

The Importance of Net Neutrality to Research Libraries in the Digital Age

Kristen Riccard, Law and Policy Fellow, ARL

Introduction: The Internet at a Crossroads

The Web is comparable, from the readers' viewpoint, to both a vast library including millions of readily available and indexed publications and a sprawling mall offering goods and services. From the publishers' point of view, it constitutes a vast platform from which to address and hear from a world wide audience of millions of readers, viewers, researchers, and buyers... Publishers include government agencies, educational institutions, commercial entities, advocacy groups, and individuals.

—*Reno v. ACLU*, 521 U.S. 844 (1997).

The US Supreme Court's characterization of the web as an enormous library and a platform for speech illuminates the early enthusiasm and hope for social benefit that our nation placed in the Internet. But today, many believe that the future of the Internet is at a crossroads—one that requires a reexamination of the Internet's current purpose and an evaluation of the role it should play going forward. This crossroads has sparked the "net neutrality" debate, and the outcome will determine whether the Internet continues to remain a platform for all to share and access information or becomes more of a commercial commodity where the deepest pockets receive the greatest benefits.

"Net neutrality" is the principle that Internet users should have the right to access and provide content and use services via the Internet as they wish, and that network operators should not be allowed to "discriminate"—slow, block, or charge fees—for Internet traffic based on the source or content of its message. As a result of developments in Internet technology, network operators now have the ability to discriminate among traffic and can choose to slow or block the flow of

traffic that they believe competes with their own services and content. Thus, the net neutrality debate centers on whether it is time to enact legal principles to protect the open Internet. While network operators assert that there is no need to enact such regulation or law, the evidence indicates that the threats against maintaining a free and open Internet continue to grow.

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Ensuring a free and open Internet is critical to research libraries and the patrons they serve because the ability to access, produce, and distribute content and services over the Internet is central to the mission of libraries. The preservation of a free and open Internet will be essential for libraries to achieve their goal of offering innovative services and providing their patrons with effective access to information over the Internet in

support of research, teaching, and learning. ARL, in partnership with the American Library Association, EDUCAUSE, and the Open Internet Coalition, has been actively supportive of net neutrality by filing numerous comments with the Federal Communications Commission (FCC), attending meetings with FCC staff, and tracking congressional action on this issue.

Network Neutrality: A Principle to Preserve the Free and Open Internet

A simple way to understand the importance of net neutrality is to consider how the communications providers might function in its absence. One need not look far but only to another communications market: cable television. In the cable television market, network providers determine which content is aired, how much to charge consumers for channel options, and the cost of providing a show on their network. The ability of Internet service providers (ISPs) to serve as similar “gatekeepers” of the open Internet—determining when and at what price content is shared over the Internet—will threaten the unique benefit that the Internet provides: a free and accessible platform for all to speak and contribute.

Net neutrality was a founding principle of the Internet’s original architecture. Under the initial business model of the Internet, network owners charged consumers for Internet access but could not discriminate based on the type of content or service transmitted by end users. Thus, it is said that innovation occurs at the edges of the Internet by end users. This open structure also promotes consumer choice. For example, the creators of Skype, Google, and

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eBay tested the utility of their applications directly with consumers via the open Internet without first paying significant costs for transmission or negotiating with network operators. These applications resulted in huge market success, consumer benefit, and encouraged further innovation in Internet services.

Now, however, network operators can, if they choose, manage networks to promote certain websites, services, and applications, while blocking or slowing others. They may seek to prioritize their own services and slow the transmission of competing traffic or attempt to increase profits by charging individual and institutional users based on the content and services they use. ISPs may not charge

users directly to view websites but rather charge service and content providers for access to end users of the Internet. These providers will then pass those costs along to end users in the form of price hikes or new charges to view content. The codification of net neutrality principles will ensure that network operators, which offer Internet access directly to the general public, do not engage in discriminatory practices that inflate prices and stifle innovation on the Internet.

The goal of net neutrality is to ensure that citizens have a public platform to interact; thus, it makes sense that net neutrality rules apply to network operators that provide broadband Internet access directly to the general public. In contrast, operators of "private networks"—such as university networks, libraries, coffee shops, and retail establishments—should not be subject to such rules because they do not provide Internet access to the public at large. Private network operators manage closed networks designed to serve the particular interests of their patrons. The FCC has long held that operators of private networks shall not be subject to the same regulations as commercial ISPs, and there is no indication that the FCC believes it is necessary to apply net neutrality to principles to entities other than commercial providers that offer broadband Internet access to the general public.¹

The Cost of Success: How Developments in Internet Technology Created the Current Threat to Net Neutrality

A primary reason why net neutrality has become an issue in recent years results from technological changes in the delivery of Internet services. During the days of dial-up service, providers were subject to certain "common carrier"

requirements under the Communications Act of 1996² that continue to apply to operators of phone lines. One such requirement is that all such traffic must pass over the telecommunications lines impartially and without interference of network operators. Today, however, most Internet access is received via cable, DSL, and wireless technologies—broadband Internet access that is not over telecommunications lines—and providers of broadband access are not subject to the same “common carrier” rules as telecommunications service providers. Thus, federal law no longer guarantees the preservation of a free and open Internet the way it did when Internet access was delivered via telecommunications lines.

A second reason why net neutrality is no longer protected in the broadband Internet market stems from developments in network management technology. During the advent of the Internet, network operators were unable to distinguish details in the content that end users transmitted over networks. Now, through the development of “deep packet inspection” technologies, ISPs can look at the source of Internet content and inspect and shape each packet of information sent over their network. With this technology, ISPs “suddenly know a whole lot more about their users and their traffic. They also gain the ability to block, shape, monitor, and prioritize that traffic—in any direction.”³ This technology, combined with the fact that more network providers offer cable TV and phone service in addition to Internet access, means that ISPs can and have an incentive to slow or “throttle” Internet content that competes with their own services.⁴

A View from Washington: Agency and Congressional Efforts to Maintain Network Neutrality

In 2005, after recognizing the growing threat to the Internet’s open architecture, the FCC developed the *Internet Policy Statement*⁵ that lists four principles of an open Internet. These principles are often summarized as (1) any lawful content, (2) any lawful application, (3) any lawful device, and (4) any provider. However, the FCC did not write the 2005 *Internet Policy Statement* into regulation at the time of creation. As such, in 2009, FCC Chairman Julius Genachowski issued a *Notice of Proposed Rulemaking* (NPRM) seeking to codify the four open Internet principles as well as two additional principles of (1) transparency and (2) non-discrimination—the lynchpins of net neutrality.⁶

Unfortunately, the FCC suffered a huge setback in this rulemaking process in

2010, when the DC Circuit Court of Appeals held that the FCC lacked the authority to enforce net neutrality principles against network operators who provide broadband access. In *Comcast v. FCC*,⁷ the court held that the FCC lacked authority because (1) broadband providers were not common carriers but rather “information service” providers and (2) the FCC also lacked any “ancillary authority” under Title I of the Communications Act to enforce the principles.⁸

After the *Comcast v. FCC* ruling, the FCC has considered different possibilities to enforce net neutrality principles. The FCC originally considered agency reclassification of broadband providers under Title II of the Communications Act, which would have allowed the FCC to enforce the certain common carrier requirements against network operators who offer broadband Internet access. However, facing strong opposition from networks surrounding reclassification—for fear that they may become subject to additional regulations—Chairman Genachowski announced on December 1, 2010, that he would introduce a proposal for net neutrality regulation under Title I ancillary authority. The FCC continues to assert its authority to enact net neutrality rules under Title I ancillary authority, but its NPRM rests this authority on slightly different grounds than were asserted in *Comcast v. FCC*. The Chairman also welcomed any action by Congress related to a net neutrality statute. The library community should continue to monitor how this issue resolves itself in Washington because it will directly impact libraries’ ability to effectively support research, teaching, and learning.

Timeline of Net Neutrality Rulemaking

September 2005	FCC publishes the <i>Internet Policy Statement</i> containing the four open Internet principles.
January 2008	FCC auctions a block of wireless spectrum requiring any purchaser to adhere to the principles of the <i>Internet Policy Statement</i> .
September 2009	FCC Chairman Julius Genachowski adds the non-discrimination and transparency principles to the original four <i>Internet Policy Statement</i> principles.
October 2009	FCC issues a <i>Notice of Proposed Rulemaking</i> on the issue of codifying the six open Internet principles.
April 2010	DC Circuit Court ruled that FCC lacked authority to impose net neutrality principles in the case <i>Comcast v. FCC</i> . The FCC appeals the case to the Supreme Court.

FCC's Current Plan for Net Neutrality Rules

- On December 1, 2010, FCC Chairman Genachowski announced his plan to circulate a proposed net neutrality rule that will be voted on by the FCC during its December 21, 2010, open meeting.⁹
- The proposal would:
 - Prohibit networks from blocking users' right to access to lawful content and applications
 - Prevent wireline companies from engaging in "unreasonable discrimination," and prevent wireless companies from blocking lawful websites
 - Require transparency in network management practices for wireless and wireline providers
- The FCC will continue to assert its authority over Internet service providers and plans to offer additional grounds for authority beyond those claimed in *Comcast v. FCC*.
- On December 21, 2010, the FCC will vote on the proposed net neutrality rule, which requires a three-person majority to pass. This majority would likely be the three democratic Commissioners: Julius Genachowski, Michael J. Copps, and Mignon Clyburn.¹⁰

Three Reasons Why Net Neutrality Is Critical to the Mission of Research Libraries

1. A Free and Open Internet Is Vital to Libraries' Mission to Promote Intellectual Freedom and the Democratic Process

Libraries serve the public interest and further democracy by providing access to information, connecting the voices of faculty and students, and creating a more informed citizenry—efforts that are all further enhanced through the use of the Internet. As the FCC stated in its NPRM, with the advent of the Internet, "the possibility of using technology to create a more transparent and connected democracy has never seemed so bright."¹¹ Similarly, Congress noted that the Internet "offer[s] a forum for a true diversity of political discourse, unique opportunities for cultural development, and myriad avenues for intellectual activity."¹² Libraries have long been champions of intellectual freedom and the democratic process, and it is well recognized that the open Internet serves as a platform for these values.

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Despite the Internet's potential social benefit, a central democratic tenet made possible by the Internet—the ability of educators, librarians, non-profit institutions, and members of the public to voice ideas on par with commercial entities—is in jeopardy if we do not enact safeguards to protect its open structure. The democratic platform provided by the Internet and promoted by libraries will be undermined if network operators are allowed to serve as gatekeepers that can unilaterally decide which content should be relegated to “slow lanes,” or completely block access to original, competing, or non-profit voices.

2. Research Libraries Depend on Access to Diverse Content Offered on the Open Internet to Serve Their Patrons

A primary goal of research libraries is to collect, manage, and provide effective long-term access to information and resources in support of research, teaching, and learning. In an increasingly digital world, libraries can only realize this goal if they have access to the diverse content offered over the Internet. Today, much of the new content and services that individuals and institutions develop is available solely or primarily in a digital format on the open Internet. These services and content range from YouTube videos, to data collection sets in open access repositories, to digital versions of political speeches, and much of this traffic requires significant bandwidth for transmission. Libraries and their users need access to a diverse range of content and services to fulfill their academic and research endeavors, and network operators should not be allowed to preemptively define the set of information that consumers use for educational and research purposes.

If network operators are allowed to charge tolls for bandwidth, the effect will be to stifle innovative content and services, as well as potentially limit use of information currently offered over the Internet. In the absence of a non-discrimination rule, network operators could charge different prices for the bandwidth required to deliver content and services to end users. This scenario would result in a “pay to play” environment, where the entities with the most financial resources have access to the users, while others are limited in their ability to provide content and services to consumers. Such an environment would effectively chill speech and limit the availability of new resources to libraries and their patrons.

Similarly, network operators might charge end users or content providers for access to particular sites or block access to some sites completely. This scenario

would be increasingly likely to play out where such traffic competes with the network operator's own content and services—such as voice and video services offered over broadband Internet access. The danger of discrimination is compounded when network operators engage in such behavior without transparently informing their costumers. Without both non-discrimination and transparency requirements, libraries and their patrons might not even know of the myriad content and services that they are unable to access.

3. Research Libraries Provide Content and Services that Require Quick and Dependable Transmission to End Users

In addition to their role as consumers of Internet resources, research libraries are also prolific providers of content, services, and applications to the general public. Research libraries create and maintain digital data collections, which according to the National Science Foundation, “are at the heart [of] fundamentally new approaches to research and education.”¹³ Additionally, research libraries have developed mobile applications that allow wireless device users to obtain access to library websites and their digital collections from a mobile wireless platform. Finally, research libraries dedicate significant time, money, and staff to provide access to electronic resources, which they then make available to students, researchers, faculty, and oftentimes the public.

However, the effort spent in creating a digital library environment is worthwhile only to the extent that patrons can access such resources for useful purposes. Many off-campus users depend on a reliable and unfettered cable or DSL Internet connection to access digital library collections. If providers prioritize traffic based on which entities are willing to pay the most to deliver content over the public Internet, research libraries and universities could be harmed because they do not have the resources to compete with other commercial entities. Such a system would not only harm libraries from an economic and practical standpoint but would compromise research activities and academic endeavors.

Conclusion: Net Neutrality as a Means to a Library's End Goal

The maintenance of a neutral network on the public Internet is critical to research libraries because it will ensure an environment in which libraries,

higher education institutions, and individuals can allow their ideas, opinions, and academic endeavors to flourish. A neutral network is a prerequisite for the free flow of information, and the codification of network neutrality principles will promote and encourage further innovation over the Internet. The collection and distribution of online library resources depends first on the library's ability to access the content and second on the ability transmit that information to end users—a system premised on a free and open Internet.

- ¹ See Telecommunications Act of 1996, 47 U.S.C. § 153(46) (2006) ("The term 'telecommunications service' means the offering of telecommunications for a fee *directly to the public*, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.") (emphasis added); see also *Framework for Broadband Internet Services*, GN Docket No. 10-127, Notice of Inquiry, 25 FCC Rcd 7866, 17909-10, para. 107 (2010) ("Nor do we intend here to address or disturb our treatment of services that are not sold by facilities-based Internet service providers to end users in the retail market....").
- ² Telecommunications Act of 1996, 47 U.S.C. § 153 (1996).
- ³ Nate Anderson, "Deep Packet Inspection Meets 'Net Neutrality, CALEA,'" *Ars Technica*, July 25, 2007, <http://arstechnica.com/hardware/news/2007/07/Deep-packet-inspection-meets-net-neutrality.ars/>.
- ⁴ For example, a network operator has the technology to determine whether traffic sent over its network is coming from the Hulu television website, and could interfere with the transmission of such traffic because it competes directly with Comcast's cable television services.
- ⁵ See *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Policy Statement, 20 FCC Rcd 14986, 14987-88, (2005) (*Internet Policy Statement*).
- ⁶ *Notice of Proposed Rulemaking*, Broadband Industry Practices, GN Docket No. 09-191, WC Docket No. 07-52, released Oct. 22, 2009. (FCC 09-93). (NPRM).
- ⁷ 600 F.3d 642 (2010).
- ⁸ *Id.*
- ⁹ "Federal Communications Commission Chairman Julius Genachowski Remarks on Preserving Internet Freedom and Openness," Federal Communications Commission, Dec. 1, 2010, http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1201/DOC-303136A1.pdf.
- ¹⁰ For information about all five FCC Commissioners, see "FCC Commissioners," Federal Communications Commission, <http://www.fcc.gov/commissioners/>.
- ¹¹ See NPRM, par. 75 (quoting THE KNIGHT COMMISSION, *INFORMING COMMUNITIES: SUSTAINING DEMOCRACY IN THE DIGITAL AGE* 28 (Oct. 2009) (KNIGHT COMMISSION, *INFORMING COMMUNITIES*), <https://secure.nmmstream.net/anon.newmediamill/aspen/kcfinalenglishbookweb.pdf>).
- ¹² 47 U.S.C. § 230(a)(3).
- ¹³ National Science Board, *Long-Lived Data Collections: Enabling Research and Education in the 21st Century* (Arlington, Virginia: National Science Foundation, 2005), 9, <http://www.nsf.gov/pubs/2005/nsb0540/>.

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