

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

In the Matter of)	
)	
Broadband Industry Practices)	
)	
Petition of Free Press et al. for Declaratory)	
Ruling that Degrading an Internet Application)	
Violates the FCC's Internet Policy Statement)	WC Docket No. 07-52
and Does Not Meet an Exception for)	
"Reasonable Network Management")	
)	
Vuze, Inc. Petition to Establish Rules)	
Governing Network Management Practices by)	
Broadband Network Operators)	

COMMENTS OF EMBARQ

In the context of petitions concerning reasonable broadband network and Internet management, there is only one way the Commission can realistically hope to fulfill its public interest obligation: it should limit itself to fact-based decisions, addressed on a case-by-case basis. Broadband networks and the applications that ride them are evolving very rapidly. Broad rules of general application would inevitably produce many unforeseen, undesirable, and often harmful outcomes, because the Commission cannot hope to anticipate all the relevant facts or predict the ways in which even the best-intentioned rules will stifle innovation and inhibit growth. Moreover, perhaps the most pressing public policy objective of the Commission, and a key goal set forth in the Telecommunications Act of 1996, is to promote broadband deployment and network investment. Regulatory restraint is essential, because overbroad rules or limitations can serve only to slow deployment and discourage investment.

The Free Press Petition and the Vuze Petition both call for overbroad and oppressive regulation. The rules sought by the petitions are contrary to the public interest and should be

denied. The two petitions are similar in many ways. For example, they are similar in alleging that one or a few broadband network providers may have placed limits on some of their subscribers' use of peer-to-peer applications and claiming that such network management should not be permitted even if necessary to protect service quality for other broadband subscribers on those networks. They are also similar in proposing dramatic and overbroad regulatory mandates for an entire industry in response to a discrete set of actions by a single broadband network provider. Finally, they are both similar in disregarding -- or failing to acknowledge -- the important public interest values that would inevitably be deeply harmed if network management were restricted as they propose.

The two petitions are different in one very important respect. The one major difference between the Free Press Petition and the Vuze Petition is that the former, at least, is limited to a single issue, albeit a dangerously broad one. It addresses only the issue of potential degrading or choosing not to prioritize one or more targeted applications. The Vuze Petition, in contrast, calls for a wide-ranging set of rules governing all aspects of network management. The dangerous overbreadth of the Vuze Petition in and of itself warrants an order dismissing the petition.

Although the Free Press Petition is less broad, it is an equally ill-advised request and should be denied. Had Free Press, *et al.* limited the petition to a request for a limited declaratory ruling that addressed solely Comcast's alleged actions--if it had focused on the specific uses of BitTorrent described in the petition--then the Free Press Petition could have been worth considering. Embarq expects that a thorough assessment of the facts could, in fact, lead the Commission to uphold some or all of Comcast's actions, but at least the Commission could have been on sound public policy footing if the petition were narrowly targeted.

The Free Press Petition, however, is not so restrained. It calls for a needless and

overbroad Commission decision, covering the entire industry, that application-specific service degradation or de-prioritization is never consistent with the public interest. Such a declaration is simply not true, however, and it would be unwise and unreasonable to adopt such a rule. In the real world, there are many applications that abuse networks, harm the public, increase costs, and compromise the performance of networks. For example, there are applications that take over customers' computers to spew spam across the Internet, often without the customer's knowledge. Most Internet users, including those whose computers are hijacked and their neighbors who can experience slower access speeds may benefit from blocking, degrading, or de-prioritizing those applications, at least in some circumstances.

Similarly, some applications, such as Voice over Internet Protocol, work better if given prioritization (which may, by necessity, entail application-specific de-prioritization of many or all other applications). Network providers need the ability to manage their networks, protect service quality, police network abuses, and operate their own businesses. Accordingly, the notion that application-specific service network blocking, degradation, or de-prioritization never constitutes reasonable network management is unequivocally wrong. Therefore, the Free Press Petition should also be denied in its entirety.

The Commission has always tried to tread carefully when considering regulation of the Internet and network technologies for fear of suppressing innovation, distorting competition, and discouraging broadband deployment and investment. Such restraint remains vitally important today. The Commission has ample authority to police any instances of genuine misconduct by network providers. The Commission should deny both petitions, and instead address any concerns on an individual case-by-case basis, judged on the applicable facts.

I. BROADBAND NETWORKS AND INTERNET APPLICATIONS ARE EVOLVING RAPIDLY SO RESOLVING DISPUTES ON A CASE-BY-CASE BASIS IS PREFERABLE TO PRESUMPTIOUSLY ADOPTING BROAD RULES OF GENERAL APPLICABILITY

A. The Commission Can and Should Proceed on a Case-By-Case Basis Rather Than Through a Broad Rulemaking

The Commission can administer its responsibilities under the Communications Act through case-by-case decision making, as it has been doing, or through industry-wide rulemaking, as proposed by Free Press and Vuze. The law is clear that the Commission is free to choose either approach—it has “very broad discretion whether to proceed by way of adjudication or rulemaking.”¹ Generally, case-by-case analysis is preferable where the facts are likely to differ significantly from one dispute to another. Similarly, case-by-case analysis can better serve the public interest where the risks associated with incorrect decisions are particularly high. Both factors are strongly present in the case of network management rules such as those suggested by Free Press and Vuze. Therefore, the Commission should not alter its course and attempt to replace fact-based case-by-case decision making with a rulemaking proceeding attempting to develop one or more general rules for broadband network management.

Case-by-case analysis has been effective in dealing with the emerging technology, services, and markets related to the use of Internet Protocol. Indeed, even those who fear that network owners will attempt undesirable practices have seen their wishes accommodated on a number of occasions. For example, Madison River settled the action brought against it at the Commission regarding port blocking. Other network owners have altered network management practices when faced with complaints. In fact, Comcast has revised its Terms of Service,²

¹ *Time Warner Entertainment Co. v. FCC*, 240 F.3d 1126, 1141 (D.C. Cir. 2001).

² <http://www6.comcast.net/terms/use/>

apparently to conform more close to the Commission's Net Neutrality principles while also addressing important network management needs in a fair and neutral manner.

These examples show that case-by-case administration has effectively resolved the few network management disputes that have arisen over the past few years. Similarly, this history supports the proposition that case-by-case analysis will be the best method for the Commission to fulfill its public interest mandates in the future. Contrary to the claims of Free Press and Vuze, the successful resolution of isolated instances of disputes over network management practices does not support a case for intrusive and harmful network management rules.

The Commission would deter broadband deployment and chill innovation if it were to follow the suggestions in the Free Press and Vuze petitions. The Commission should not attempt to outlaw network management practices across the board based on isolated cases or suppositions and allegations about harms that might result. Broad rules will surely be more restrictive than necessary, and they will substantially increase the risk of network investments. This will, in turn, drive up the cost of investing in broadband networks, contrary to the core policy goal of the Telecommunications Act of 1996 to promote the deployment of advanced telecommunications networks. Similarly, if the Commission were to limit network management practices across the board rather than reviewing matters on a case-by-case basis, it would become substantially more difficult to develop and deploy innovative new services. In particular, some services (for example carrier-grade voice-over Internet Protocol services) may require some traffic to be prioritized over other traffic. Such prioritization may have the effect of selectively targeting or de-prioritizing other applications, however. The Commission should wait until it has all of the relevant facts before it decides whether or not to prevent such innovation in the name of preventing purported "discrimination".

B. Neither Free Press Nor Vuze has Proposed a Viable Network Management Rule, Much Less One that Could Serve the Public Interest

Free Press proposes that “degrading or blocking targeted applications is subject to preliminary injunction, permanent injunction, and significant forfeitures . . .”³ Vuze suggests that “network management practices should be based on actual impact on the network, rather than targeting or disproportionately impacting specific services or technologies.”⁴ Although Vuze apparently believes these two are mutually exclusive, they are not. Specific services or technologies may be impose actual harm on the network or, more importantly, on other network users. One customer should not have an unfettered right to use a shared network in a manner or to such a degree that other customers experience declines in service quality. Moreover, in practice, it may very well be the case that identifying and de-prioritizing certain applications is the most efficient or best approach to minimizing an “actual [negative] impact on the network”.

Both the Free Press and Vuze proposals are facially unworkable or, at a minimum, strongly contrary to the public interest because they are overbroad. For example, there are specific applications (called bots) that are used (generally without the awareness of the computer owner) to originate and distribute millions of spam messages every hour from computers all over the Internet. These applications do not benefit consumers; instead, they cause harm by slowing users broadband services and clogging e-mail mailboxes. Surely, network owners should be permitted to combat spam through blocking, degrading, or de-prioritizing targeted applications. This will benefit customers generally rather than harming the public interest.

The potential for harm from overbroad network management rules is particularly acute now because broadband networks and applications are evolving rapidly. There is no way the

³ Free Press Petition, at 33.

⁴ Vuze Petition at 15.

Commission can reasonably anticipate what will or will not constitute the full range of reasonable network management practices in the coming months or years. Therefore, the better course would be for the Commission to allow technology and markets to evolve, and to address any alleged abuses or problems as they develop.

II. NETWORK MANAGEMENT IS OFTEN ESSENTIAL TO PROTECT CUSTOMERS AND PRESERVE THE QUALITY OF THEIR SERVICES

Even broadband networks face substantial capacity constraints, so unchecked congestion can and does harm service quality. Broadband networks use packet-based technologies that permit faster and more efficient transmission of data. One reason for this greater efficiency is that available transmission capacity is shared among multiple users rather than being dedicated to a particular communication. Cable broadband networks are shared nearly all the way to the end user, whereas broadband networks using digital subscriber line technology are dedicated to a particular end user further into the network. In both cases, however, the bulk of the transmission capacity is shared by many users simultaneously.

It would not be efficient to deploy enough transmission capacity to serve all customers if they were all placing high demands on their broadband connections simultaneously; nor would those customers be willing to pay the cost of deploying such a network. Broadband connections would cost much more than they do today, particularly in lower-density areas such as the heavily-rural areas served by Embarq. In addition, many applications (including many uses of file-sharing) do not suffer from de-prioritization or delays of an intermittent or temporary nature, which means that customers do not experience declines in service quality. Accordingly, capacity constraints are inherent in broadband networks, particularly where the costs associated with deploying unlimited capacity are high, such as in rural areas with few users per square mile.

In the face of capacity constraints, situations will arise inevitably where the majority of customers will experience declines in service quality that are directly attributable to the heavy demands placed on the network by a handful of other customers. For example, a couple of customers in a community may be engaging in high-bandwidth gaming or video sharing and those uses will slow Internet connections for all other customers on the network at that time. The majority of customers may benefit in these circumstances when the heavy demands on the network are moderated. Moreover, network owners typically want to serve the customers that are placing heavy demands on the network and impacting other customers, so they can and often do suggest other services that are more appropriate for the high-demand customers. Those customers can either shift their demand to less congested times or purchase dedicated capacity that would allow them to use the network without imposing blocking, degradation, or de-prioritization on other customers experiences, which inevitably follows from placing great demands on shared, and inherently limited, bandwidth.

III. CONCLUSION

Broadband services and Internet applications are evolving rapidly, and our national policy is to encourage investment and innovation in these sectors. In these circumstances, the Commission can best fulfill its obligations through case-by-case dispute resolution based on the specific facts on any alleged instance of improper network management. Both the Free Press and Vuze petitions, however, request overbroad and invasive regulation that would add little benefit to the Commission's case-by-case approach while imposing substantial and unwarranted harm to innovation and broadband deployment. The petitions should be denied.

Respectfully submitted,

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