Content and its Discontents:
What Net Neutrality Does and Doesn't Mean for Copyright

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Thank you Laura and Chris for inviting me here today. It is truly an honor to speak to you — the Information Society Project is an important hub of scholarship and intellectual thought on some of the most critical technology and information policy issues of the day. I am particularly humbled to be part of the same speaker series as my friends and colleagues Julie Cohen, Beth Noveck, Siva Vaidhyanathan and Fred Von Lohmann.

I'm going to talk about two information policy issues today — network neutrality and copyright enforcement — and I'll talk about where they do and don't intersect. This issue really hits Public Knowledge's sweet spot — the organization was founded in 2001 to ensure that citizens have access to an open communications system at every layer. Thus, we are concerned both with copyright holders' control of the content layer and Internet Service Providers' control of the physical and applications layers of our communications system. It has always confounded me that other media

reform groups in Washington practically run away screaming when copyright reform is mentioned. In my opinion, we cannot have an open Internet if large corporate copyright holders can exploit overly burdensome copyright laws to sacrifice legitimate speech at the altar of trying to stop piracy.

As I'm sure many of you know, net neutrality has been in the news a lot lately. Last Thursday, the Federal Communications Commission proposed net neutrality rules and is seeking comment on those rules for an unusually long period of time — over four and a half months. It will probably take several more months after that for the agency to come up with a final order and vote on it. For those of you not familiar with net neutrality, it is a straightforward concept. The core idea behind net neutrality is that network providers that offer access to the Internet should not be able to pick winners and losers among the applications, services and content that travel over those networks. Some network providers would like to charge application, service and content providers for quality of service assurances; other providers want to ensure that the applications, services and content that they own are given a competitive advantage. But that would upset the fundamental nature of the Internet, a principle that is built into the network's

very architecture — that control rest at the ends of the network, and not in the middle.

Prior to 2005, Internet access providers were prohibited from favoring or discriminating against certain applications and content. That changed when the Supreme Court in the *Brand X* case upheld an FCC decision that found that cable-based Internet access services were unregulated "information services." Until that decision, Internet access services (at least those provided by telephone companies) were considered telecommunications services under Title II of the Communications Act and providers were prohibited under that title from engaging in "unjust and unreasonable" discrimination. After the *Brand X* decision, the FCC quickly moved to classify broadband wireline Internet access, broadband wireless Internet access and broadband-over-power line Internet access as information services as well.

In an effort to set some guidelines for network provider behavior in the wake of the *Brand X* decision, the FCC in 2005 adopted four broadband principles, "to ensure that broadband networks are widely deployed, open,

affordable and accessible to all consumers." They are: 1) Consumers are entitled to access the lawful Internet content of their choice; 2) Consumers are entitled to run the applications and access the content of their choice; 3) Consumers are entitled to connect legal devices that do not harm the network; and 4) Consumers are entitled to competition between networks, application, service and content providers. But while these principles address a situation where a network provider blocks an application, service or content, they do not address the situation where a provider favors or degrades an application, service or content for competitive or other reasons.

So, for the past 4+ years, Public Knowledge, along with its allies in the public interest community and in the "edge" Internet industry--companies like Amazon, eBay, TiVo, Sony Electronics, Skype and Google--have been asking Congress and the FCC to reinstate the non-discrimination rule, which was first called "open access," and now, thanks to Columbia Professor Tim Wu, is called network neutrality or net neutrality.

At this point, you might find yourself asking, how does copyright fit into this picture? Copyright issues came rather late to the net neutrality

party. At first, in the “open access” days, Disney was an active member of the pro-open access Coalition of Broadband Users, which also included Microsoft, Amazon, Yahoo and Apple. Disney understood the dangers involved with being a content provider that must seek out access to a conduit. It had for years done battle with cable operators seeking to deny access or to extract monopoly rents.

But as movie studios increasingly lost control of their content on digital networks, Disney and the other studios decided to focus the majority of their policy resources on fighting infringement. Because of the amount and value of the programming they own, the studios didn't fear a loss of access or discrimination much — in fact, they are happy to pay an Internet access provider for better quality of service or faster speeds for their content. On the other hand, the studios began to fear that a non-discrimination rule could prohibit network providers from enforcing their copyrights, and specifically, from engaging in network level filtering to automatically identify and block illegally obtained, copyrighted content. If a network provider was prohibited from blocking or degrading applications, services and content, how could it block unlawful transfers of copyrighted works?

Let me stop at this point to briefly explain what copyright filtering is and how it works. At the most basic level, copyright filtering is a method whereby network appliances use a technology known as Deep Packet Inspection, or DPI, to inspect the data that travels over an Internet access provider's network, identifying content as it passes through the filter and then either blocking or permitting that traffic based on the instructions the filter is given. When a network provider uses DPI, it is as if the postman grabbed your mail, opened it up, read it, and then either sent it to its destination or stuck it in his pocket based on the contents of your letter.

Filters can either attempt to determine the type of content that's in transit by looking at packet exchanges or traffic patterns — this is what Comcast was found to have done when it illegally blocked the Bit Torrent protocol — or by engaging in content analysis, whereby the data in hand is compared to a registry containing the identifying characteristics of works a copyright holder wants protected. In addition to adding enormous costs and technological burdens to the operation of a network, copyright filters harm end users in several ways. First, because no filter is (or likely ever will be),

smart enough to distinguish a lawful use of copyrighted works from an unlawful one, it will necessarily block lawful uses of content. Second, to the extent that filters use DPI, they will have grave implications for user privacy and for lawful speech that is completely unrelated to copyright. Recall that it was DPI that the Iranian government used to stifle political dissent over the country's elections earlier this year.

If you want a more detailed explanation of copyright filters and their policy implications, visit Public Knowledge's homepage and download the white paper entitled "Forcing the Net Through A Sieve: Why Copyright Filtering is Not a Viable Solution for U.S. ISPs."

During the last few years, the content industry has started looking for opportunities to ensure that network neutrality does not upset their filtering dreams. The first came during the FCC's drafting of the August 2008 decision declaring that Comcast's blocking of Bit Torrent violated the agency's broadband principles. From their adoption in 2005, the principles were subject to a "reasonable network management" exception. The Comcast decision defined the reasonable network management standard for

the first time, stating that "there must be a tight fit between [the network providers] chosen practices and a significant goal….Its practice should further a critically important interest and be narrowly or carefully tailored to serve that interest." The Commission decided that since Comcast selectively blocked only the BitTorrent application and not other high bandwidth applications, and because it did so at all times, and not solely during times when its network was congested, Comcast's actions did not constitute reasonable network management.

But the FCC did not stop there. In *dicta*, it explained that it did not wish to micromanage ISPs network management practices, and noted that because the principles state that:

> consumers are entitled to access the *lawful* Internet content of their choice, network providers, consistent with federal policy, may block transmissions of illegal content (*e.g.*, child pornography) or transmissions that violate copyright law.

Of course, this statement did not come out of nowhere — the studios lobbied the FCC to include it.

So started the meme, now universally accepted, that network neutrality only protects *lawful* content; and that consistent with reasonable network management, the network provider can willfully block or degrade both unlawful content like child pornography and *unlawful transfers* of content like the unauthorized transfer of copyrighted works. Moreover, as the principles state — the ability of consumers to use applications and services of their choice is subject to "the needs of law enforcement."

This standard gives copyright holders a wide berth with which to enforce their rights online. Nothing in the principles interferes with the notice and takedown requirements of the Digital Millennium Copyright Act (DMCA). Nothing prohibits filtering at the edge, like YouTube's automated content identification system. Nothing prohibits a network provider from sending warning notices to subscribers engaging in unlawful conduct, which, according to a Disney lobbyist, effectively stops illegal behavior 80% of the time. Nothing prohibits the government or copyright holders from going to court and bringing criminal and/or civil actions against illicit websites and applications or, as they often do, from stopping illegal behavior using the mere threat of excessive statutory damages.

But how does network level copyright filtering, which necessarily blocks both lawful and unlawful content, fit into the reasonable network management standard? While Hollywood and the recording industry claim that such filters work 98% of the time, they (as usual) have no empirical evidence to back up that claim, and even if they did, that 2% of errors could contain the next great "Macaca" moment that changes the course of an election. Of course, I am referring to the 2006 video that showed then Senator George Allen making a racially offensive remark to a videographer from his opponent's campaign. And what should be made of the fact that copyright filtering does nothing to ensure the smooth operation of the network (in fact, it accomplishes the opposite) and therefore is not *network* management but *content* management?

So let's look again at the Comcast reasonable network management standard:

> there must be a tight fit between [the network provider's] chosen practices and a significant goal….Its practice should further a critically important interest and be narrowly or carefully tailored to serve that interest.

It seems to me that even if we assume that copyright filtering is network management and not content management, there is little doubt that copyright filtering cannot meet that standard. There is no “tight fit” between the practices and the goal of stopping infringement. And even if stopping or slowing infringing behavior can be considered a “critically important interest,” the FCC would be hard pressed to find that filtering, which is a blunt instrument, is “carefully tailored to serve that interest.”

I don’t doubt that Hollywood agrees with me (for once), because ever since the Comcast decision, it has used every opportunity to have Congress and the FCC to declare flat out that copyright filtering is “reasonable network management,” thereby removing any uncertainty as to whether such filtering would meet the Comcast standard. The first effort came during Congress' consideration of the American Recovery and Reinvestment Act, known more commonly as the economic stimulus bill. Senator Dianne Feinstein proposed an amendment to the portions of the bill that empowered the National Telecommunications and Information Administration of the Department of Commerce to give grants totaling $4.6 billion dollars for projects that would promote broadband deployment and adoption. The bill required that grantees operate their networks in a non-discriminatory

manner. Seizing on that openness requirement, the Feinstein amendment required the NTIA to:

> …allow for reasonable network management practices such as deterring unlawful activity, including child pornography and copyright infringement.

Copyright filtering certainly "deters" copyright infringement, and as such would almost certainly be considered reasonable network management under the Feinstein definition.

Public Knowledge spearheaded the opposition to this language, and with the aid of our public interest and industry allies, the language was dropped in exchange for a pointed question to then FCC Chairman-designate Julius Genachowski about net neutrality and copyright infringement. While the NTIA was developing grant guidelines pursuant to the stimulus bill, Hollywood again tried and failed to condition the non-discrimination requirement with a reasonable network management exception encompassing efforts to "deter" copyright infringement.

The economic stimulus bill also required the FCC to develop a National Broadband Plan — that is, a roadmap for how this country can first achieve a universally accessible and affordable broadband system that

revolutionizes not only communications, but also education, health care, energy independence, etc. and second, how it can encourage those who haven't yet adopted broadband to do so. Interestingly, FCC officials have made clear that net neutrality will not be discussed in the context of the broadband plan, leaving it to the rulemaking I discussed earlier. But that has not deterred Hollywood from advancing its agenda one iota. The studios argue that protection of copyright must be part of the National Broadband Plan because without such protection, they will not make valuable content available online, and without their valuable content online, people who do not already subscribe to broadband will not do so. While popular Hollywood content is undoubtedly one driver of broadband adoption, it is hardly the only, or even the most important driver of adoption. Indeed, social networks like Facebook are arguably more important drivers of broadband adoption, and user generated content appears to be more popular than Hollywood fare on websites like YouTube. While I have received assurances from FCC staff that copyright issues will not be addressed in the broadband plan, Hollywood's relentless lobbying of the FCC could certainly change that calculus.

This brings us back to the net neutrality rulemaking, which may be

Hollywood's best opportunity to get explicit permission to pressure network providers to filter. Remember that I said earlier that the Comcast reasonable network management standard is too stringent to permit filtering. So if you can't get an explicit law or rule that clarifies that filtering is indeed reasonable network management, what's the next best thing? Trying to lower the reasonable network management standard.

In a move that must have had corks popping in Los Angeles, the FCC is seeking comment on that very issue. In paragraph 137 of its notice of proposed rulemaking, the Commission tentatively concludes that the Comcast reasonable network management standard is "unnecessarily restrictive in the context of a rule that generally prohibits discrimination subject to a flexible category of reasonable network management." In other words, the Commission is arguing that a strict reasonable network management standard may be unnecessary if the Commission adopts non-discrimination requirement, and it seeks comment on that proposal.

The FCC proposes the following definition of reasonable network management to replace the Comcast standard:

> Reasonable network management consists of (a) reasonable practices employed by a provider of broadband Internet access service to (i)

> reduce or mitigate the effects of congestion on its network or to address quality-of-service concerns; (ii) address traffic that is unwanted by users or harmful; (iii) prevent the transfer of unlawful content; or (iv) prevent the unlawful transfer of content and (b) other reasonable network management practices.

By eliminating the requirement that the network provider demonstrate that its management practices bear even the slightest relation to an important network management goal, the FCC has greatly weakened the standard. Moreover, the proposed definition is circular: reasonable network management consists of "reasonable network management practices?" Maybe I'm missing something, but huh?

I must say also that I don't quite understand the FCC's rationale for weakening the standard. The fact that they are reinstating a non-discrimination requirement means very little if the exception to the requirement is so broad as to undermine it.

In any event, this definition appears to open the door wide for network-level copyright filtering. The FCC need only determine that the technique was a "reasonable practice" to "prevent the unlawful transfer of content." A network provider needn't show that its network management practices are a "tight fit" or "narrowly tailored" to prevent the unlawful

transfer of content. In other words, under this standard, a 98% accuracy rate, or maybe even 51%, would likely be considered reasonable.

Now before Hollywood lobbyists start drinking that champagne, there is other language in the notice that could be interpreted to cabin the reasonable network management standard as it applies to copyright filtering. In paragraph 139 of the order, the FCC again emphasizes that:

> [o]pen Internet principles apply only to lawful transfers of content. They do not, for example, apply to activities such as unlawful distribution of copyrighted works, which has adverse consequences on the economy and the overall broadband ecosystem. In order for network openness obligations and appropriate enforcement of copyright laws to co-exist, it appears reasonable for a broadband Internet access service provider to refuse to transmit copyrighted material if the transfer of that material would violate applicable laws. Such a rule would be consistent with the *Comcast Network Management Practices Order*, in which the Commission stated that "providers, consistent with federal policy, may block…transmissions that violate copyright law."

In this language, there is a lot of emphasis on unlawful transfers and the ability to block unlawful transfers of content if the transfer of the material would violate copyright laws. But those qualifiers are not in the proposed rules themselves — the rules are purposefully barebones, and include only the proposed new definition of reasonable network management.

I'm hoping that my Public Knowledge colleague Art Brodsky is correct in saying that the notice is Talmudic in nature — the proposed regulations are spare, but there is a lot of language in the notice that will help to inform this FCC and future FCCs when the time for interpretation arrives. But it is not due to concerns about copyright that Public Knowledge will seek to tighten the FCC's proposed standard for reasonable network management. The validity and enforceability of the rules rest on that definition, and while we certainly agree that network providers should be able to ensure the proper and secure operation of their networks, and even that wireless providers should have a bit more leeway (at least at first) because of bandwidth constraints and technological differences from wireline services, we can't support an exception that swallows the rule.

So the next 6 months or so are sure to be fascinating on many different levels. Given its twin goals of open networks and balanced copyright, Public Knowledge in particular is in an interesting and somewhat difficult position — wanting very much to support the FCC in its adoption of enforceable net neutrality rules, but very much concerned about what the proceeding may mean for its copyright policy goals. It is a much easier

calculus for a company like Verizon, which opposes copyright filtering *and* net neutrality regulations. At Public Knowledge's bi-weekly copyright reform meeting, I asked a Verizon lawyer how the company was going to address the issue. She said, and I paraphrase — "it's really hard, but this proceeding may drive Internet service providers and Hollywood into each other's arms," because they both want a broad network management exception.

Ultimately, I agree with Chairman Genachowski, who said in his September 21 speech announcing the commencement of the rulemaking that "the enforcement of copyright and other laws and the obligations of network openness can and must co-exist." But the question as to what constitutes "appropriate" or "reasonable" copyright enforcement by network providers will inevitably challenge this goal. I welcome all of you to help inform the debate — the Commission really wants to hear from people outside the Beltway and I know that they will make good on their promise to make this process open, transparent and welcoming to your input. Public Knowledge and its allies need your help to ensure that the FCC's open Internet rules promote their intended purpose — to promote creativity, innovation, civic discourse and economic growth. Thank you.