Before the FEDERAL COMMUNICATIONS COMMISSION Washington, DC 20554

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In the Matter of Protecting and Promoting the Open Internet

GN Docket No. 14-28

Comments of

American Association of State Colleges and Universities American Council on Education American Library Association Association of American Universities Association of College & Research Libraries Association of Public and Land-grant Universities Association of Research Libraries Chief Officers of State Library Agencies Council of Independent Colleges EDUCAUSE And Modern Language Association

July 18, 2014

EXECUTIVE SUMMARY

Libraries and institutions of higher education depend upon an open Internet to carry out their missions and to serve their communities. Our organizations are extremely concerned that broadband Internet access providers that offer services to the general public (i.e., public broadband Internet access providers) currently have the opportunity and financial incentive to block, degrade or discriminate against certain content, services and applications. We thus support strong, enforceable policies and rules to protect and promote an open Internet.

The specific proposals in the Notice of Proposed Rulemaking (NPRM) fall short of what is necessary to ensure that libraries, institutions of higher education and the public at large will have access to an open Internet. It proposes different rules for fixed and mobile broadband access when there is no technological reason to do so. Furthermore, the proposed rules appear to endorse individually-negotiated contracts that could grant some users expedited transmission and prioritized content, thereby relegating nonprioritized users to a "slow lane."

In these comments, we suggest ways to strengthen the proposed rules and ensure that they preserve an open Internet for libraries, higher education and the communities we serve. For instance,

- the proposed open Internet rules should explicitly apply to public broadband Internet access service provided to libraries, institutions of higher education and other public interest organizations;
- the rules should prohibit "paid prioritization;"
- the proposed rules should be technology-neutral and should apply equally to fixed and mobile services;
- the Federal Communications Commission (FCC) should adopt a re-defined "noblocking" rule that bars public broadband Internet access providers from interfering with the consumer's choice of content, applications, or services;
- the FCC should strengthen the disclosure rules; and
- the proposed ombudsman should be charged with protecting the interests of libraries and higher education institutions and other public interest organizations, in addition to consumers and small businesses.

Regarding the scope of the proposed rules, the FCC should clarify that its rules only apply to those network providers that offer service to the general public and do not apply to private networks that do not serve the general public or to end user Wi-Fi provided by coffee shops, libraries and colleges and universities.

The FCC has all necessary authority to implement open Internet rules sufficient to protect and promote the openness of the Internet. Title II reclassification would provide valuable certainty to the marketplace and place public broadband Internet access service on an equal regulatory footing with other communications services. In the alternative, we agree with the FCC that enforceable rules could be created under its Section 706 authority. We have serious reservations, however, about the viability of the proposed "commercially reasonable" standard. If the FCC chooses to implement open Internet rules under Section 706, it should craft a different standard that reflects the unique character of the Internet as an open platform for innovation, freedom of speech, research and learning, which we suggest could be called an "Internet reasonable" standard.

Table of Contents

	<u>Page</u>
I. Introduction	1
II. The FCC Should Specifically Recognize the Importance of an Open Internet for Research, Education, the Free Flow of Information, and Other Public Interest Benefits Provided by Institutions of Higher Education and Libraries.	4
A. From Its Inception in University Laboratories, the Internet Was Created In a Higher Education Culture that Values Openness, Research, Learning and Freedom of Expression, and the FCC Should Seek to Preserve These Foundational Characteristics of the Internet.	4
B. Libraries and Higher Education Bring the Benefits of the Internet to Segments of the Population that May Not Be Served by the Commercial Sector.	5
C. Higher Education and Libraries Are at the Forefront of Internet Innovation.	7
D. The Final Order in this Proceeding Should Recognize the Value of the Internet for Research, Learning, Education and Freedom of Speech.	10
III. The FCC Should Design Strong Open Internet Rules to Preserve the Unique and Vitally Important Character of the Internet to Promote Research, Learning, Education and the Free Flow of Information.	10
A. The Scope of the Rules Should Cover All Institutions that Serve the Public Interest, Including Higher Education and Libraries.	10
B. The Commission Should Prohibit Paid Prioritization.	12
C. The Scope of the Rules Should Clearly State that the Open Internet Rules Do Not Apply to Private Networks or End Users.	13
D. The Rules Should Be Technology-Neutral.	14

E. The FCC Should Clarify the Disclosure Rules to Ensure that Information about Data Caps and Bandwidth Speeds are Displayed Prominently and Clearly to Consumers and Edge Providers.	15
F. The FCC Must Establish a Firm "No Blocking" Policy for Both Mobile and Fixed Broadband Providers, and the Policy Should Focus on the End User Perspective.	16
G. The Commission's Enforcement Ombudsperson Should Be Authorized to Act as a Watchdog for Libraries and Higher Education.	20
IV. The Commission Has All Necessary Authority to Implement Open Internet Rules Sufficient to Preserve the Character of the Internet as an Open Platform for Education, Research and Free Speech.	20
A. Re-Classifying Public Broadband Internet Access Service as a Title II Common Carriage Service Offers a Strong, Certain Path to Preserving an Open Internet.	20
B. Section 706 Offers an Effective Path to Preserving an Open Internet If Based on an "Internet Reasonable" Standard.	21
V. Conclusion	26
Appendix A: Net Neutrality Principles	30
Appendix B: About the Organizations	34

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I. Introduction

The American Association of State Colleges and Universities (AASCU), the American Council on Education (ACE), American Library Association (ALA), the Association of American Universities (AAU), the Association of College & Research Libraries (ACRL),

the Association of Public and Land-grant Universities (APLU), the Association of Research Libraries (ARL), the Chief Officers of State Library Agencies (COSLA), Council of Independent Colleges (CIC), EDUCAUSE and the Modern Language Association (MLA)¹ welcome the opportunity to submit these comments in response to the Notice of Proposed Rulemaking (NPRM) in this proceeding² to protect and promote the open Internet.³

Our nation's libraries and institutions of higher education are leaders in creating, fostering, using, extending and maximizing the potential of the Internet for research, education and the public good. Libraries and institutions of higher education⁴ depend upon an open Internet to fulfill their missions and serve their communities.

Our organizations are thus extremely concerned with the current void in policies to protect the openness of the Internet. As a result of the D.C. Circuit Court of Appeals decision in *Verizon v. FCC*,⁵ there are currently no rules or policies in effect to guard against blocking or discriminatory behavior by broadband Internet access providers. Broadband providers that serve the general public (which we refer to herein as "public broadband Internet access providers") currently have the financial incentive and the opportunity to sell higher priority access to certain content providers and discriminate

² FCC 14-61, released May 15, 2014.

³ Many of the signatories to these comments representing institutions of higher education and libraries published our key Net Neutrality Principles for protecting and promoting the open Internet on July 10, 2014 (attached as Appendix A). We recommend these Principles as a framework for resolving many of the issues in this proceeding. These comments offer more detailed suggestions regarding some of the specific questions raised in the NPRM.

⁴ While our comments reflect the views of the libraries and higher education organizations, we note that governmental organizations, K-12 education, community-based organizations and other similar organizations whose missions are to serve the public interest benefit from an open Internet as well.

⁵ Verizon v. FCC, 740 F.3d 623 (D.C. Cir. 2014)("Verizon").

¹ Brief descriptions of each of these organizations are contained in Appendix B.

against other providers who do not have the resources to pay for enhanced access. Allowing public broadband providers to degrade or discriminate against library or higher education content jeopardizes our institutions' ability to fulfill our public interest missions and educational goals.

Our organizations strongly urge the FCC to adopt enforceable rules that ensure an open Internet. We believe that the FCC has all necessary authority to establish such rules. Title II provides valuable certainty to the marketplace and places public broadband Internet access service on an equal regulatory footing with other communications services. If Title II reclassification is not feasible, however, the FCC should craft enforceable rules using its authority under Section 706. We have serious reservations, however, about the viability of the "commercially reasonable" standard proposed by the Commission. As we explain in more detail below, the FCC should adopt a standard that reflects the unique character of the Internet as a platform for innovation, free speech, research and education, which we suggest could be called the "Internet reasonable" standard.

Our comments proceed as follows:

- First, these comments will explain why protecting and promoting an open Internet is so vitally important to the missions of institutions of higher education and libraries and to the students, teachers, researchers, library patrons and the communities that these institutions serve.
- Second, these comments will discuss some of the specific proposals raised in the NPRM and will suggest alternate approaches to some of the key issues that are necessary to protect and promote an open Internet for entities that serve the public interest, such as libraries and institutions of higher education.
- Third, these comments will discuss the legal basis for the FCC's actions to protect and promote the open Internet in the wake of the Court of Appeals decision. In particular, we will discuss the merits of Title II reclassification, as well as an "Internet reasonable" standard under Section 706.

II. The FCC Should Specifically Recognize the Importance of an Open Internet for Research, Education, the Free Flow of Information, and Other Public Interest Benefits Provided by Institutions of Higher Education and Libraries.

High-capacity broadband is the key infrastructure that libraries, community colleges, public and private colleges and universities, and many other institutions need to carry out their public interest missions. These institutions rely on open Internet access both to retrieve and contribute content on the World Wide Web. In fact, the public interest missions of libraries and institutions of higher education are highly intertwined with the Internet. The democratic nature of the Internet as a neutral platform for carrying information and research to the general public is strongly aligned with the public interest missions of libraries and higher education.

Unfortunately, the NPRM does not give sufficient recognition to the value of the Internet for education, learning, research and other public services. While the NPRM properly describes the importance of the Internet for innovation and commerce, the educational and public interest benefits of an open Internet are just as important.

This section of these comments provides an overview of the Internet-based services and content that libraries and institutions of higher education provide to their communities and explains why the FCC should incorporate our institutions' perspective into its open Internet rules.

A. From Its Inception in University Laboratories, the Internet Was Created In a Higher Education Culture that Values Openness, Research, Learning and Freedom of Expression, and the FCC Should Seek to Preserve These Foundational Characteristics of the Internet.

The initial protocols for the Internet were developed by institutions of higher education, and universities were the first to deploy private high-speed data networks that formed the test-bed for what later became the public Internet.⁶ The Internet arose out of the

⁶ There are several papers that document the role of university professionals in creating the protocols that developed into what we know as the Internet today. One brief summary of these

same university mindset that promotes the open exchange of information, intellectual discourse, research, free speech, technological creativity, innovation and learning. This essential character of the Internet as an open platform should be preserved by the FCC. Incorporating these principles into treatment of Internet access is especially important in today's age when Internet access is provided by commercial companies. Internet openness is an essential driver of the "virtuous circle" that both the FCC and the federal court have recognized as the engine for Internet development. The unimpeded flow of knowledge, information, and interaction across the Internet enables the circle of innovation, user demand, and subsequent broadband expansion that have generated the dramatic social, cultural, and economic benefits acknowledged by the Commission, the courts, and the nation as a whole.

B. Libraries and Higher Education Bring the Benefits of the Internet to Segments of the Population that May Not Be Served by the Commercial Sector.

An open Internet is especially important for libraries to serve the needs of the most vulnerable segments of our population, including those in rural areas, unemployed and low-income consumers, and elderly and disabled persons. Public libraries specialize in providing Internet access to *all* people, especially the roughly one-third of people who do not have broadband access at home. Local public libraries offer the *only* no-fee public Internet access in over 60% of all communities.⁷ The general public depends upon the availability of open, affordable Internet access from their local libraries to complete school homework assignments, locate e-government services, research family histories, find health information, learn from job-training videos and apply for jobs, download streaming media, upload and share their own digital content, and more. The nation as a whole benefits when libraries and their patrons have access to open, high-speed, online information and services. Two-thirds of public libraries report they would like to

efforts is available at <u>http://www.internetsociety.org/internet/what-internet/history-internet/brief-history-internet</u>.

⁷ See, <u>http://www.plinternetsurvey.org/analysis/public-libraries-and-community-access</u>.

increase their broadband speeds, largely driven by community demand for high-speed wired and Wi-Fi Internet access and the services enabled by this library broadband infrastructure.⁸

Similarly, colleges and universities make Internet access available to their entire student bodies, faculty, researchers and administrators. Higher education institutions make the Internet accessible and plentiful so that it provides a foundation for Internet-based learning and experimentation. College students who may not have broadband at home are able to develop a familiarity with the Internet on campus that they can take with them to their jobs, their families and their lives after college. Furthermore, the majority of college students live off-campus, which means that students rely on the availability of the public Internet for access to (increasingly media-rich) courses and learning resources, academic and student support, faculty and peer collaboration, and more.

This is particularly the case for the rapidly growing population of students in distance learning or hybrid⁹ courses, where all or a significant portion of the learning process takes place away from campus. Distance learning and hybrid courses increase higher education access, making it possible for adult learners and other students to pursue their academic goals when a traditional, campus-based academic experience might make that infeasible. However, such courses and programs also make those students' learning experience highly dependent on high-bandwidth Internet access. Online courses rely more and more on multi-media resources, adaptive learning applications, and dynamic simulations for interactivity, engagement, and subsequent learning success. Just as degradation of Internet transmission speed can make an online video or video game for personal entertainment unwatchable or unplayable, such degradation

⁸ Institute of Museum and Library Services Public Hearing: "Libraries and Broadband: Urgency and Impact". See transcript at <u>http://www.imls.gov/about/broadband_hearing.aspx</u>.

⁹ In "hybrid courses," students learn in the classroom for part of the course time while learning online for other portions of the course time. For example, a hybrid course might have students attending class on campus once a week while learning via online modalities for the remainder of the course time that week.

could easily frustrate a learning experience utilizing online video, simulations, and so forth, with dire implications for the student, family, community, and our country, writ large.

C. Higher Education and Libraries Are at the Forefront of Internet Innovation.

Libraries and higher education institutions have been leaders in developing innovative uses of Internet bandwidth and new learning methodologies from the Internet's inception. Today, higher education institutions use the public Internet to advance learning (both in class and at a distance, including innovations such as massive open online courses, or MOOCs), research (especially around "big data"), Digital Humanities¹⁰ and scholarly collaboration. Higher education specializes in developing innovative online learning services, such as multimedia instructional resources, dynamic simulations, and cloud computing capabilities.

Libraries have been among the most innovative Internet users and generators of online content. Virtually every library across the country now provides broadband services to its patrons at no charge, and 98% of public libraries provide wireless (Wi-Fi) access as well. Library patrons are constantly using the Internet to take advantage of educational services, remote medical services, job-training courses, distance learning classes, access to e-government services, computer and technology training, and more. Furthermore, librarians specialize in collecting and hosting robust databases of information, digitizing unique community artifacts and records, engaging community conversations through social media, developing innovative media, and preserving the free flow of information and research over the public Internet for all people.

¹⁰ For a brief introduction into the new field of Digital Humanities , please see "A Guide to Digital Humanities" provided by Northwestern University, available at <u>http://sites.library.northwestern.edu/dh/</u>.

Below are some specific examples of projects and services that highlight our institutions' value in providing access to information and the importance of the open Internet in disseminating such information.¹¹

- The National Library of Medicine (NLM), the world's largest medical library, provides a vast amount of information-based services, ranging from video tutorials to downloads of large genomic datasets. NLM provides valuable information and data to the public amounting to trillions of bytes each day disseminated to millions of users. Without rules to protect the open Internet, NLM's ability to provide access to this important information would be jeopardized.
- Columbia University created the 9/11 Oral History Project, focusing on the aftermath of the destruction of the World Trade Center. The Project includes over 900 recorded hours on digital media. More than half of the Columbia collection is open and available to the public, and the entire archive will eventually be available for study and research. This content is currently used in New York K-12 public schools.
- After receiving over 2,500 boxes of records and documents and 12,000 promotional photographs from the New York World's Fair of 1939 and 1940, the New York Public Library (NYPL) digitized the content and makes it available online. It provided the material in a free app that was later named one of Apple's "Top Education Apps" of 2011 and is used in New York K-12 public schools.
- The Ann Arbor Public Library has produced and shared close to 150 podcasts featuring interviews from a local historian discussing the Underground Railroad, to a fifth-grader talking about library programs for kids her age, to Top Chef Steph. The library also hosts the Ann Arbor Film Festival Archive, among dozens of local history digital collections.
- The Iowa City Public Library encourages interest and awareness of local musicians with a digital collection of more than 100 albums by artists playing

¹¹ Additional examples of library and higher education uses of the open Internet are available here: <u>http://www.arl.org/storage/documents/publications/lt-pubint-nn13dec10.pdf</u>.

everything from electronica to children's music. The collection includes out-ofprint music and live shows.

- The North American Network of Science Labs Online (NANSLO) is an alliance of cutting-edge science laboratories that provide students enrolled in higher education science courses with opportunities to conduct their lab experiments on state-of-the-art science equipment over the Internet. From any computer, students can log into one of the labs' web interfaces and manipulate the controls on a microscope or other scientific equipment, participate in conversations with lab partners, ask for assistance from a knowledgeable lab technician in real time, and collect data and images for their science assignments. NANSLO makes it possible for students who cannot go to campus for a lab course because of their rural location or family and work obligations to still pursue a science degree.
- Scholars in the digital humanities from around the country are integrating historical documents and data sources with audio, video, and interactive simulations to provide students and the general public with online access to immersive learning experiences. For example, the University of Richmond's Digital Scholarship Lab has developed "Hidden Patterns of the Civil War," a collection of interrelated projects that use digital tools and digital media to provide interactive representations of Civil War era social, cultural, political, and economic developments. As another example, the University of California, Los Angeles Center for Digital Humanities maintains the Digital Karnak Project, which provides students, faculty, and the public with an online, interactive, three-dimensional virtual reality model of the ancient Egyptian temple site of Karnak accompanied by original videos, maps, and essays.
- nanoHUB serves as an online platform for nanotechnology research, education, and collaboration. The site hosts hundreds of online simulation programs for nanoscale phenomena. It also provides online presentations, courses, learning modules, podcasts, animations, teaching materials, and more. In addition, the site offers researchers a venue to explore, collaborate, and publish content, as well. Through nanoHUB-U, undergraduate and graduate students in engineering and applied sciences can access both instructor-led and self-paced courses incorporating online video and simulations, allowing them to obtain an essential grounding in the field.

D. The Final Order in this Proceeding Should Recognize the Value of the Internet for Research, Learning, Education and Freedom of Speech.

In principle, the higher education and library communities strongly value and support the open Internet as a fundamental cornerstone for preserving our democracy and enhancing freedom of speech in the information age. In practice, the education and library communities need an open, accessible Internet for "nuts and bolts" services – distance learning, telemedicine, access to e-government services, and many other essential community services. Educators and librarians are continuously developing new digital content, e-learning services and other teaching tools that depend on unfettered access to the Internet.

As mentioned earlier, the NPRM does not give sufficient attention to the Internet's importance to education, research and free speech. We urge the FCC to incorporate the needs of libraries and institutions of higher education into its rationale justifying its open Internet policies. In addition, we also provide some specific policy suggestions below.

III. The FCC Should Design Strong Open Internet Rules to Preserve the Unique and Vitally Important Character of the Internet to Promote Research, Learning, Education and the Free Flow of Information.

Our organizations suggest that the FCC make the following changes to its proposed rules to reflect the needs and interests of higher education and libraries.

A. The Scope of the Rules Should Cover Broadband Providers that Serve the Public and Institutions that Serve the Public Interest, Including Higher Education and Libraries.

The NPRM proposes to retain the same definitions and scope of the FCC's rules as were adopted in the 2010 Open Internet Order.¹² The definitions in the FCC's 2010 Open

¹² Preserving the Open Internet, GN Docket No. 09-191, WC Docket No. 07-52, Report and Order, 25 FCC Rcd 17905 (*Open Internet Order*).

Internet Order, however, do not clearly include all the entities that should be included. The definitions should include <u>all</u> libraries, higher education and other public interest organizations explicitly.¹³

The 2010 Open Internet Order applied the agency's open Internet rules only to "mass market" services, which it defined as:

a service marketed and sold on a standardized basis to residential customers, small businesses, and other end-user customers such as schools and libraries, including services purchased with support of the E-rate program.¹⁴

This definition needs to be clarified to ensure that the term "other end-user customers" *clearly* includes institutions of higher education and other institutions that purchase standardized broadband Internet access service.¹⁵ Certainly, institutions of higher education are not "residential customers" or "small businesses." There is some uncertainty about whether institutions of higher education (and their libraries) are included in the term "schools" because the term is sometimes interpreted as applying only to K-12 schools. The FCC should explicitly state that all libraries, colleges, universities and other public interest institutions that purchase standardized broadband

¹⁴ NPRM, para. 54.

¹³ In the proceedings leading up to the FCC's 2010 Open Internet Order, ALA, ARL and EDUCAUSE filed multiple comments to ensure that the needs of libraries, higher education and other public interest institutions were included in the FCC's policies. (See, e.g. *Ex parte* letter from ALA, ARL and EDUCAUSE in General Docket No. 09-191 and WC Docket No. 07-52, December 13, 2010.) While we were gratified that the FCC changed the definition of "end user" to include "schools and libraries", this language does not reflect the needs of all libraries, higher education and other public interest institutions in an open Internet, as we discuss in more detail below.

¹⁵ Note that the Online Competition and Consumer Choice Act introduced by Sen. Leahy (S. 2476) and Rep. Matsui (H.R. 4880) on June 17, 2014 both include the word "institution" in the definition of both "end user" and "edge provider," which recognizes libraries and higher education institutions' dual role as consumers and content providers.

Internet access service from public broadband providers¹⁶ are included in the term "other end-user customers, such as schools and libraries."

B. The Commission Should Prohibit Paid Prioritization.

We are especially concerned that public broadband Internet access providers now have the opportunity and financial incentive to provide favorable Internet service to certain edge providers or customers, thereby disadvantaging non-profit or public interest entities such as colleges, universities and libraries. For instance, public broadband providers could sell faster or prioritized transmission to certain entities ("paid prioritization"). Many institutions that serve the public interest, such as libraries, colleges and universities, may not be able to afford to pay extra fees simply for the transmission of their content and could find their Internet traffic relegated to chokepoints (the "slow lane") while prioritized traffic zips through to its destination. Paid prioritization inevitably favors those who have the resources to pay for expedited transmission and disadvantages those entities – such as libraries and higher education – whose missions and resource constraints preclude them from paying these additional fees.

Further, it is likely that those who *are* able to pay for preferential treatment will pass along their costs to their consumers and/or subscribers. In some cases, libraries and other public institutions may be among these subscribers who would then be forced to pay more for services they may broker on behalf of their patrons. Public libraries, for instance, subscribe to digital media services such as Hoopla, OverDrive, and Zinio, to provide access to video, audiobooks, e-books, and e-magazine titles.

¹⁶ As we explain further below, the proposed rules should only apply to those broadband providers that serve the general public, which we describe as "public broadband Internet access services providers" or "public broadband providers." The word "public" is in this context is intended to have a meaning similar to the definition of "telecommunications service," which is defined as "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.")

Finally, prioritizing some traffic over others would undermine one of the Internet's fundamental underlying principles – network operators are expected to use "best efforts" to deliver information to the end user. And from a broader perspective, traffic prioritization creates artificial motivations and constraints on the use of the Internet, damaging the web of relationships and interactions that define the value of the Internet for both end users and edge providers.

C. The Scope of the Rules Should Clearly State that the Open Internet Rules Apply to Public Broadband Providers and Not to Private Networks or End Users.

The FCC should also clarify the scope of the rules to ensure that they are not applied to private networks or end users. The *2010 Open Internet Order* correctly found that the open Internet rules should not apply to premise operators, such as individual consumers' home Wi-Fi connections or bookstores or coffee shops that provide wireless services to their patrons. (This provision is sometimes misleadingly called the "coffee shop exception.") While the Commission was correct to find that these end user activities should not be subject to open Internet rules, this list of services is not exhaustive. For instance, almost all libraries offer Wi-Fi connections to their patrons, and these end user Wi-Fi services should not be regulated as if they were public broadband providers. Also, many colleges and universities have their own private end-user networks (both on-campus and off-campus¹⁷) that are not available to the general public. The FCC should clarify that all private, end-user networks fall within the "coffee shop" exception and should not be subject to open Internet regulation.

There is no precedent or expectation that private networks or end users, whether large or small, should be subject to regulation; doing so in this proceeding would burden consumers such as libraries and institutions of higher education and discourage the

¹⁷ Some colleges maintain several different campuses and maintain private networks connecting these campuses. These networks are analogous to intra-corporate networks that connect branch offices of a multi-location business. Such networks serve the internal communications and broadband needs of their owners and should not be subject to these rules.

purchase and use of broadband Internet access services. There is substantial precedent in the law for treating private networks differently from networks available to the public.¹⁸

We believe that the NPRM intends to exclude private networks and end user activities from regulation, but we urge the FCC in its final rules to expand the list of end users as set forth above and to be absolutely clear that such private networks and end users (such as households, coffee shops, higher education institutions, or libraries) should be free to decide how they use the broadband services they obtain from public broadband Internet access service providers.

D. The Rules Should Be Technology-Neutral.

The 2010 Open Internet Order created separate rules for fixed and mobile services. The arguments for distinguishing between fixed and mobile service were not well founded in 2010 and are even less defensible today. Consumers and edge providers use fixed and mobile services interchangeably, often switching from one device to another to surf the web, send and receive email, post to Twitter accounts, use applications, download e-books, view lectures and listen to podcasts. The proliferation of 4G mobile networks makes it increasingly easy to upload and download data using mobile devices. Students, library patrons, faculty and researchers are increasingly dependent on using mobile devices. Mobile services will become even more prevalent in the future with the

¹⁸ See, *e.g.*, Section 103 of the Communications Assistance for Law Enforcement Act (CALEA), which specifically excludes "equipment, facilities, or services that support the transport or switching of communications for private networks or for the sole purpose of interconnecting telecommunications carriers." 47 U.S.C. § 1002(b)(2)(B). See also, "Common Carrier Regulation of Telecommunications Contracts and the Private Carrier Alternative," by Pitsch and Bresnahan, Federal Communications Law Journal, Vol. 48, Issue Three, June 1, 1996 (which reviews the FCC's history of treating several activities as "private," including satellite transponders, private land mobile radio services, and enhanced services, in part because they are not offered to the general public.)

advent of 5G technologies¹⁹ and as more spectrum is made available for commercial mobile services through the upcoming incentive auctions. We urge the FCC to think ahead to the enormous growth of mobile technologies and craft policies that anticipate the future. Broadband Internet policies should be independent of the connection technology (wired, wireless, satellite, fiber-optic, etc.) and open Internet rules should apply no matter which technology is used to access the Internet.

E. The FCC Should Clarify the Disclosure Rules to Ensure that Information about Data Caps and Bandwidth Speeds are Displayed Prominently and Clearly to Consumers and Edge Providers.

The NPRM proposes to enhance the transparency rules to give consumers, edge providers, the Internet community and policy-makers greater information about broadband Internet access providers' services and network management practices. Our organizations support these proposals. Consumers have a right to know the scope and quality of the services that they are purchasing, especially in light of the hundreds of complaints received by the Commission that the advertised bandwidth offerings may exceed the actual amount of provided bandwidth. Furthermore, public broadband providers are continually changing their network equipment, routing tables, and management practices, so any disclosures should be updated regularly. Requiring public broadband providers to make available the information about the actual scope and quality of the broadband services will allow regulators to hold providers accountable for their services and make sure that their actual services align with how providers describe them to end users of all types, including colleges, universities, and libraries.

Furthermore, the Commission should make sure that public broadband providers display this information in a standardized format so that consumers can compare different providers' services. While the NPRM cites examples of disclosure

¹⁹ "EU and South Korea to Develop 5G Mobile Network", Financial Times, June 16, 2014, available at <u>http://tinyurl.com/mhmgkkt</u>. ("For consumers, the EU suggests 5G mobile device users will be able to download a one-hour high-definition film in six seconds.")

requirements from the food, drug, credit card, appliance and mortgage industries, another useful analogy may be the disclosures required when purchasing an automobile. Just as car dealers must display basic information regarding the automobile (including miles per gallon, warranties, financing terms, and other features and functions), a public broadband Internet service provider should be required to disclose the bandwidth, latency, data caps, warranties, payment terms, termination penalties, and so forth.²⁰

F. The FCC Must Establish a Firm "No Blocking" Policy for Both Mobile and Fixed Broadband Providers, and the Policy Should Focus on the End User Perspective.

The NPRM proposes

to adopt the text of the no-blocking rule that the Commission adopted in 2010, with a clarification that it does not preclude broadband providers from negotiating individualized, differentiated arrangements with similarly situated edge providers (subject to the separate commercial reasonableness rule or its equivalent). So long as broadband providers do not degrade lawful content or service to below a minimum level of access, they would not run afoul of the proposed rule. We also seek comment below on how to define that minimum level of service. Alternatively, we seek comment on whether we should adopt a no-blocking rule that does not allow for priority agreements with edge providers and how we would do so consistent with sources of legal authority other than section 706, including Title II. [footnotes omitted]

In our view, the FCC must establish a no-blocking rule that is clear to public broadband Internet access providers, consumers and edge providers and that has a firm basis in legal authority. It is a bedrock principle of Internet openness that broadband providers

²⁰ The disclosure requirements should track the performance measurements in the FCC's "Measuring Broadband America" reports. See, <u>http://www.fcc.gov/measuring-broadband-america</u>.

should not be permitted to block consumers' access to lawful websites, applications or services. We support the FCC's effort to re-instate the no-blocking rule (though without tying it to the "commercially reasonable" standard, as we explain in more detail below).²¹

While we are pleased that the FCC proposes to re-instate the no-blocking rule vacated on appeal, we suggest that the FCC may need to redefine the nature of the service being offered in order to be consistent with the *Verizon* decision. The NPRM proposes to include a definition of a "minimum level of access" or a "minimum level of service", but doing so may be the exact opposite of the *Verizon* court's recommendation. ²² Rather than defining a minimum level of service, our reading of the court's decision is that FCC should take a broader view of the definition of the service that is being provided ("access to their subscribers generally") – a definition that would encompass both individually negotiated levels of service and a lower level "boundary" (not a mandated minimum).

Admittedly, there is ambiguity in the court's language, and it is not entirely clear in the *Verizon* court's discussion of this topic whether the relevant "service" is service to the end user/subscriber or to the edge provider. The FCC's proposed definition of "mass market" suggests that the relevant service is the service provided to the end

²¹ A rule that requires public broadband Internet access providers not to block access to lawful websites, applications and services does not on its own treat the provider as a common carrier. Broadband providers may still have the opportunity to negotiate individual arrangements or provide additional services to certain edge providers. A no-blocking policy simply directs the provider to allow access to the websites, applications or services *requested by the consumer*.

²² The key sentence from the *Verizon* decision is as follows: "Thus, if the relevant service that broadband providers furnish is access to their subscribers generally, as opposed to access to their subscribers at the specific minimum speed necessary to satisfy the anti-blocking rules, then these rules, while perhaps establishing a lower limit on the forms that broadband providers' arrangements with edge providers could take, might nonetheless leave sufficient 'room for individualized bargaining and discrimination in terms' so as not to run afoul of the statutory prohibitions on common carrier treatment." *Cellco*, 700 F.3d at 548.

user/subscriber, but the court's language implies that the relevant service is provided to the edge providers. In the context of the "no-blocking" rule, we suggest that the most relevant service is the service provided to the end user/subscriber. The service being provided is to connect the end user/subscriber to the Internet "cloud." For this purpose, there is no need to define a "minimum level of access or service" being "provided" to the edge provider. It is sufficient to say that a broadband provider may not block access to any lawful website, application or service chosen by the end user/subscriber, subject to reasonable network management.²³

The no-blocking rule, as defined by the choice of the end user/subscriber, does not run afoul of the statutory provision that bars broadband providers from being regulated as common carriers. Defined in that way, this type of "no-blocking rule" does not run the risk that a court would find it to be similar to a common carrier-like obligation to serve the public indiscriminately. Rather, a no-blocking rule defined as carrying out the will of the consumer simply says that, once a public broadband Internet access provider connects an end user/subscriber to the Internet "cloud", it cannot take affirmative steps to block a certain lawful web site, application or service that the consumer chooses to access from that "cloud". Rather than directing each public broadband provider to serve each individual website, application or service, such a no-blocking rule would simply say that the provider cannot block those edge providers connected to the Internet cloud from serving the requests the providers' subscribers have made of them.

To clarify the "no-blocking" rule and to avoid the risk of being overturned on appeal, the Commission should insert the end user's perspective into the "no-blocking rule", so that it would read as follows:

A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not block **an end user from accessing** lawful

²³ Defining the no-blocking rule in this manner, as a service provided to the end user/subscriber, also helps to justify the "no-blocking" rule separately from the rule concerning the treatment of edge providers, discussed below.

content, applications, services, or non-harmful devices, subject to reasonable network management.

Note that, unlike the 2010 Open Internet Order, the "no-blocking" rules should be applied equally to both fixed and mobile services.²⁴ The 2010 "no-blocking" rule for mobile devices was far weaker than the no-blocking rule for fixed services. The rule for fixed service prohibited blocking of "lawful content, applications, services, or non-harmful devices". The rule for mobile devices only applied to lawful websites and applications that compete with the providers' voice or video offerings. In other words, mobile providers were allowed to block services, non-harmful devices, and some applications as well (those that do not compete with their voice and video offerings).

The policy of differentiating between fixed and mobile technologies cannot stand up to scrutiny. As mentioned above, the technologies for mobile services are developing rapidly, and speeds of 4G mobile devices are already faster than the lowest level of fixed broadband service when the FCC first adopted its open Internet policies in 2005. Mobile services are expected to carry ten and hundred megabit levels in the near future. Furthermore, even if one were to accept the theory that mobile networks have greater technical constraints than fixed (with which we disagree), the no-blocking rule should be reasonably related to these technical differences. Instead, the no-blocking rule for mobile devices arbitrarily allows blocking of non-competing applications or services but not websites, with no showing that applications or services are more data-intensive or more difficult to manage than websites.²⁵ This directly inhibits consumer choice and

²⁴ As the NPRM notes, the 2010 Open Internet Order rule barred <u>fixed</u> providers from blocking "lawful content, applications, services, or non-harmful devices subject to reasonable network management. It prohibited <u>mobile</u> providers from blocking "consumers from accessing lawful websites," as well as "applications that compete with the provider's voice or video telephony services," subject to "reasonable network management." [footnotes omitted]. See NPRM, para. 21.

²⁵ In fact, the 2010 *Open Internet Order* found that the accessing lawful web sites generated much *more* traffic than services or applications, which indicates that applications and services create

competition, and undermines the FCC's stated policies that led it to require number portability from one device to another.

G. The Commission's Enforcement Ombudsperson Should Be Authorized to Act as a Watchdog for Libraries and Higher Education.

The NPRM proposes "the creation of an ombudsperson to act as a watchdog to represent the interests of consumers, start-ups and small businesses."²⁶ We agree that creating an ombudsperson could help enforce the open Internet policies. We simply request that the ombudsperson be vested with the responsibility to advocate for the interests of libraries, colleges and universities in addition to consumers, start-ups and small businesses. Because libraries, colleges and universities have limited budgets with which to serve collectively millions of people, they are in an especially vulnerable position if public broadband providers block or degrade their traffic. Including libraries and higher education in the charter of the ombudsperson's responsibilities will help to send a message to these providers to take our institutions' concerns seriously.

IV. The Commission Has All Necessary Authority to Implement Open Internet Rules Sufficient to Preserve the Character of the Internet as an Open Platform for Education, Research and Free Speech.

A. Re-Classifying Public Broadband Internet Access Service as a Title II Common Carriage Service Offers a Strong, Certain Path to Preserving an Open Internet.

Re-classification of public broadband Internet access service²⁷ as a Title II "common carrier" service would allow the FCC to craft a set of policies and procedures that

less congestion and there is no need for mobile broadband providers to be able to block these services. See 2010 Open Internet Order, paras. 97-106.

²⁶ NPRM, paras. 8 and 10. We also note that our institutions are not mentioned in Chairman Wheeler's statement when discussing the role of the ombudsperson.

²⁷ See Footnote 16 for an explanation of "public" in this context.

effectively ensures the broader public interest goals of an open Internet are met, while providing the FCC with the flexibility to adapt and tailor its regulations to fit the market. Treating providers of broadband services offered to the general public as Title II common carriers will provide valuable certainty to the marketplace and will place public broadband Internet access service on an equal regulatory footing with other communications services. Re-classifying public broadband Internet access service is a legally sustainable approach²⁸ that would ensure that relevant providers will not be able to engage in "unreasonable discrimination" against or in favor of any particular content, application or service.

B. Section 706 Offers an Effective Path to Preserving an Open Internet If Based on an "Internet Reasonable" Standard.

While Title II re-classification has the benefits noted above, in the alternative, we urge the FCC to craft legally-sustainable rules to protect and promote Internet openness using the Section 706 authority that was upheld by the U.S. Court of Appeals in the *Verizon* decision. The court of appeals provided some specific guidance as to how to structure open Internet rules under section 706 that could be legally sustainable, and the NPRM indicates that the FCC intends to follow this path. But the NPRM then proposes to adopt a "commercially reasonable" standard that is not required by section 706 or the *Verizon* court. The "commercially reasonable" standard could undermine the open Internet policies that the FCC seeks to establish.

To replace the "non-discrimination" rule that was invalidated by the *Verizon* court, the NPRM "tentatively conclude[s] that the Commission should adopt a revised rule that, consistent with the court's decision, may permit broadband providers to engage in individualized practices, while prohibiting those broadband provider practices that threaten to harm Internet openness." To explain this standard, the NPRM goes further to suggest that it should include a) "an enforceable legal standard of conduct barring

 ²⁸ National Cable & Telecommunications Association et al. v. Brand X Internet Services et al., 545 U.S.
967 (2005).

broadband provider practices that threaten to undermine Internet openness," b) clearly established factors to give guidance about what would undermine Internet openness, and c) "encouragement of individualized negotiation."²⁹ The NPRM recognizes that "[s]ound public policy requires that Internet openness be the touchstone of a new legal standard."³⁰

The NPRM then proposes a rule to require broadband providers to offer service that is "commercially reasonable," which raises many concerns. The NPRM states that the FCC:

would prohibit as commercially unreasonable those broadband providers' practices that, based on the totality of the circumstances, threaten to harm Internet openness and all that it protects. At the same time, it could permit broadband providers to serve customers and carry traffic on an individually negotiated basis.

While we understand that any standard under Section 706 must allow some degree of individual negotiation to avoid treating broadband providers as "common carriers", we have strong concerns that a generic "commercially reasonable" standard would give too much leeway to such providers to undermine the open Internet goal. For instance, a "commercially reasonable" approach could be interpreted to allow any broadband and edge provider to reach a contract to provide "paid prioritization". If the two companies reach an agreement that they mutually believe to be in their commercial interests, it might be found "commercially reasonable" even if it has the effect of degrading the Internet service used by other parties (such as higher education institutions and libraries) sharing the same network.³¹ Furthermore, a "commercially reasonable"

³¹ Stated differently, a broadband provider and an edge provider voluntarily agree to enter a contract that prioritizes the edge provider's traffic, it will be difficult for the FCC to find such an

²⁹ NPRM, para. 111.

³⁰ NPRM, para. 116.

standard may not provide assurance that the Internet will remain open for non-profit (non-commercial) entities who serve a public interest mission, such as colleges, universities, and libraries.

We believe that the Commission should craft a different standard under section 706 that is more directly related to the unique and open character of the Internet. Such a standard should provide a baseline level of openness protections, while permitting but setting boundaries around the scope of individual negotiation. This new standard should be derived from the culture and character of the Internet itself so that the essential operating principles which created and sustain the "virtuous circle" of Internet growth and development are preserved into the future. Rather than borrow an existing standard from another area of law or activity (as suggested in paragraph 119), it would be far better for the Commission to craft a flexible standard that reflects how the Internet was initially designed and inherently functions. Rather than a generic "commercially reasonable" standard, the proper standard should be grounded in what is "Internet reasonable."

The proposed "Internet reasonable" standard would recognize that the Internet itself is fundamentally an ecosystem that supports a myriad of personal, institutional, community, and commercial relationships and interests. As with any other ecosystem, if the conditions that foster those relationships and interests are negatively impacted, the system as a whole is subject to collapse. The virtuous circle the FCC identified and the court endorsed is a function of a healthy ecosystem - preserving the system's capacity for healthy growth and evolution means preserving the essential conditions that catalyzed its development in the first place.

There are several key features of the Internet that can be incorporated into an "Internet reasonable" standard. In evaluating whether an action by a public broadband Internet

arrangement "commercially unreasonable" if it is in the commercial best interests of both parties.

access provider is "Internet reasonable", the FCC could assess whether or not the action violates these rebuttable presumptions:

- 1. "Innovation without Permission": This phrase (often articulated by one of the "fathers" of the Internet, Vint Cerf) captures the notion that end users and edge providers should not have to obtain the permission of a public broadband provider to use the Internet. Any action taken by a public broadband provider to require its "approval" to carry certain lawful content, applications or services should be presumed to be in violation of what is "Internet reasonable."
- 2. "Paid Prioritization": The Internet is built on a democratic model that allows any individual, library, college, start-up business, or huge commercial conglomerate to obtain access to each other's content, services or applications without actions by the public broadband provider to prioritize some traffic over others. Any action by a public broadband provider to sell or provide enhanced transmission to some content or service providers over others should be presumed to violate what is "Internet reasonable."³² Prioritizing some traffic over others would fundamentally alter the Internet as a whole by creating artificial motivations and constraints on its use, damaging the web of relationships and interactions that define the value of the Internet for both end users and edge providers.
- 3. "Open Platform": The Internet is unique because it uses a decentralized, open architecture that has few barriers to entry. Any action by a public broadband provider to undermine the open architecture of the Internet should be presumed to violate what is "Internet reasonable," due to its inevitable adverse impact on

³² Of course, broadband providers may continue to charge consumers and content, application and service providers for their broadband connections to the Internet, and may receive greater compensation for greater bandwidth capacity chosen by the consumer or content, application or service provider. This principle limits the broadband provider's ability to prioritize certain traffic over other traffic after the initial connection is purchased.

the capacity of the Internet to maintain and advance the virtuous circle of innovation.³³

4. "Degradation": It should be presumed that public broadband providers should refrain from taking any action to favor one party if it would degrade the level of service provided to other parties. But this is not all. The networks that carry Internet traffic are undergoing continual change. Internet demand is following an exponential growth curve. If the Internet transmission speed available to a given user or edge provider does not keep pace with this growth, then the user or edge provider may effectively experience a degraded level of service as compared to those whose transmission speeds maintain or exceed that pace. Any action by a public broadband provider that would discourage it from investing in greater bandwidth to the non-prioritized party should also be presumed to violate the "Internet reasonable" standard.

The factors above are not hard and fast barriers – they establish rebuttable presumptions that the broadband providers could overcome if they can demonstrate a public interest benefit. If a public broadband provider's action violates these presumptions, it would have the burden of proving that its action was nevertheless in the public interest. For instance, a public broadband provider might be able to justify an individually negotiated agreement for prioritized transmission of telemedicine services, of emergency or public safety communications, or other services that are particularly necessary in the public interest. The provider might be able to explain that it uses "Quality of Service" (QOS) to enhance some traffic in a manner that does not degrade the traffic of other users. The provider may also have the opportunity to justify its action if the network is congested, particularly if the adjudicatory body finds that the congestion is not due to the provider's own failure to invest.

³³ This concept is also similar to the "broad form" of the "end-to-end" design of the Internet, as articulated in *Internet Architecture and Innovation*, by Barbara van Schewick, MIT Press, 2010, available at <u>https://netarchitecture.org</u>.

By articulating these and perhaps other factors ahead of time, the FCC could fashion an approach using an "Internet reasonable" standard that would incorporate the flexibility that the *Verizon* court found wanting in the prior rules,³⁴ while also providing as much guidance as possible to consumers, edge providers, libraries, colleges and universities, and the Internet ecosystem as a whole.

V. Conclusion

In conclusion, libraries and institutions of higher education are greatly concerned that public broadband Internet access providers currently have the financial incentive and the opportunity to block, degrade or prioritize the Internet transmission of some at the expense of others. These practices, if permitted, could have severe adverse impacts on online education, research, learning and free speech. We urge the FCC to incorporate the needs of higher education and libraries into its open Internet rules, including by making the following changes:

- a. The FCC should clarify that the proposed open Internet rules apply to public broadband Internet access providers that serve libraries, institutions of higher education and other public interest organizations;
- b. "paid prioritization" should be prohibited;
- c. the proposed rules should be technology-neutral and should apply equally to fixed and mobile services;
- d. the FCC should adopt a re-defined "no-blocking" rule that bars public broadband Internet access providers from interfering with the consumer's choice of content, applications, or services;
- e. the FCC should strengthen the disclosure rules;

³⁴ "Moreover, unlike the data roaming rule in *Cellco*—which spelled out 'sixteen different factors plus a catchall . . . that the Commission must take into account in evaluating whether a proffered roaming agreement is commercially reasonable,' thus building into the standard 'considerable flexibility,' *Cellco*, 700 F.3d at 548—the *Open Internet Order* makes no attempt to ensure that this reasonableness standard remains flexible." *Verizon* slip op. p. 59.

- f. the proposed ombudsman should be charged with protecting the interests of libraries and higher education institutions and other public interest organizations, in addition to consumers and small businesses;
- g. the FCC should continue to recognize that libraries and institutions of higher education operate private networks or engage in end user activities that are not subject to open Internet rules; and
- h. the FCC should preserve the unique capacities of the Internet as an open platform by exercising its well-established sources of authority to implement open Internet rules, based on Title II reclassification or an "Internet reasonable" standard under Section 706.

Respectfully Submitted,

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27 | Page

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July 18, 2014

APPENDIX A

The following Net Neutrality Principles were previously filed in this docket on Thursday, July 10, 2014

NET NEUTRALITY PRINCIPLES

Provided by

American Association of Community Colleges

American Association of State Colleges and Universities

American Council on Education

American Library Association

Association of American Universities

Association of Public and Land-grant Universities

Association of Research Libraries

Chief Officers of State Library Agencies

EDUCAUSE

Modern Language Association

National Association of Independent Colleges and Universities

July 10, 2014

The above organizations firmly believe that preserving an open Internet is essential to our nation's freedom of speech, educational achievement, and economic growth. The Internet now serves as a primary, open platform for information exchange, intellectual discourse, civic engagement, creativity, research, innovation, teaching, and learning. We are deeply concerned that public broadband providers have financial incentives to interfere with the openness of the Internet and may act on these incentives in ways that could be harmful to the Internet content and services provided by libraries and educational institutions. Preserving the unimpeded flow of information over the public Internet and ensuring equitable access for all people is critical to our nation's social, cultural, educational, and economic well-being.

Our organizations have joined together to provide the following background information and to set forth the key principles (below) that we believe the Federal Communications Commission

(FCC) should adopt as it reconsiders its "net neutrality" policies in response to the recent court decision. We invite others to join us.

Background: The FCC opened a new proceeding on "net neutrality" in May 2014 (Docket No. 14-28). This proceeding is in response to a January 2014 ruling by the U.S. Court of Appeals – D.C. Circuit that overturned two of the FCC's key "net neutrality" rules but affirmed the FCC's authority under Section 706 of the Telecommunications Act to regulate broadband access to the Internet. The new FCC proceeding will explore what "net neutrality" policies it can and should adopt in the wake of the court's ruling.

The above organizations support the FCC's adoption of "net neutrality" policies to ensure that the Internet remains open to free speech, research, education and innovation. We believe that Internet Service Providers (ISPs) should operate their networks in a neutral manner without interfering with the transmission, services, applications, or content of Internet communications. Internet users often assume (and may take for granted) that the Internet is inherently an open and unbiased platform, but there is no law or regulation in effect today that requires ISPs to be neutral. ISPs can act as gatekeepers—they can give enhanced or favorable transmission to some Internet traffic, block access to certain web sites or applications, or otherwise discriminate against certain Internet services for their own commercial reasons, or for any reason at all.

The above organizations are especially concerned that ISPs have financial incentives to provide favorable Internet service to certain commercial Internet companies or customers, thereby disadvantaging nonprofit or public entities such as colleges, universities and libraries. For instance, ISPs could sell faster or prioritized transmission to certain entities ("paid prioritization"), or they could degrade Internet applications that compete with the ISPs' own services. Libraries and higher education institutions that cannot afford to pay extra fees could be relegated to the "slow lane" on the Internet.

To be clear, the above organizations do not object to paying for higher-capacity connections to the Internet; once connected, however, users should not have to pay additional fees to receive prioritized transmission and their Internet messages or services should not be blocked or degraded. Such discrimination or degradation could jeopardize education, research, learning, and the unimpeded flow of information.

For these reasons, the above organizations believe that the FCC should adopt enforceable policies based on the following principles to protect the openness of the Internet:

Net Neutrality Principles

Ensure Neutrality on All Public Networks: Neutrality is an essential characteristic of public broadband Internet access. The principles that follow must apply to all broadband providers and Internet Service Providers (ISPs) who provide service to the general public, regardless of underlying transmission technology (e.g., wireline or wireless) and regardless of local market conditions.

• **Prohibit Blocking**: ISPs and public broadband providers should not be permitted to block access to legal web sites, resources, applications, or Internet-based services.

Protect Against Unreasonable Discrimination: Every person in the United States should be able to access legal content, applications, and services over the Internet, without "unreasonable discrimination" by the owners and operators of public broadband networks and ISPs. This will ensure that ISPs do not give favorable transmission to their affiliated content providers or discriminate against particular Internet services based on the identity of the user, the content of the information, or the type of service being provided. "Unreasonable discrimination" is the standard in Title II of the Communications Act; the FCC has generally applied this standard to instances in which providers treat similar customers in significantly different ways.

Prohibit Paid Prioritization: Public broadband providers and ISPs should not be permitted to sell prioritized transmission to certain content, applications, and service providers over other Internet traffic sharing the same network facilities. Prioritizing certain Internet traffic inherently disadvantages other content, applications, and service providers—including those from higher education and libraries that serve vital public interests.

Prevent Degradation: Public broadband providers and ISPs should not be permitted to degrade the transmission of Internet content, applications, or service providers, either intentionally or by failing to invest in adequate broadband capacity to accommodate reasonable traffic growth.

Enable Reasonable Network Management: Public broadband network operators and ISPs should be able to engage in reasonable network management to address issues such as congestion, viruses, and spam as long as such actions are consistent with these principles. Policies and procedures should ensure that legal network traffic is managed in a content-neutral manner.

• **Provide Transparency**: Public broadband network operators and ISPs should disclose network management practices publicly and in a manner that 1) allows users as well as content, application, and service providers to make informed choices; and 2) allows policy-makers to

determine whether the practices are consistent with these network neutrality principles. This rule does not require disclosure of essential proprietary information or information that jeopardizes network security.

Continue Capacity-Based Pricing of Broadband Internet Access Connections:

Public broadband providers and ISPs may continue to charge consumers and content, application, and service providers for their broadband connections to the Internet, and may receive greater compensation for greater capacity chosen by the consumer or content, application, and service provider.

Adopt Enforceable Policies: Policies and rules to enforce these principles should be clearly stated and transparent. Any public broadband provider or ISP that is found to have violated these policies or rules should be subject to penalties, after being adjudicated on a case-by-case basis.

♦ Accommodate Public Safety: Reasonable accommodations to these principles can be made based on evidence that such accommodations are necessary for public safety, health, law enforcement, national security, or emergency situations.

Maintain the Status Quo on Private Networks: Owners and operators of private networks that are not openly available to the general public should continue to operate according to the long-standing principle and practice that private networks are not subject to regulation. End users (such as households, companies, coffee shops, schools, or libraries) should be free to decide how they use the broadband services they obtain from network operators and ISPs.

APPENDIX B

About the American Association of Community Colleges (AACC)

The American Association of Community Colleges (AACC) is the primary advocacy organization for the nation's community colleges. The association represents more than 1,100 two-year, associate degree–granting institutions and more than 13 million students. AACC promotes community colleges through five strategic action areas: recognition and advocacy for community colleges; student access, learning, and success; community college leadership development; economic and workforce development; and global and intercultural education.

About the American Association of State Colleges and Universities (AASCU)

AASCU is a Washington, DC-based higher education association of more than 400 public colleges, universities, and systems whose members share a learning- and teaching-centered culture, a historic commitment to underserved student populations, and a dedication to research and creativity that advances their regions' economic progress and cultural development.

About the American Council on Education (ACE)

Founded in 1918, ACE is the major coordinating body for all the nation's higher education institutions, representing more than 1,600 college and university presidents, and more than 200 related associations, nationwide. It provides leadership on key higher education issues and influences public policy through advocacy. For more information, please visit <u>www.acenet.edu</u> or follow ACE on Twitter <u>@ACEducation</u>.

About the American Library Association (ALA)

The American Library Association is the oldest and largest library association in the world, with approximately 57,000 members in academic, public, school, government, and special libraries. The mission of the American Library Association is to provide leadership for the development, promotion, and improvement of library and information services and the profession of librarianship in order to enhance learning and ensure access to information for all.

About the Association of American Universities (AAU)

The Association of American Universities is an association of 60 U.S. and two Canadian research universities organized to develop and implement effective national and institutional

policies supporting research and scholarship, graduate and professional education, undergraduate education, and public service in research universities.

About the Association of College and Research Libraries (ACRL)

The Association of College and Research Libraries (ACRL), a division of the American Library Association, is a professional association of academic librarians and other interested individuals. It is dedicated to enhancing the ability of academic library and information professionals to serve the information needs of the higher education community and to improve learning, teaching, and research.

About the Association of Public and Land-grant Universities (APLU)

The Association of Public and Land-grant Universities (APLU) is a research, policy, and advocacy organization representing 234 public research universities, land-grant institutions, state university systems, and affiliated organizations. Founded in 1887, APLU is North America's oldest higher education association with member institutions in all 50 US states, the District of Columbia, four US territories, Canada, and Mexico. Annually, APLU member campuses enroll 4.7 million undergraduates and 1.3 million graduate students, award 1.1 million degrees, employ 1.3 million faculty and staff, and conduct \$41 billion in university-based research.

About the Association of Research Libraries (ARL)

The Association of Research Libraries (ARL) is a nonprofit organization of 125 research libraries in the US and Canada. ARL's mission is to influence the changing environment of scholarly communication and the public policies that affect research libraries and the diverse communities they serve. ARL pursues this mission by advancing the goals of its member research libraries, providing leadership in public and information policy to the scholarly and higher education communities, fostering the exchange of ideas and expertise, facilitating the emergence of new roles for research libraries, and shaping a future environment that leverages its interests with those of allied organizations. ARL is on the web at http://www.arl.org/.

About the Chief Officers of State Library Agencies (COSLA)

COSLA is an independent organization of the chief officers of state and territorial agencies designated as the state library administrative agency and responsible for statewide library development. Its purpose is to provide leadership on issues of common concern and national interest; to further state library agency relationships with federal government and national

organizations; and to initiate cooperative action for the improvement of library services to the people of the United States. For more information, visit <u>www.cosla.org</u>.

About the Council of Independent Colleges (CIC)

CIC is the major national service organization for all small and mid-sized, independent, liberal arts colleges and universities in the U.S. CIC focuses on providing services to campus leaders through seminars, workshops, and programs that assist institutions in improving educational offerings, administrative and financial performance, and institutional visibility.

About EDUCAUSE

EDUCAUSE is a nonprofit association whose mission is to advance higher education through the use of information technology. EDUCAUSE supports those who lead, manage, and use information technology in higher education through a comprehensive range of resources and activities, including analysis, advocacy, community building, professional development, and knowledge creation. The current membership comprises more than 2,400 colleges, universities, and related organizations, including nearly 350 corporations, with over 68,000 active members. (www.educause.edu)

About the Modern Language Association (MLA)

The Modern Language Association promotes the study and teaching of languages and literatures through its programs, publications, annual convention, and advocacy work. The MLA exists to support the intellectual and professional lives of its members; it provides opportunities for members to share their scholarly work and teaching experiences with colleagues, discuss trends in the academy, and advocate for humanities education and workplace equity. The MLA aims to advance the many areas of the humanities in which its members currently work, including literature, language, writing studies, screen arts, digital humanities, pedagogy, and library studies. The MLA facilitates scholarly inquiry in and across periods, geographical sites, genres, languages, and those disciplines in higher education that focus on questions about communication, aesthetic production and reception, translation, and interpretation.

About the National Association of Independent Colleges and Universities (NAICU)

NAICU serves as the unified national voice of independent higher education. With more than 1,000 member institutions and associations, NAICU reflects the diversity of private, nonprofit

higher education in the United States. They include traditional liberal arts colleges, major research universities, church- and faith-related institutions, historically black colleges, Hispanic-serving institutions, single-sex colleges, art institutions, two-year colleges, and schools of law, medicine, engineering, business, and other professions.