Net Neutrality is a Struggle over Control of Communications Infrastructure

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17-22 minutes

Net neutrality has been a hot topic in media policy for years—yet it remains mystifying to many, even those who study or work in media industries. The issue is back in the spotlight recently—bubbling up from its regular coverage in the media and technology industries' trade presses and blogospheres and heavy debate in policymaking circles to once again making headlines in the mainstream press and gaining popular attention. A new battle and a great furor have quickly risen up around FCC Chairman Tom Wheeler's proposal for new Open Internet rules, in the wake of the *Verizon v. FCC* decision that effectively gutted the previous policy. The 2010 Open Internet regulations were as close as the US has come to meaningful net neutrality policy, with prohibitions against blocking and discriminating against content, applications, services, and devices on the internet, but all of this was struck down by the DC Circuit Court in the *Verizon* decision. The plan now being considered by the FCC would undermine rather than protect the open internet, as it would support internet service providers (ISPs) operating private fast lanes for prioritized network traffic

and charging content providers extra tolls to reach users.

Accompanying the FCC's actions, other recent moves made in the aftermath of the *Verizon* verdict reveal how ISPs and content providers are positioning themselves in a pending post-net-neutrality world. AT&T announced its Sponsored Data plans to exempt certain apps' traffic from its monthly data caps. Netflix reached 'paid peering' agreements with both Comcast and Verizon for direct connections to broadband networks. Comcast has been especially busy: in addition to extracting payment from Netflix, the cable and broadband giant is seeking to buy Time Warner Cable (TWC) and is cutting a deal with Apple for priority access over its specialized service network (to go along with its ongoing arrangement with Microsoft for preferential treatment of its Xfinity-on-Xbox service). A seismic shift in the political economy of the internet is afoot, but what is at stake is more than just what business models will prevail. The implications of the struggle over net neutrality for everyday internet users are great: net neutrality is the very basis for the internet existing as a public infrastructure for communication and connectivity.

Distilled to its basic essence, network neutrality is actually a rather simple principle: network operators should not interfere with the activities of the users of the network. Nonetheless, the perplexity surrounding the issue is unsurprising given the typical obscurity of both technical infrastructure and regulatory policy—both subjects are usually invisible to everyday people (often intentionally and strategically). Net neutrality is the classic "boring" policy issue that is made arcane by elites with much to gain by shutting out the public from intervening or even

understanding what is actually a pivotal battle for control of communications. Discussions of the internet still too often fall into a romanticized "cyber-utopian" discourse that tends to erase the materiality of the network and the historical role of state intervention to guarantee democratic access to such essential communications infrastructure.

1. Net neutrality is not without history.

2. Net neutrality is a principle of public values over private interests.

3. Net neutrality is a battle over the shape of internet infrastructure.

4. Net neutrality is a broadly applicable logic.

5. Net neutrality is not dead yet.

1. Net neutrality is not without history.

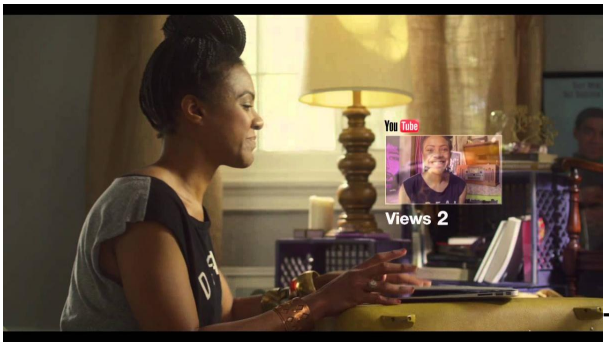
Even though some insist that it's a made-up solution in search of a problem, net neutrality has a long history. When Tim Wu coined the term in 2003 in a seminal law journal article, he was not so much introducing a new concept as putting a name to the principle of openness and nondiscrimination by which the internet had been governed since its inception. Net neutrality comes out of two traditions—one technological, one regulatory—which enabled the open architecture and equitable access that once characterized the internet. The technological tradition (which informed computer network design since the 1960s) is the "end-to-end argument" for general-purpose network design that enables a wide variety of uses and emphasizes end-user

control rather than centralized management. The regulatory tradition (dating back at least as far as 15th century English common law) is common carriage, the state-enforced duty of basic communications providers to serve all on an equal basis.

Net neutrality—once a built-in result of end-to-end architecture and common carriage regulation—only became an issue of concern once these enabling conditions were gone. As cable companies began providing internet access for the first time during the transition to broadband around the turn of the millennium, in addition to developing network management technologies that afforded them a greater degree of control, they pushed back against openness regulations. Since the 1980s, in the FCC's influential Computer Inquiries and codified in the Telecommunications Act of 1996, "telecommunications services" have been regulated separately from "information services." Telecommunications services are basic infrastructure (the conduit) while information services make use of that infrastructure to publish (the content). In keeping with the common carriage tradition, the FCC regulates the conduit to ensure open access to the content. Yet, beginning with the Cable Modem Order of 2002 and affirmed by the Supreme Court in the *Brand X* case in 2005, the FCC regulates broadband internet access not as a telecommunications service subject to common carriage regulation, but as an information service that enjoys publishers' rights—the decision that doomed the agency's previous attempts to implement Open Internet rules and still haunts its net neutrality plans.

2. Net neutrality is a principle of public values over private

interests.



The story of net neutrality is too often described in the terms of corporate warfare—bold Silicon Valley innovators battle incumbent phone and cable companies! Who gets left out of this reductive frame, however, are the average internet users, and they stand to lose the most without net neutrality protections (not to mention that the relationship between the tech industry and broadband providers has increasingly shifted from combative to collusive anyway). When reduced to a fight over revenue streams, net neutrality loses its meaning as a matter of equitable access to the means of creativity and circulation.

Net neutrality is ultimately about providing for participation in the public sphere. As a principle of openness and nondiscrimination, net neutrality supports public values of equality and fairness crucial to democracy and can be conceived of within an affirmative tradition of free speech. Although the dominant discourse of the First Amendment today tends to see the role of the state regarding free speech as just to stay out of the way, there is a long history of government intervention to actively empower citizens with the ability to express themselves and be heard on equal terms. As an update to the common carriage regulation that comes out of this conception of free speech, net

neutrality is a way of assuring that the essential communications infrastructure of the 21st century is an openly accessible resource. It is a principle that comes from recognition that the private interests of the marketplace alone cannot protect the public values of democratic communications.

3. Net neutrality is a battle over the shape of internet infrastructure.

Net neutrality articulates a particular vision of the internet that differs from that of the owners of its underlying infrastructure. ISPs occupy a bottleneck position as the "last mile" of the network, which they seek to leverage into gatekeeper control over the traffic that flows back and forth to the rest of the network. This represents a fundamental reshaping of the internet from a universal public infrastructure for the multi-directional circulation of communication and culture into a private delivery system for media industry content.

Internet Access Infrastructure

The diagram above depicts a very simplified view of the physical infrastructure for access to the internet and the institutional arrangements for the flow of traffic on the network. Following this diagram, let's quickly trace the typical way it works for an end-user (that's you, me, and other everyday individuals) to access something or someone on the internet—content like a website, blog, Google search, or Netflix video, or communication with another user like a tweet, email message, or YouTube video. First, an end-user requests data from servers on the network, whether stored in data centers run by large content

providers like Google, Amazon, or Netflix, or originating from other end-users. Next, that data is passed from those servers to the backbone of the internet by the ISP that provides internet access to the content provider or user (for large content providers this would be either a transit ISP such as Level 3 or Cogent, or content providers' own transit networks). Then, backbone providers that operate the core of the internet (large-scale telecommunications providers like AT&T, Verizon, and Tata) transmit the data through their networks to the ISP that provides the end-user with internet access. Finally the end-user's ISP (a consumer broadband provider like Comcast, AT&T, Verizon, or TWC) connects that data to the end-user's device.

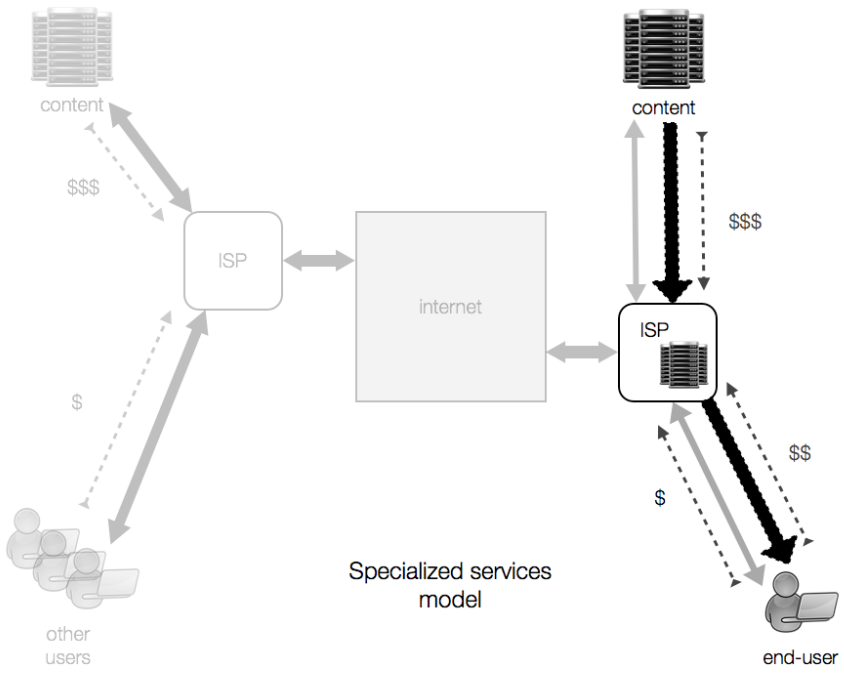
Within this typical arrangement, content providers pay into the operation of internet access infrastructure one of two ways: by either subscribing to an ISP (just like any user of the internet, except with higher capacity) or investing in their own infrastructure by building their own network to connect themselves to the internet. This is the traditional arrangement that broadband providers like Comcast, Verizon, and AT&T are trying to change. These ISPs are more interested in being distributors than dumb pipes and they want a piece of the new revenues being generated by online video and mobile apps—especially given that the legacy business models of the large cable and phone companies that dominate the broadband market are being threatened by those over-the-top services. Their desired model is what economists call a 'two-sided market' and what most people would call double-dipping—or collecting

protection money.

There are two particular ways ISPs are moving toward this broadband discrimination model, depicted respectively in the two diagrams below.

pay to play infrastructure

The first way is a ‘pay-to-play’ arrangement—the imposition of various charges by the end-user’s ISP on content providers. This is typically for some sort of preferential treatment or subsidy to users’ costs, but it effectively becomes a toll collected by ISPs to be allowed to reach its users. This has already become a standard practice in many places around the world. This is problematic not only because content providers are already paying for access to the internet, making charges to get their traffic out the other end of the network excessive, but also because those large content providers who can afford this payola are put at an unfair advantage over smaller startups or everyday users.



The second way is the operation of “specialized services”—[private networks ostensibly distinct from the “public internet.”] These differentiated fast lanes on broadband pipes, also known as “managed services,” have been commonly used for ISPs’ own IPTV or VoIP services, but many [deals involving other content and applications are in the works]. This is troubling as a splintering of multiple ‘internets’ that are separate and unequal. In what is often referred to as the ‘dirt road scenario,’ unregulated networks are reserved for only ISPs and the corporations that can afford to pay them for uncongested priority distribution, providing incentives for investment and innovation only on the private internets, effectively squeezing out the public internet and marginalizing public participation in online media creation and circulation.

4. Net neutrality is a broadly applicable logic.

Net neutrality is a principle understood and applied differently in

particular policies, practices, and places. There tends to be wide agreement on net neutrality in theory, but there have been uneven results when it comes to putting it into practice. The deeply compromised and ultimately untenable version of net neutrality in the FCC's 2010 Open Internet rules is just one example of countries around the world struggling with it. Net neutrality laws in Chile, the Netherlands, and Slovenia are encouraging, and the groundbreaking *Marco Civil da Internet* in Brazil can serve as a great model for national legislation. Net neutrality remains in disarray in many countries, though, seen in the faulty schemes of co-regulation in Canada, Japan, France, and the UK. Even South Korea, oft-cited as broadband paradise, has a troubling approach to net neutrality policy. Further, internet filtering by states like China, Russia, Iran, and Syria is too often considered a separate issue from net neutrality, but restricting expression online should be understood as censorship whether done by governments or corporations.

As a broad principle for a global network, net neutrality should be thought of and practiced transnationally. The European Union is one of the most prominent sites of debate around net neutrality, where the strong net neutrality provisions of the Telecoms Single Market legislation at the European Parliament has surprisingly survived familiar industry attacks. In many ways, the most important regulation of internet infrastructures comes from the shared norms generated and diffused through the multistakeholder processes of global internet governance, which are very influential on policies and practices around the world. Net neutrality is making headway as a principle within the

collective deliberations between public, private, civil society, and academic representatives that take place within these bodies, such as the model framework being developed by the Dynamic Coalition on Network Neutrality at the Internet Governance Forum.

The ideas of openness, fairness, and equality articulated in net neutrality can be a powerful foundation upon which to understand other internet policy issues, too. Net neutrality is typically narrowly understood to apply only to the way ISPs manage their networks—and usually only how consumer ISPs connect to end-users, excluding connections with transit ISPs and backbone providers. However, that is beginning to change as more attention is paid to the net neutrality implications of other aspects of internet infrastructure, such as peering agreements between ISPs and/or content providers, the operation of content delivery networks (CDNs), and the placement of data centers. Net neutrality is also increasingly being seen as part of a larger normative project to apply to any intermediary that plays a gatekeeping role in access to information and communication, including other 'platforms' like search engines, social networking sites, and media hosting services. Net neutrality should further be seen as closely related to issues of surveillance, intellectual property, corporate ownership, and digital divides. Prominent examples include the ongoing revelations of NSA spying by Edward Snowden, the SOPA/PIPA uprising in 2011-2012, the further concentration of the broadband market, and the persistent unevenness of internet access both nationally and globally—all of which either

reveal or give rise to increased interference with what we do on the internet and a distinct lack of neutrality. While there is no such thing as a truly 'neutral' network, net neutrality remains an important conceptual vehicle through which to address the necessity of equitable access and participation online.

5. Net neutrality is not dead yet.

The reports of net neutrality's death have been greatly exaggerated—or at least premature. Sure, the heart of the FCC's old Open Internet rules was torn out in the *Verizon* case and Chairman Wheeler's plan for new rules would corrode rather than protect net neutrality. Things look bad—but nothing is settled yet. With fits and starts, net neutrality is gaining momentum in other countries and in transnational governance, a contrast that could serve as leverage in the US debate. There are also other avenues for implementing net neutrality in the US (although they come with severe tradeoffs). And the FCC's new Open Internet proceeding has only just begun.

The FCC remains the most important site to address net neutrality within the US, but, regardless of what the agency says, its current course of action is not net neutrality. The new Open Internet proposal would only stop preferential treatment

that is deemed “commercially unreasonable”—conditions based in the private interests of the marketplace, not public values of democracy. According to reports, Wheeler’s Open Internet plan explicitly allows for the discriminatory models of pay-to-play and specialized services detailed above and deals with violations only on a case-by-case basis after the fact, not to mention that it still doesn’t extend proper protection to mobile broadband networks. The root of the whole net neutrality problem at the FCC—underlying both the old Open Internet rules and the new—is the agency’s definition of broadband as an information service, which prioritizes the private property rights of ISPs over the public free speech rights of users. The FCC’s current information service framework for broadband regulations not only enables but—as confirmed by the DC Circuit in the *Verizon* case—presupposes discrimination. Net neutrality is fundamentally based in the universality and nondiscrimination tradition of common carriage but, unless it reclassifies broadband within the telecommunications service framework, the FCC legally can’t treat ISPs as common carriers. Therefore, no matter what Open Internet rules the FCC passes, there will be no meaningful net neutrality without reclassification as common carriage. Reclassification and real net neutrality is what public interest advocates have been pushing for and, as the comment period for the FCC’s new Open Internet proposal begins on May 15, they are gearing up for a major campaign to engage the public in the process. Massive citizen pushback against hollow Open Internet rules may be net neutrality’s last hope.