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

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

To: The Commission

COMMENTS OF NBC UNIVERSAL, INC.

The rapid expansion of consumer access to broadband networks in the United States has the potential to usher in a new golden age of video news, entertainment and sports programming delivered over the Internet. Yet the same growth in download speeds and compression technologies that fuels the expansion in legal video downloading and streaming also facilitates fast – and free – illegal distribution of digital content, primarily through peer-to-peer ("P2P") file "sharing."[1]

- As much as 60-70% of traffic on the Internet consists of P2P file transfers by a very small minority – fewer than 5% – of users.[2] P2P thus outstrips every other communication and distribution protocol on the Internet and continues to grow exponentially.[3]

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[1] We place "sharing" in quotation marks because the term implies – incorrectly in this context – a positive, pro-social action, whereas most P2P file transfers involve the distribution of stolen property. Accordingly, we use here the more accurate term file "transfers."

[2] *See* Christopher S. Yoo, *Network Neutrality and the Economics of Congestion*, 94 GEO. L. J. 1847, 1879 & n.145 (2006) ("Yoo"); CacheLogic, "P2P in 2005," http://www.cachelogic.com/home/pages/studies/2005_01.php (P2P represented 60% of Internet traffic at end of 2004) ("P2P in 2005"); PeerApp White Paper, "Comparing P2P Solutions," http://peerapp.com/solutions-managing-transit-link-growth.aspx (figure today may be as high as 70% of all Internet backbone traffic). PeerApp describes itself as "the leader in providing P2P-Based Bandwidth Solutions." *Id. See also Protecting Copyright and Innovation in a Post-Grokster World: Hearings Before the Senate Judiciary Comm.,* 109th Cong. (Sept. 28, 2005) (statement of Sam Yagan, president of parent company of P2P application eDonkey reporting that in North America and the U.K., file sharing represents 76% of total upstream traffic and 48% of total downstream traffic), http://judiciary.senate.gov/testimony.cfm?id=1624&wit_id=4689. The figure is even higher for last-mile traffic, 80% of which consists of P2P. *See* Cache Logic, "True Picture of P2P File Sharing," http://www.cachelogic.com/home/pages/studies/2004_07.php.

[3] *See* P2P in 2005.

- These bandwidth hogs threaten the quality of Internet service enjoyed by mainstream broadband subscribers who rely on the Internet principally for e-mail and web browsing.
- But the rampant growth of P2P is not merely a capacity problem that can be remedied by expansion of networks. The vast majority (perhaps 90% or more) of P2P file transfers – which are subsidized by law-abiding citizens who use far less capacity – are in knowing and flagrant violation of our nation's copyright laws [4] and threaten the viability of U.S. businesses that depend on copyright protection.
- Moreover, many P2P files carry harmful spyware, adware and malware, including worms and viruses that escape detection because of the unique attributes of P2P.[5]

It is inconceivable that the U.S. government would stand by mutely and permit any other legitimate U.S. business to be hijacked in this fashion. Would the government permit Federal Express or UPS to knowingly operate delivery services in which 60-70% of the payload consisted of contraband, such as illegal drugs or stolen goods? The answer is no, and it should be no different for the Internet. Surely, the government would not turn a blind eye if nearly three-quarters of the Internet's traffic consisted of child pornography or auctions of stolen goods. Those engaged in – and those who facilitate – illegal file transfers appear to believe, however, that stolen entertainment content is somehow different and less entitled to the protection of the law. After all, "It's only movies or music or TV shows – what is the harm in 'sharing' this content among thousands or even millions of users?"

In fact, the impact of content piracy on the U.S. economy is staggering. U.S. industries that rely heavily on copyright or patent protection to generate revenue are the

[4] See *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.,* 543 U.S. 913, 923, 933 & 940 (2005) ("vast majority of users' downloads are acts of infringement"; "90% of works available on one of the networks was shown to be copyrighted"; "evidence of infringement on a gigantic scale").

[5] Indeed, these harms were of such concern to the National Association of Attorneys General that the organization addressed the issue during its summer meetings in 2004 and followed up with a strong letter to the trade association representing P2P software developers. *See* Letter dated August 5, 2004, from the National Association of Attorneys General to Adam Eisgrau, Executive Director, P2P United (available at

most important growth drivers of the U.S. economy, contributing nearly 40% of the growth achieved by all U.S. private industry and nearly 60% of the growth of the total U.S. exportable products.[6] Motion pictures are a particularly attractive target for pirates because they are expensive to produce but cost almost nothing to illegally reproduce.[7] Within days of their theatrical release – and in rare cases even before – most movies are available through pirated DVDs sold on the streets or through illegal downloads on the Internet or both.[8] In 2005, movie piracy alone (i.e., excluding music, video games, software and video programming on television and cable) caused a total annual output loss of $20.5 billion dollars among all affected industries in the U.S., including $6.1 billion in direct losses suffered by the motion picture studios; $5.5 billion annually in lost earnings for all U.S. workers; and 141,030 lost jobs that otherwise would have been created for American workers.[9]

These losses do not merely harm elite, wealthy enclaves of film producers in New York and Los Angeles. Because of our nation's interlocking economy, two-thirds of the lost earnings and lost jobs are in industries other than motion picture production. For example, in the absence of movie piracy, video retailers would sell and rent more titles. Movie theaters would sell more tickets and popcorn. Corn growers would earn greater profits and buy more farm equipment.[10] Movie piracy steals from all of these legitimate

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http://www.eff.org/IP/P2P/20040805_P2PUnitedLetter.pdf) (expressing grave concern over the use of P2P file transfer applications to "disseminate pornography, invade privacy and infringe copyrights").

[6] Institute for Policy Innovation, *The True Cost of Motion Picture Piracy to the U.S. Economy*, POLICY REPORT NO. 186 (Sept. 2006) ("IPI Piracy Report").

[7] *Id.* at 2.

[8] *Id.*

[9] *Id.* at 8-11.

[10] *Id.* at 3.

business in all parts of the nation. As noted above, the primary means of illegally downloading movies and other copyrighted content is through P2P file transfers over broadband networks. With the accelerating growth of both P2P and broadband access, the Internet is becoming the dominant mechanism for content piracy. [11]

Until recently, most broadband service providers have viewed online content piracy largely as "not our problem." While the Digital Millennium Copyright Act of 1998 ("DMCA") imposes certain affirmative obligations on (and provides certain safe harbors for) online service providers with respect to infringing material, that statute is nearly 10 years old, and the functioning of the Internet has changed dramatically in that decade.[12] Stolen intellectual property is not the occasional needle in the haystack of legitimate content that Congress envisioned in 1998 when it established the DMCA's safe harbors – instead, it threatens to become the entire haystack. Even advocates on opposite ends of the copyright vs. digital "rights" debate agree that in enacting the DMCA, Congress never anticipated or addressed the problems caused by P2P file transfer applications and the rampant copyright infringement facilitated by such applications.[13] And while service providers may comply with the minimum legal requirements of notice

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[11] *See, e.g., "P2P File-Sharing Ruins Physical Piracy Business*," http://torrentfreak.com/p2p-file-sharing-ruins-physical-piracy-business/ (describing how Internet pirates are forcing "physical pirates" out of business).

[12] *See* Yoo, *supra* note 2, at 1860-63.

[13] *See, e.g.,* Rob Kasunic, "Solving the P2P 'Problem,'" at 2-3, Stanford University Libraries Copyright & Fair Use, http://fairuse.stanford.edu/commentary_and_analysis/2004_03_kasunic.html ("Kasunic") ("While the DMCA provided copyright owners with considerable control to facilitate and encourage distribution of digital works on the Internet, it did not anticipate or specifically address the peer-to-peer distribution of digital networks, where one unprotected copy of a work could be quickly propagated throughout a decentralized network of unrelated individuals"); Fred von Lohmann, "What Peer-to-Peer Developers Need to Know about Copyright Law," Electronic Frontier Foundation (Jan. 2006), http://www.eff.org/IP/P2P/p2p_copyright_wp.php ("Because Congress did not anticipate peer-to-peer file sharing when it enacted the safe harbors [of the DMCA], many P2P products may not fit within the four enumerated functions").

and takedown under the DMCA for infringing material posted on websites hosted on their systems, they have taken few proactive steps to publicize or enforce "rules of service" agreements with their customers, which prohibit use of the providers' facilities for copyright infringement. Some service providers, though not all, have refused even to forward notices to subscribers caught illegally distributing copyrighted content and have turned a blind eye to subscribers who repeatedly abuse the network by engaging in persistent patterns of infringement – even though such inaction may jeopardize eligibility for the DMCA's safe harbors.[14]

Now, however, these service providers are seeing more and more of the capacity of their expensive networks monopolized by bandwidth hogs who command a disproportionate percentage of the network resources, which in turn adversely affects the functionality of core services for mainstream consumers, such as e-mail and web browsing. Adding more bandwidth does not solve the problem, because P2P applications are designed to consume as much bandwidth as is available, and adding more capacity will simply lead to more consumption. Perhaps more importantly, these same service providers are themselves exploring innovative ways to deliver content directly to consumers through their broadband networks, such as video on demand, and are now facing the very same unfair competition that legitimate motion picture producers have been confronting for years as Internet pirates give away the content that the producers are trying to sell as part of viable businesses.

Many broadband service providers have responded to the first problem – network congestion and service degradation – by implementing a variety of bandwidth-shaping

[14] *See* 17 U.S.C. § 512(i).

tools, including (1) protocols that slow P2P traffic and allow other types of traffic (such as e-mail and web browsing) to receive the level of service to which they are entitled; (2) terms of service that charge a premium for higher downstream and upstream speeds and higher monthly consumption caps;[15] and (3) termination of subscribers who "typically and repeatedly consume exponentially more bandwidth than an average residential user."[16] While these tools do not have as their direct purpose the reduction of copyright infringement on the Internet, they may incidentally discourage some Internet pirates from engaging in P2P transfers of stolen material.[17]

In 2005, the Commission adopted a Policy Statement in which it announced the following four principles of network neutrality, which are intended to "encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet":[18]

- Consumers are entitled to access the lawful Internet content of their choice.
- Consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement.
- Consumers are entitled to connect their choice of legal devices that do not harm the network.

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[15] *See* Cox Communications, Policies – Limitations of Service, http://cox.com/policy/limitations.asp.

[16] *See* Dan Mitchell, "Say Goodnight, Bandwidth Hog," New York Times (online), http://www.nytimes.com/2007/04/14/technology/14online.html?ex=1180584000&en=4441568cbf9370c4&ei=5070 (referring to Comcast).

[17] The typical pirate is a male between 16 and 24 years of age, an age group that represents 71% of all downloaders in the U.S. Forty-four percent of MPAA company losses in the U.S. are attributable to college students. IPI Piracy Report at 25. Unfortunately, some members of these demographic groups tend to view legal restrictions with disdain, as evidenced by the dramatic adverse impact on the music and recording industries from rampant illegal file transfers among college students. Kasunic, *supra* note 9, at 3. However, some members of these demographic groups also may be less willing or able to pay a premium for higher speed or higher bandwidth consumption.

[18] *See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Policy Statement, 20 FCC Rcd 14986 (2005) ("Policy Statement").

- Consumers are entitled to competition among network providers, application and service providers and content providers.[19]

The thread that runs through these four principles is "lawfulness" – consumers are entitled to "lawful" Internet content – not the stolen content of others – and are entitled to use "legal" devices that do not harm the network – not applications that allow a single copy of a proprietary film or TV show to be distributed to millions of people worldwide in less time than it takes to type this paragraph. And consumers are entitled to competition among content providers – but not the unfair competition that results when one provider steals the desirable content that another has spent millions of dollars to develop and distribute through legitimate channels.

The Commission initiated the current proceeding to enhance its understanding of the market for broadband and related services, including the behavior of broadband service providers and the impact of such behavior on consumers, and seeks to determine whether any regulatory intervention is necessary to ensure that the policies of broadband providers benefit consumers.[20] The NOI focuses on two principal categories of broadband service provider behavior: packet management practices and pricing practices.[21] With respect to packet management practices, the Commission cites a variety of objectives served by packet management, including prioritizing packets for latency-sensitive applications; blocking child pornography, spyware, viruses or spam; managing packets to improve network performance, engineering, or security; and implementing

[19] *Id.* at 14988.

[20] *In the Matter of Broadband Industry Practices*, Notice of Inquiry, __ FCC Rcd __ , ¶ 1 (FCC 07-31, rel. April 16, 2007) ("NOI").

[21] *Id.*, ¶¶ 8-9.

legal requirements, such as those imposed by the DMCA.[22] The Commission seeks comment on whether these practices are consistent with the Policy Statement.

As the Commission is aware, the network neutrality debate is filled with polarizing rhetoric. Scores of comments will be filed in this proceeding advocating for and against increased regulation of broadband service providers. What is missing from this debate – and from the Policy Statement and the Commission's own commentary – is the acknowledgment that a huge and rapidly growing proportion of Internet traffic consists of stolen property and the concomitant recognition that service providers must act to stem the overwhelming use of their broadband facilities for the distribution of that stolen property. While the number of subscribers engaging in such activity is small, the impact on broadband service is enormous. The Commission should make unmistakably clear, as part of its regulations governing broadband industry practices, that broadband service providers have an obligation to use readily available means to prevent the use of their broadband capacity to transfer pirated content, especially when such use represents huge percentages of their capacity and reduces the quality of service to other subscribers. Whether those means consist of relatively low-tech but potentially effective steps such as forwarding notices to customers who have been identified as infringers,[23] or using increasingly sophisticated bandwidth management tools as and when they come online, the obligation to deploy such measures must be explicit.[24] A failure by the Commission

[22] *Id.*, ¶ 8 & n.18.

[23] Of course, to be effective, such notices must be sent to an address (whether e-mail or physical) that is in fact monitored by the subscriber. Unused e-mail addresses are of little use in reaching infringing subscribers, while physical billing addresses, or blocking the browser from accessing the Internet until the subscriber acknowledges receipt, are much more likely to be effective.

[24] It goes without question, therefore, that the appropriate use of such measures should not be prohibited as discriminatory or as violative of the Policy Statement.

to mandate the deployment of such measures is bad public policy – bad for legitimate businesses, bad for the networks that comprise the Internet and bad for law-abiding consumers who are being deprived of the Internet access they have paid for.

CONCLUSION

Broadband service providers, as well as the content companies, have much to gain from restraining illegal markets and encouraging the growth of authorized content distribution via the Internet. The success of legitimate, high-quality video download businesses is part of a "virtuous cycle" that will motivate many more consumers to subscribe to broadband service, thus giving both content owners and broadband service providers the ability and incentive to develop and market even more innovative – and legitimate – services, to the benefit of all participants in the cycle.

As the entity charged by Congress with ensuring that Americans have access to "a rapid, efficient, Nationwide, and world-wide wire and radio communication service with adequate facilities at reasonable charges,"[25] the Commission must ensure that its policies do not allow the Internet to become the province of the lawless.[26] The Commission possesses the necessary authority to prevent this outcome.[27] It should exercise that authority judiciously to ensure that all of the participants in this "virtuous cycle" can enjoy the full benefits of the most revolutionary communications tool in history.

Respectfully submitted,

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[25] 47 U.S.C. § 151; *see also* NOI, ¶ 7.

[26] To be eligible for the DMCA's safe harbor, a service provider must accommodate and not interfere with technical measures that are used by copyright owners to identify or protect copyrighted works. DMCA, § 512(i).

[27] *See National Cable & Telecom Ass'n v. Brand X Internet Services*, 545 U.S. 967, 976 (2005) (Commission has authority under its Title I ancillary jurisdiction to impose regulatory obligations on broadband Internet access providers).