Ensuring Network Stability and Consumer Confidence in Competitive Markets

Summary

Proposals to limit quality of service differentiation or mandate non-discriminatory treatment of network traffic may have the unintended consequence of harming consumers and curtailing innovation and investment in Internet-based services. We reaffirm our support for the transparency principle, to ensure that consumers are clearly informed of their service capabilities and uses and level of service quality that they should expect (as expressed in the Universal Service and e-Privacy Directives). And, we agree that consumers should be able to access any content on the Internet and run any application and device that they choose. There is no question that this ability has and will continue to be fundamental to the Internet's success. But, critically, this should happen without prejudicing network stability and consumer confidence, allowing the operator to manage congestion and capacity constraints on a secure network.

- Network management tools include the prioritization of traffic over networks. Without adequate management, operators today would not be able to increase network stability, including efforts to: a) ensure consumers have a good connection when congestion occurs in the network; b) block spam emails; c) manage network traffic to assure that specific user behavior does not unfairly affect the quality of user experience for others; d) enable real-time home medical monitoring; e) deliver the highest quality IPTV experience; and f) enforce parental controls to protect minors from inappropriate online content.

- The internet has grown and developed in an open environment characterized by competition, cooperation and adaptation. Legislating minimum quality of service levels or mandating non-discriminatory treatment of network traffic in the Directives would reduce innovation and ultimately consumer choice at all levels of the internet. New advances, like those in telemedicine, would be severely hampered without the ability to offer specialized connections.

- The competitive market for network services in Europe already guarantees customers adequate competition, transparency and choice of service plans. Mandated service levels would not enhance consumer rights. To the contrary, it would lead to decreased flexibility and less effective network management, and thus, reduced choice for consumers.

What do customers expect when they log on?

- ***Meaningful Transparency*** – That they will receive adequate information about the products / services they purchase in order to make the choice most appropriate to them (including, for example, such elements as relevant rates, terms and conditions, or any limitations that apply).

- ***Responsible behavior*** – That service providers and others in the Internet value chain will act responsibly in the broadband world or be held responsible by the relevant regulatory authorities.

- ***Continuous Innovation*** – to preserve and improve the quality of the user experience, ensuring:
  - That Internet mailboxes will not be overstuffed with spam.
  - That users' online experiences will not be unfairly degraded or disrupted due to congestion from the online activities of their neighbor next-door.
  - That the services they pay for will not be susceptible to a variety of online attacks or other threats from malware of various kinds.
  - That the market will continue to offer new and differentiated services and content.

- ***Choice*** – When consumers have meaningful information about the nature of their broadband services and the practices of their providers, in a competitive market, they will choose their own 'winner' in the marketplace according to their own needs and budget.

"**Innovation Happens**" – Users expect it – that is, until something prevents it from happening. Policies that impose regulation where there's never been a demonstrated problem requiring government intervention will discourage the continuous innovation and choice that today ensures network stability, consumer confidence and a high quality user experience.

What is Network Management?

The Internet is a network of networks, where traffic is exchanged in "thousands of handshakes" that take place by mutual agreement among the more than twenty thousand networks that comprise the Net. It's also a global marketplace for network resources and capabilities. As this market handles ever-increasing levels of traffic, the exercise of effective network management consists, first and foremost, of cooperative efforts between carriers in the value chain to deal with challenges such as spam and congestion.

Each network employs management tools that are the products of continuous technical innovation by network operators, engineers and communications equipment manufacturers. These tools may prioritize traffic on networks and, by their very nature, 'discriminate' among the various bits that make up typical Internet traffic, in much the same way that traffic signals at intersections in a busy city center discriminate momentarily in the interest of a better overall flow of traffic. Such discrimination occurs according to source, destination, or type of application, in order **to provide** a quality service, **not to detract** from a user experience or access to content. Network management, using **intelligent technical tools within the network**, helps to address issues such as:

- "Packet loss" – oversaturated network elements that may drop packets, which causes the receiver to request retransmission, which contributes to greater congestion
- "Latency" – delays in packet delivery due to distance and queuing
- "Jitter" – variable latency due to congestion

Some network architectures have clear benefits over others, but all networks are designed on a premise of shared bandwidth with capacity limits. Some real-time applications – IPTV, VoIP, online gaming, video conferencing and medical monitoring, to name but a few – demand very high service quality and are **especially vulnerable** to problems caused by **congestion and/or rapid changes in bandwidth demand**.

Recent industry innovations have underscored the value of cooperative efforts between stakeholders in the Internet value chain to improve overall efficiency in the use of scarce resources. For example, a voluntary industry group known as P4P has found that, by sharing routing information between networks and peer-to-peer application providers, they are able to reduce the network capacity required for file-sharing applications by 600 percent. This kind of cooperation can create a win for everyone – reduced costs for network operators, a better product for application providers and a better experience for consumers.

How do consumers benefit from network management?

'Net neutrality' advocates typically suggest that what the Internet really needs is a first-in-first-out traffic model of packet delivery – an 'all bits must be treated the same' approach. This would be a radical change – the medium simply has never worked that way. By prohibiting the beneficial differentiation among different types of network traffic, or forcing network operators to pre-justify use of certain technologies, many network **responses to real consumer needs** would cease or be far less effective.

— **For consumers, for instance:**
- Blocking spam or phishing emails and distributed denial of service attacks
- Using parental controls to protect minors from inappropriate online content
- Delivering the highest quality IPTV experience, seamless video and interactive conferencing solutions
- Managing network traffic to assure that specific user behavior does not unfairly affect the quality of user experience for others
- Enabling real-time home medical monitoring
- Fostering teleworking and telepresence
- Facilitating multi-player interactive gaming
- Improving the quality and reliability of VOIP services
- Providing virtual private networks (VPNs), which allow business and institutional users to send their data through the Internet with the same guarantees of bandwidth, and the same security and privacy that they have previously obtained from dedicated, hard-wired circuits.

The Internet has grown and developed in an open environment characterized by competition, cooperation and adaptation. Many of the 'net neutrality'-related concerns regarding network management tools simply

ignore the fact that operators today already operate in this highly competitive environment. In this environment, while it is uncertain which new and innovative services will succeed, **customer choice and quality of service are key to the survival of market participants**. At the end of the day, consumers will be best served by having multiple broadband platforms competing, with a wide range of business models and services differentiating competitors. That's why **policies encouraging broadband deployment and market-based solutions** will continue to be the best way to ensure that happens.

What have European officials said about competition and network stability?

The Council and the Commission, in a declaration made in May 2008, signaled their commitment to deploy high capacity infrastructure to improve health and social care in Europe. Improved fixed and mobile broadband connectivity can bring extraordinary benefits to patients through telemedicine and real-time medical monitoring and consultation, advances which would be severely hampered without the ability to offer efficient network management and specialized connections.

EU law in fact already recognizes that 'discrimination' that benefits users, in the form of quality of service differentiation, is not only permissible, but desirable. As the Commission stated recently, "in the EU, product differentiation has been considered generally beneficial for the market so long as user have choice to access the transmission capabilities and services they want."[1] The Commission added that "allowing broadband operators to differentiate their products may make market entry of content providers more likely, thereby leading to a less concentrated industry structure and more consumer choice."

In any market, even those that are operating effectively, there is always the possibility of bad actors and questionable practices. Various tools are available to deal with these problems, including consumer protection laws, self-regulation by responsible firms and case-specific, ex-post enforcement by regulatory and competition authorities. If any anticompetitive discrimination at wholesale level were to occur, it could be dealt with swiftly and effectively.

> "Regulation should not be developed to prospectively address hypotheticals. The discriminatory practices alleged [by Net Neutrality proponents] are not occurring in the market, but if or when they do, we [EU regulators] already have the tools to address them quickly and decisively."
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> *Dougal Scott*
> *Director of Policy Development, U.K. OfCom*
> *London Business School, May 2006*

In the course of its review of the Electronic Communications Framework, the Commission agreed. "The competitive markets together with the current provisions on access and interconnection should be sufficient to protect "net freedoms" and to offer a suitably open environment for both European consumers and service providers." [2] A competitive market with transparent offerings (provided for under Directive 2002/22/EC) should ensure that end-users are able to access and distribute any lawful content and use any lawful applications and/or services of their choice (provided for under Article 8 of Directive 2002/21/EC), without prejudice to network stability, innovation and the integrity and security of services.

Conclusion

We agree that consumers should be able to access any content on the internet, and run any application and device that they choose. But, critically, this should happen without prejudicing the ability of fixed and mobile network operators to manage congestion and capacity constraints on a secure network, or the market's ability to experiment with new ways to organize and provide services.

We do write in-part, however, to affirm our continued support for the transparency principle, which would ensure that consumers are clearly informed of their service capabilities and uses (as expressed in the USD and Privacy Directive). Improved and meaningful transparency of service terms, conditions and limitations should be the goal of all network, service and content providers. This is guaranteed by the proposed Directives – enhancing the transparency of prices and conditions and the quality of information that consumers receive about their contracted services.

With this in mind, it is our firm belief that proposals to mandate quality of service levels or require non-discriminatory treatment of network traffic would not only adversely impact the quality of service received by consumers today, but it would also reduce future innovation and consumer choice. Creating new regulation

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[1] Commission Staff Working Document – Impact Assessment, SEC(2007)1473 [SEC(2007)1472, page 91].

[2] Commission Staff Working Document – on the Review of the EU Regulatory Framework, SEC(2006)816, page 32 §9.2.

today to address a potential concern that has yet to manifest in the marketplace won't prevent some market participant somewhere someday from perhaps doing something bad with otherwise good technology. However, a competitive market where innovation is permitted to continue will mean more options for consumers and more opportunities for new investments, new business models and new services.

Respectfully submitted,

LIBERTYGLOBAL
Liberty Global Europe BV

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telenet

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Cable Europe
representing all leading broadband cable TV operators and their national associations throughout Europe: **www.cable-europe.eu**

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the principal policy group for European electronic communications network operators: **www.etno.be**

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at&t

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ciena .: the network specialist

With any questions, comments or requests for meetings with regard to this paper, please email: secretariat@NetConfidenceCoalition.com.