

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Petition for Rulemaking to Establish Rules	)	
Governing Network Management Practices by	)	WC Docket No. 07-52
Broadband Network Operators	)	
	)	
Petition for Declaratory Ruling Regarding	)	
Internet Management Policies	)	

**Comments of Frontier Communications**

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Date: February 13, 2008

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**I. Introduction and Summary**

Frontier Communications (“Frontier”)<sup>1</sup> hereby submits its comments in the above captioned matter pursuant to the Commission’s January 14, 2008 Public Notices.<sup>2</sup> In summary, Frontier submits that the Petitions should be denied to the extent that they seek additional regulation of the Internet, and that the Commission should continue its existing policy and practice of maintaining a very light hand of regulation.

Vuze, Inc. (“Vuze”) urges the Commission to adopt regulations specifying what Internet Service Providers (“ISPs”) may or may not do to manage traffic on their networks. In particular, Vuze seeks to ensure that the content distribution technology it has adopted, “torrent”

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<sup>1</sup> Frontier is a mid-size carrier with incumbent local exchange carrier (ILEC) operations in 24 states under the common ownership of Citizens Communications Company. As an ILEC, Frontier operates in one of the most competitive (both residential and business) urban markets in the country (Rochester, NY), but the balance of its ILEC operations are located in several small, high cost rural markets throughout the United States. Frontier offers broadband Internet access using DSL technology to the large majority of its ILEC customers, dial-up Internet access to all of its ILEC customers, and broadband wireless Internet access in a number of areas.

<sup>2</sup> Comment Sought on Petition for Rulemaking to Establish Rules Governing Network Management Practices by Broadband Network Operators, DA 08-92 (Jan. 14, 2008); Comment Sought on Petition for Declaratory Ruling Regarding Internet Management Policies, DA 08-91 (Jan. 14, 2008).

technology, is protected against application-specific network management or “shaping” practices by ISPs. As will be shown below, the economic impact of Vuze’s proposal would be to shift costs related to content distribution from the content providers to all ISP customers, not just those who use Vuze services or torrent technology. To put it more simply and bluntly, Vuze would set up torrent technology as the Bully of the Internet.

Vuze’s proposal would have several other far-reaching negative effects. Vuze’s proposal is anticompetitive because it would stifle potential applications that would compete with Vuze. In addition, Vuze’s world view of strictly regulated network management would make it difficult, if not impossible, for ISPs to develop and provide prioritized service for emergency communications or other similar valuable services. The situation is, in fact, quite opposite from the picture painted by Vuze. It is not true that ISPs are attempting to stifle potential competition from Vuze. Instead, it is Vuze that is attempting to stifle potential competition from ISPs and from future new applications by guaranteeing the priority of Vuze’s cost-shifting technology.

Frontier does not have a position on whether the specific actions of Comcast with respect to torrent technology are consistent with the Commission’s 2005 Policy Statement on broadband Internet access.<sup>3</sup> Frontier’s view of this and other recent and well-publicized alleged “net neutrality” violations is that the open market promptly takes care of most issues, and the Commission is available as a backstop to cover the rare cases where an ISP is alleged to be violating the principles of the Policy Statement and declines to change its behavior. The current crop of alleged violations does not require any changes in the Policy Statement or the Commission’s current light-handed regulatory stance.

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<sup>3</sup> Policy Statement, CC Docket No. 02-33 *et al.*, Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, 20 FCC Rcd 14986, FCC 05-151 (Sept. 23, 2005).

## **II. ISPs Must Be Permitted to Manage Bandwidth-Hogging Applications.**

Torrent technology shifts costs from Vuze to ISPs, and therefore by operation of economics it requires all ISP customers to pay for Vuze's services. Torrent technology is a mechanism for end users to download portions of distributed files from multiple other end users, not only from the content provider's central file servers. What the technology does in its very essence is turn end user customers and their ISPs into additional hosts and transporters for the shared files. As long as the end user customers know this is taking place, and as long as the shared files are not pirated files in breach of copyright law, there is nothing unlawful or improper about the use of this technology. However, it inescapably eats up a great deal of Internet capacity in its operations, because torrent users are continually uploading as well as downloading the shared files.

The economic impact of this technology is very simple. Vuze and similar content providers save a great deal of money by using torrent technology because they are able to use their end users, and in addition their end users' ISPs, as supplementary capacity to provide content to other end users without any supplementary costs to Vuze. Vuze's requirements for server capacity and Internet bandwidth connectivity are thus substantially reduced.<sup>4</sup> This is wonderful for Vuze, and it would not be harmful to anyone else if Internet capacity were free and unlimited. Unfortunately, Internet capacity is both costly and limited. As a result, if torrent technology exhausts an ISP's capacity, to avoid degrading all users' service the ISP must either control torrent usage or add more capacity. Adding capacity is costly, and the ultimate result of a capacity increase is that all of the ISP's customers must pay for the added capacity. Vuze wholly escape these costs, and Vuze's users only pay a portion of them. Controlling torrent usage is a great deal less costly, and doing so does not necessarily shift any server or capacity

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<sup>4</sup> Vuze specifically admits this fact at page 7 of its Petition.

costs back to Vuze. However, controlling torrent usage does increase the time required for end users to download Vuze's files.

It is therefore no surprise that Vuze seeks a regulatory regime under which ISPs are prohibited from managing a specific service or technology.<sup>5</sup> The ISPs then would have no technical option other than to add capacity if a service or technology like torrent expands to fill the ISP's existing capacity, and no economic option other than to recover those costs from its entire customer base.<sup>6</sup>

Frontier submits that Vuze's regulatory proposals would set up torrent technology as the Bully of the Internet. Additional content distributors will see the benefits of lower costs that Vuze has experienced, and because the content providers avoid the costs that their end users' ISPs bear from the increase of torrent traffic, there is no market mechanism to prevent this technology from taking over all available spare capacity. If left alone, Frontier submits that the free market, with all its innovations in services and technology, will be able to control the bully, but the free market must be allowed to target the bully if it is causing a problem. However, if the Commission were to adopt regulations to give the bully free rein, the results would be either across-the-board service degradations, or forced network upgrades solely to accommodate torrent technology with significant added costs to all ISPs and significant price increases to all consumers of broadband access services. Frontier submits that such a policy would be economically unsound and inconsistent with the nation's policy of providing high quality broadband access to all consumers at reasonable prices. In addition, a policy that allows

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<sup>5</sup> Vuze Petition, p. 15.

<sup>6</sup> It may be argued that ISPs could manage torrent capacity by charging extra for it, as opposed to managing it in the network, but doing so would effectively require ISPs to charge end users by usage rather than by capacity. The enormous jump in dial-up Internet usage that occurred when ISPs changed from per-minute to flat rate pricing demonstrates that consumers prefer not to pay for Internet access on a usage basis. An ISP that attempted to convert from capacity-based to usage-based pricing would likely experience significant customer attrition in today's highly competitive broadband marketplace.

content providers freely to shift their costs to network providers can only retard the expansion of broadband deployment.

Vuze's proposal would give the bully free rein to take over the playground and degrade the service of all other Internet users. Vuze sends out its "seed" files to anyone who will accept them, regardless of the impact of the additional traffic on other users. In contrast, ISPs' businesses depend upon maintaining good service for their entire customer base. It follows that content providers using torrent technology are far more likely than any ISP to cause significant service degradations. The Commission should therefore not forbid ISPs from managing specific applications, particularly those that can consume bandwidth on an exponentially increasing basis.

### **III. Vuze's Proposal is Anticompetitive.**

By guaranteeing the equal priority of torrent technology with all other applications and technologies, Vuze would stifle the development of competitive technologies that require prioritization, technologies that are likely to be competitive with Vuze's services. No one knows exactly what these technologies will be, but Frontier submits that if a willing content provider, a willing ISP and a willing end user wish to arrange for a service that prioritizes packets, then that arrangement is no more unlawful or improper than Vuze's use of its end users' computers and their ISPs' capacity to provide shared files to Vuze's other end users.

As an example, a consumer may not be satisfied with the type of distributed, non-real-time, multiple-source downloads that Vuze is able to offer with torrent technology and may wish to obtain a service such as real-time video much more quickly. That consumer, the content provider and the ISP may all agree that for that consumer, the video application should receive a higher level of priority than other traffic. There is no basis for the Commission to forbid, in advance, the prioritization of the live video stream at a higher level than the prioritization of

torrent technology. Vuze's proposed heavy-handed regulation would be likely to kill this kind of innovative and competitive service before it is born.

**IV. Vuze's Proposed Regulation of the Internet Could Compromise Public Safety and Other Future Benefits of the Internet.**

Some of the as-yet undeveloped technologies that heavy-handed regulation of the Internet could stifle are services that would in fact intentionally degrade some or all categories of ordinary Internet traffic in favor of emergency communications. Such a service could involve first responders, critical government agencies, public alerts and a host of undreamed-of emergency applications that could help preserve life, health, safety and property. Other technologies involving network management or prioritization are likely to provide improved lifestyles for Americans, either at home or at work. No one knows yet just what these services will be or how they will work, but it is inevitable that they will appear if the free market is left to work. Vuze's proposal would stifle their development.

At the heart of some content and application providers' proposals for regulation of ISPs is a long-term desire, possibly even a strategy, to turn ISPs into "dumb pipes." If they succeed in minimizing the potential contribution of ISPs to future services in the value chain by minimizing the functions that ISPs are permitted to perform, the content and application providers will maximize their own future profits, at the cost of forcing the Internet to develop following their preferred model. In this model the content or application provider, not the customer, is king. Moreover, ISPs relegated to the status of dumb pipes would lose significant economic incentives to invest in broadband network expansion. The Commission should recognize this inherent economic bias in any proposal to forbid ISPs from taking actions that manage, prioritize or monitor particular kinds of Internet traffic or that otherwise enable them to provide novel services to customers in competition with existing content and application

providers. No one could have predicted the current state of the Internet 15 years ago, and no one can accurately predict the state of the Internet 15 (or even 10) years from now. The enormous value that the Internet has provided to society is due entirely to the workings of the free market economy, and those workings have been enabled in large part by the willingness of regulators to keep their hands off the Internet. Any heavy-handed regulatory step that the Commission takes now would surely distort the marketplace in the future, and would reduce the ability of the Internet to enhance and protect the lives and property of the nation's citizens.

**V. The Free Market Can Take Care of Itself.**

It would be flatly contradictory to the economic interests of an ISP to allow any prioritizing technology to create material degradations of service to its other subscribers. There are plenty of watchdogs on the Internet looking for net neutrality violations, as evidenced by the Free Press petition in this docket. In a competitive marketplace, the court of public opinion provides a swifter and more terrifying judge than any FCC regulation. Moreover, in most markets consumers can readily vote with their feet by moving to a competing broadband technology, including DSL, cable modem, cellular and satellite-based broadband Internet access services. The Commission does not currently get involved when in today's markets any particular ISP's services slow down because of a network bottleneck, and there is no *a priori* basis for the Commission to get involved in any other alleged reduction of service quality. Customers will demand the services they want at the price they are willing to pay, and if they do not get what they want from one ISP they will turn to another.

Looking into the future, it is clear that Commission intervention will be needed even less in the future than it is needed now, if it is needed now at all. Competing broadband technologies such as WiMax, WiFi, fiber-to-the-premises and enhanced broadband cellular services are continuously appearing and challenging existing broadband services. At some

point it may be no more fruitful for the Commission to oversee Internet access services than it is worthwhile to attempt to regulate the quality of images displayed by television sets. Consumers will steer the market where it needs to go. Wherever the market is capable of working, the Commission's first choice should always be to let the market work.

**VI. There Is a Place for Limited Commission Action in Individual Cases.**

There is always the possibility of a service provider that, despite public outcry and regardless of its probable severe loss of customers, insists upon action that is clearly anticompetitive. The Commission's Policy Statement deals with such a possibility, and in an extreme case the Commission is perfectly capable of taking action. This possibility does not mean that the Commission should adopt detailed regulations precisely defining what, given today's technology, is permissible or not. The few examples of net "non-neutrality" that have been reported are isolated. For the most part they have been self-corrected by a combination of the court of public opinion (an expression of the free market) and the carriers' own internal reviews of the situations. Thus, in two widely cited examples,<sup>7</sup> it did not take Commission regulation for Verizon to allow opt-in text messages from a pro-choice advocacy group or for AT&T to enforce its internal polices against censoring transmitted content.

Frontier does not take a position on whether the particular network management practices of Comcast with respect to torrent technology are or are not consistent with the Commission's Policy Statement. If the Commission finds that they are not consistent and must be changed, the Commission will no doubt direct Comcast to make a change. The decision as to whether this particular fact pattern is contrary to Commission policy will be public and easily accessible (because of the Internet), and will be guidance to other carriers in the future. The fact that one or two matters have been brought to the Commission for decision and possible

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<sup>7</sup> *E.g.*, Vuze petition, pp. 11-12.

action by no means warrants the adoption of generic regulations on the subject. It is far too easy to get regulation wrong, and the existing process can readily take care of isolated issues.

Accordingly, the Commission should deny the submitted petitions to the extent that they seek more regulation of the Internet. If the Commission finds that Comcast's practices are inconsistent with the Policy Statement, the Commission should take the minimum action necessary to bring this one carrier back into compliance.

Respectfully Submitted,



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Date: February 13, 2008

**CERTIFICATE OF SERVICE**

I, Gregg C. Sayre, do certify that on February 13, 2008, the aforementioned **Comments of Frontier Communications** were electronically filed with the Federal Communications Commission through its Electronic Comment Filing System and were electronically mailed to the following:

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