceedings to define and second-guess whether particular network management tools are "reasonable."

IV. REGULATING DISCLOSURE OF NETWORK MANAGEMENT PRACTICES IS UNNECESSARY AND UNWARRANTED

Nobody in this proceeding quarrels with the notion that Internet service providers should inform their customers of any limitations that materially restrict their ability to access and use Internet content and applications. But the comments of Free Press confirm what NCTA and other parties demonstrated in their comments – namely, that the disclosures advocated by the petitioners in this proceeding would go far beyond matters that materially affect Internet customers' usage and would, in fact, require detailed disclosure of network management

³⁸ Policy Statement, 42 FCC Rcd. at 14988 n.15.

³⁹ Although the petitions in this proceeding appeared to be focused on specific network management activities, Free Press's comments range far afield from this issue in attempting to catalogue all sorts of cable industry practices that allegedly violate the principles in the Policy Statement – but which, in fact, do not. For example, Free Press alleges that "[b]eyond throttling peer-to-peer applications, Comcast has also maintained a lock on consumer devices that could help competing online providers offer Internet video directly to television screens." Free Press Comments at 55. But the suggestion that OpenCable Application Platform (now known as "tru2way") specifications prohibit a device from getting Internet information into their TV sets is simply false. Just as "one-way" plug-and-play devices such as CableCARD-enabled TiVo Series 3 DVRs and personal computers using a CableCARD-equipped "OCUR" – all of which are now being sold – can access the Internet, any device that includes tru2way technology may do so too. In fact, a device built to tru2way specification may have whatever capability the manufacturer wants to build into the device – Internet access, DBS reception capability, over-the-air digital broadcast, gaming station, DVD player, personal computer, etc – so that the consumer may access video programming from any source.

practices. As a number of parties explain, such disclosures are not only unnecessary but would undermine the beneficial and wholly legitimate purposes of such practices.

Verizon points out, for example, that, simply from the standpoint of helping consumers understand any restrictions on their service, “[i]t is neither possible nor desirable to provide consumers with an avalanche of information concerning every possible eventuality that could affect their services. In fact, overly detailed disclosures may result in more confusion for consumers, rather than more meaningful information.”⁴⁰

Worse, as we pointed out in our initial comments, the detailed disclosures requested by Vuze and Free Press seem designed more to help Internet application providers (who have no contractual relationship with the Internet service provider) circumvent network management than to help the Internet service provider’s customers understand any restrictions on their service. As Verizon explains,

The level of detail that the petitioners seem to demand of providers would also undermine the effectiveness of the network management practices being described. For example, identifying in detail every step that a network provider takes to defend its network from outside threats such as spam or denial of service attacks could well facilitate the ability of criminals and the ill-intentioned to evade those protections and inflict harm on the network or subscribers’ services, or to steal personal data from subscribers’ computers.⁴¹

Furthermore, as AT&T points out, “because network management is an intensely dynamic process, network providers could not be expected as a practical matter to give constant updates each time its engineers design a new technological method to defeat network threats or ensure efficiently balanced traffic loads.”⁴² AT&T also confirms that, as NCTA noted,

⁴⁰ Verizon Comments at 16.

⁴¹ *Id.*

⁴² AT&T Comments at 33.

disclosure requirements are hardly necessary to detect “purportedly anti-consumer network-management practices” in a competitive marketplace that is under close scrutiny by competitors, by the press, and by the Internet community.⁴³ In any event, even if a network provider’s disclosures were deemed deceptive or unfair and were not promptly remedied in the competitive marketplace, there are ample remedies available for such practices at the Federal Trade Commission or in contract law.⁴⁴

⁴³ *Id.*

⁴⁴ Comments of Randolph J. May at 8.

CONCLUSION

For the foregoing reasons, and for the reasons set forth in NCTA's initial comments, now is not the time for – and nothing in the record warrants – abandonment of the Commission's sensible policy of vigilant restraint with respect to Internet services and practices. Internet services and applications are flourishing and consumers are responding enthusiastically, just as the Commission expected when it embarked on that policy and when it adopted its Policy Statement. Network management, far from an impediment to such growth and to consumer satisfaction, is necessary to alleviate congestion and ensure a smooth flow of traffic for all customers.

The regulations and restrictions envisioned by the petitioners would only serve to undermine these benefits. The petitions should be denied.

Respectfully submitted,

/s/ Daniel L. Brenner

Daniel L. Brenner
Neal M. Goldberg
Michael S. Schooler
Steven F. Morris
Counsel for the National Cable &
Telecommunications Association
25 Massachusetts Avenue, N.W. – Suite 100
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