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IN THE
United States Court of Appeals for the District of Columbia Circuit

MOZILLA CORPORATION, *et al.*,
Petitioners,

v.

FEDERAL COMMUNICATIONS COMMISSION and
UNITED STATES OF AMERICA,
Respondents.

On Petition for Review of an Order of the
Federal Communications Commission

**BRIEF *AMICI CURIAE* OF THE AMERICAN COUNCIL ON EDUCATION
AND 19 OTHER EDUCATION AND LIBRARY ASSOCIATIONS IN
SUPPORT OF PETITIONERS**

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August 27, 2018

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), *amici curiae* American Council on Education (ACE), Accreditation Council for Pharmacy Education (ACPE), American Association of Colleges for Teacher Education (AACTE), American Association of Colleges of Nursing (AACN), American Association of Community Colleges (AACC), American Association of State Colleges and Universities (AASCU), American Library Association (ALA), Association of American Universities (AAU), Association of College & Research Libraries (ACRL), Association of Jesuit Colleges and Universities (AJCU), Association of Public and Land-grant Universities (APLU), Association of Research Libraries (ARL), College and University Professional Association for Human Resources (CUPA-HR), Consortium of Universities of the Washington Metropolitan Area (CUWMA), EDUCAUSE, Middle States Commission on Higher Education (MSCHE), National Association for Equal Opportunity in Higher Education (NAFEO), National Association of Independent Colleges and Universities (NAICU), Student Affairs Administrators in Higher Education (NASPA), and Thurgood Marshall College Fund (TMCF) certify the following:

Parties and *Amici*. Except for the above-listed and following *amici*, all parties and intervenors appearing in this Court are listed in the Joint Brief for Non-Government Petitioners and the Joint Brief for Government Petitioners.

As of the time of this filing, the following parties have submitted *amicus* briefs in support of Petitioners: Consumers Union; Engine Advocacy; Jon Peha and Scott Jordan; Professors of Administrative, Communications, Energy, Antitrust, and Contract Law and Policy; and Twilio Inc.

In addition, the following parties have filed notices of intent to file *amicus* briefs in support of Petitioners: Professors of Communications Law; Electronic Frontier Foundation; City of New York; Members of Congress; and eBay, Inc.

All of the above-listed *amici* that are party to this brief are “trade associations” for purposes of D.C. Circuit Rule 26.1(b).

Ruling Under Review. Reference to the ruling at issue appears in Petitioners’ opening briefs.

Related Cases. Other than those cases listed in Petitioners’ opening briefs, Counsel is not aware of any related cases within the meaning of Circuit Rule 28(a)(1)(C).

/s/ Jessica L. Ellsworth
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**BRIEF *AMICI CURIAE* OF THE AMERICAN COUNCIL ON EDUCATION
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STATEMENT OF INTEREST OF *AMICI CURIAE*¹

The American Council on Education (ACE), the higher education community, and libraries around our country have long relied on and supported the democratic nature of the Internet as an available and neutral platform for sharing information and research. As end users and as content providers within their

¹ All parties have consented to the filing of this brief. No party's counsel authored this brief in whole or in part; no party or party's counsel contributed money intended to fund the brief's preparation or submission; and no person other than amici contributed money intended to fund the brief's preparation or submission.

communities and more broadly, universities² rely on the transmission of digital data. Libraries also create and provide digital information and ensure the general public—including those without personal connectivity—can access and share such information.

The open character of the Internet is critical to the missions and values of universities and libraries, which include advancing research, education, and information exchange. Increasingly, content is available solely or primarily online, as are the educational and information services based on such content. And increasingly, students and adult learners are relying on online courses and digital education tools to earn undergraduate or advanced degrees. As a result, universities and libraries—and their constituencies—depend more than ever on an open Internet to meet the needs of their students, faculty, patrons, and the general public. This trend line will only get steeper.

ACE and the other *amici* are filing this brief to underscore that the FCC's *Restoring Internet Freedom* Order³ imperils the Internet's continued operation as a reliable platform for research, learning, and information sharing. By eroding the Internet's openness and treating all content providers as though they are profit-motivated commercial actors, the Order will make it far more difficult for

² Any reference in this brief to “universities” includes both colleges and universities.

³ *Restoring Internet Freedom*, Declaratory Ruling, Report and Order, and Order, 33 FCC Rcd. 311 (2018) [hereinafter FCC Order].

universities to educate their students and facilitate research and for libraries to provide digital content and no-fee public Internet access to the communities they serve.

The **American Council on Education** (ACE) represents all higher education sectors. Its approximately 1,700 members reflect the extraordinary breadth and contributions of degree-granting colleges and universities in the United States. Founded in 1918, ACE seeks to foster high standards in higher education, believing a strong higher education system to be the cornerstone of a democratic society. ACE's member institutions are leaders in creating, extending, and maximizing the potential of the Internet in higher education to further research, education, and access to public information. ACE regularly contributes amicus briefs on issues important to the education sector.

ACE is joined in this brief by the following organizations, which are described more fully in the Addendum: Accreditation Council for Pharmacy Education (ACPE), American Association of Colleges for Teacher Education (AACTE), American Association of Colleges of Nursing (AACN), American Association of Community Colleges (AACC), American Association of State Colleges and Universities (AASCU), American Library Association (ALA), Association of American Universities (AAU), Association of College & Research Libraries (ACRL), Association of Jesuit Colleges and Universities (AJCU),

Association of Public and Land-grant Universities (APLU), Association of Research Libraries (ARL), College and University Professional Association for Human Resources (CUPA-HR), Consortium of Universities of the Washington Metropolitan Area (CUWMA), EDUCAUSE, Middle States Commission on Higher Education (MSCHE), National Association for Equal Opportunity in Higher Education (NAFEO), National Association of Independent Colleges and Universities (NAICU), Student Affairs Administrators in Higher Education (NASPA), and Thurgood Marshall College Fund (TMCF).

SUMMARY OF ARGUMENT

The FCC's *Restoring Internet Freedom* Order (the Order) is legally flawed for all the reasons asserted in Petitioners' joint briefs. *Amici* here highlight the significant burden the Order will impose on universities, libraries, and the communities they serve if not vacated. To carry out their missions, universities need to reliably exchange digital data with sources outside their on-campus networks, and libraries must be able to freely transmit digital content and provide no-fee public Internet access to their communities.

The FCC's Order threatens these operations. As a stratified Internet emerges, universities and libraries will be squeezed both as content providers and end-users. Providers of Internet access have incentives to charge additional fees to certain content providers in return for enhancing their delivery of certain traffic

over other traffic or by blocking certain websites altogether. Eliminating the rules to prevent this behavior risks pushing universities and libraries into the “slow lane,” unable to compete with deep-pocketed commercial content providers, like Amazon and Netflix, for a limited amount of bandwidth. And as creators of non-commercial content, *amici* will be less able to rely on the market-based approach and transparency rules that the FCC believes will prevent blocking and throttling. As recipients of digital content, universities and libraries’ extensive research and database subscriptions and online educational tools will become more expensive, as most content providers will simply pass the Order’s additional costs onto their customers.

Universities and libraries depend upon their online presences both as content providers and end-users. Universities offer online and hybrid courses to millions of students, many of whom must access these offerings to earn their degrees. Even students who have never taken an online course depend heavily on their university’s online resources to receive and complete assignments, take tests, collaborate with other students, and connect with professors. Universities and libraries also make their extensive databases and research repositories digitally available to students, faculty, staff, and the broader public. These resources not only promote scholarly exploration and advance student learning, but also provide tangible benefits to the government, industry, and the general public.

And as end-users, universities and libraries use digital educational technologies, such as virtual reality simulators, to support their students and patrons, and they subscribe to thousands of external journals and databases to advance knowledge and scholarship. Long at the forefront of technological innovation, universities and libraries continue to experiment with ways to better connect with their communities and participate more effectively in today's digitized world.

The FCC's Order will seriously disadvantage universities, libraries, and those that they serve. Universities and libraries often support their students and faculty, not to mention the broader public, through third-party Internet service providers (ISPs). Lifting the previous bright-line rules barring paid prioritization, blocking, and throttling, *see* FCC Order, ¶ 239, will increase costs for universities and libraries, slow their transmission speeds, and put them at greater risk of private censorship.

In terms of content creation, universities and libraries generally lack the resources to pay the increased costs for prioritized transmission. As a result, the data traffic from most of these institutions will be forced into a "slow lane," that will become increasingly congested (and therefore slower) over time, diminishing educational quality and limiting research capabilities. As end-users, universities and libraries will face increased costs, as their essential, and extensive, digital

subscriptions and educational programs become more expensive. Meanwhile, with more leeway, ISPs are positioned to limit academic freedoms and curb higher education's ability to promote dialogue on controversial issues.

ACE and others raised these concerns to the FCC. But the Order ignores that a bifurcated Internet and prioritized treatment will inherently disadvantage universities, libraries, and other non-profits, regardless of how much additional broadband investment the Order will supposedly prompt. If, as expected, Internet "fast lanes" and "slow lanes" emerge, many end-users will abandon online educational resources that they experience as slower and less reliable than other commercial content. And with relatively less market power, universities and libraries will be particularly vulnerable to blocking and throttling. This dynamic will imperil the mission of higher education and make it more difficult for universities and libraries to function in an increasingly connected and digitized world. Because the FCC disregarded an "important aspect of the problem," the Court should vacate the Order. *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

ARGUMENT

I. UNIVERSITIES AND LIBRARIES RELY ON THE OPEN INTERNET TO FULFILL THEIR MISSIONS.

The open Internet is crucial to fulfilment of *amici's* educational, research, and information sharing missions. An uneven digital playing field would frustrate

online learning, research collaboration, and future educational innovation, leaving universities and libraries ill-suited for the demands of the 21st century.

A. *Amici* And Their Members Create And Transmit Their Own Digital Content In Fulfilling Their Missions.

1. Online learning plays a vital—and growing—role in higher education.

Online and hybrid courses enable colleges and universities to expand learning opportunities and educate their students. Over 6.3 million students took at least one online course during the fall of 2016—a figure that has increased for each of the last fourteen consecutive years. Jordan Friedman, *Study: More Students Are Enrolling in Online Courses*, U.S. News & World Rep. (Jan. 11, 2018).⁴

Meanwhile, the number of students studying strictly on a physical campus is declining, dropping by more than 1 million, or 6.4 percent, between 2012 and 2016. *Id.* As online classes have proven to be flexible, affordable, and effective, these trends will no doubt continue.

Online learning, also known as “distance learning,” provides particular benefits to non-traditional or otherwise “disadvantaged students.” Allison Bailey et al., Boston Consulting Grp. & Arizona State Univ., *Making Digital Learning Work: Success Strategies from Six Leading Universities and Community Colleges*

⁴ Available at <https://www.usnews.com/higher-education/online-education/articles/2018-01-11/study-more-students-are-enrolling-in-online-courses>.

6 (Mar. 2018).⁵ Non-traditional students—including adult learners and those with care-giving obligations for children and others—face particularly high “barriers in reaching their educational goals.” Joann Horton, *Identifying At-Risk Factors That Affect College Student Success*, 7 *Int’l J. Process Educ.* 83, 84 (2015). It is commonly far more difficult for these students to attend regularly scheduled classes or pay the tuition associated with a traditional university education. As a result, they are “significantly less likely” to earn a degree or certification in their desired timeframe, if they are able to earn one at all. Courtney Hitteplow, *Nontraditional Students: Supporting Changing Student Populations 3*,⁶ *see also* Kris MacDonald, *A Review of the Literature: The Needs of Nontraditional Students in Postsecondary Education*, 5 *Strategic Enrollment Mgmt. Q.* 159, 160 (2018) (citing study that found “67% of nontraditional students drop[] out of college before receiving a degree”).⁷

Distance learning provides a partial solution. Because online courses are offered on an “anytime, anywhere” basis, students have flexibility to earn a degree while also working or caring for family members. Friedman, *supra*; *see also* MacDonald, *supra*, at 161 (“[C]ourse flexibility has ranked near if not at the top of

⁵ Available at <https://edplus.asu.edu/sites/default/files/BCG-Making-Digital-Learning-Work-Apr-2018%20.pdf>.

⁶ Available at https://www.naspa.org/images/uploads/main/Hittepole_NASPA_Memo.pdf (last visited Aug. 23, 2018).

⁷ Available at <https://onlinelibrary.wiley.com/doi/epdf/10.1002/sem3.20115>.

[non-traditional] students' needs.”). Moreover, online classes tend to be more “affordable.” Mark Lieberman, *Blended Is Best*, Inside Higher Educ. (Apr. 12, 2018).⁸ With online courses, universities “reduce their need to provide and maintain physical campus-based facilities,” and pass those savings—sometimes as high as 50 percent—through to their students. Bailey, *supra*, at 6, 28. And over half of students enrolled in online courses pay reduced in-state tuition to public universities, further reducing barriers to educational attainment. *See* Friedman, *supra* (stating that two-thirds of online courses are taken at public universities and fully 84% of that population take the courses in their home state).

As a result, more non-traditional students are matriculating. *See* MacDonald, *supra*, at 160 (stating the number of nontraditional students enrolled in higher education “is projected to rise 14% to 14 million students by 2024.”). In fact, older adults are for the first time in years increasing their higher education enrollment at a rate faster than their younger counterparts. *27 Is the New 18: Adult Students on the Rise*, Educ. Comm’n of the States (Aug. 3, 2016);⁹ *see also* MacDonald, *supra*, at 159 (“Nontraditional students, or adult learners, are the new majority in the classroom in any sector of higher education.”). Online courses are

⁸ Available at <https://www.insidehighered.com/digital-learning/article/2018/04/12/online-programs-can-contribute-better-outcomes-lower-costs-and>.

⁹ Available at <https://www.ecs.org/27-is-the-new-18-adult-students-on-the-rise/>.

also particularly helpful for students in rural areas, where college attendance rates are disproportionately low. Letter from Carrie Besnette Hauser, President & CEO, Colorado Mountain Coll., to Hon. Ajit Pai, Fed. Commc'ns Comm'n, *Restoring Internet Freedom*, WE Docket No. 17-108 (Dec. 14, 2017).¹⁰ Distance learning puts higher education within reach for rural students unable to travel the long distances required to attend the nearest in-person classes. *Id.*

In sum, online learning has allowed millions of students to earn a degree that would otherwise be unattainable—promoting *amici*'s longstanding mission to improve “higher education access.” Comments of American Association of Community Colleges et al., *Restoring Internet Freedom*, WC Docket No. 17-108, at 7 (July 17, 2017) [hereinafter ACE Comments];¹¹ *see also* Lieberman, *supra*.

Remarkably, as high-quality online courses expand access and lower costs, evidence suggests they also produce “equivalent or even improved student learning outcomes.” Bailey, *supra*, at 6, 10. One study even found that online enrollees perform better than students taking the very same course in a “face-to-face” setting. *Id.* at 12-13 (describing study finding that online students average “almost 40% of a letter grade” higher than students taking in-person courses).

¹⁰ Available at <https://ecfsapi.fcc.gov/file/121488369556/CMCStatementNetNeutralityDec2017.pdf>.

¹¹ Available at <https://library.educause.edu/~media/files/library/2017/7/201707hednetncomments.pdf>.

The relative success of hybrid and online courses appears to derive from the more personalized educational experience they offer. These courses allow students to “master the course material at a pace that works best for them.” *Id.* at 8. With “multimedia resources,” students are able to easily “track [their] progress,” re-watch lectures or re-do simulations, deeply explore topics they find particularly challenging or interesting, and collaborate with one another outside of class. *Id.* Moreover, institutions collect information through online and hybrid courses and then use it to hone their own practices and maximize student success. With “[p]owerful analytic tools” and “access to a cornucopia of data,” online learning creates opportunities for “continuous improvement” for both students and universities. *Id.* at 7-8.

Given the effectiveness of many different types of educational resources, the large majority of universities now offer online classes and other digital education tools. All told, roughly 71 percent, or 3,338, degree-granting higher education institutions offered some form of distance education as of 2016. Julia E. Seaman et al., Babson Survey Research Grp., *Grade Increase: Tracking Distance Education in the United States* 22 (2018).¹² Contrary to the common misconception that for-profit, online-only institutions account for the majority of distance learning, roughly two-thirds of students who took online classes in 2016 did so at public

¹² Available at <http://onlinelearningsurvey.com/reports/gradeincrease.pdf>.

universities. Friedman, *supra*. For example, the University of Maryland alone had over 50,000 students enrolled in at least one online course, while the University of Florida and the University of Central Florida each had over 30,000. Seaman, *supra*, at 31.

Online learning's growth rate is accelerating. Between 2015 and 2016 alone, the number of students taking at least one online course grew by 5.6 percent, the largest increase of the past three years. Friedman, *supra*. And our nation's public universities are leading the way. In 2016 public universities experienced larger growth in online course enrollment—at 7.3 percent—than any other subset of higher education. *Id.*

Moreover, specialized graduate programs that were initially slow to adopt online learning are now beginning to enter the fray. See Max Huffman, *Online Learning Grows Up – And Heads to Law School*, 49 *Ind. L. Rev.* 57, 57 (2015); Henry Kronk, *The Ice Is Melting for Hybrid J.D. Programs*, *ElearningInside News* (Feb. 22, 2018).¹³ Law schools, for instance, are beginning to offer online courses, finding that they “reduce[] costs for students, increase[] flexibility, [promise] a more diverse student population . . . and improve[] learning outcomes.” Huffman, *supra*, at 57. Indeed, the accrediting arm of the American

¹³ Available at <https://news.elearninginside.com/the-ice-is-melting-for-hybrid-j-d-programs/>.

Bar Association recently proposed a new rule that would double—to one third—the number of credits law students may earn on-line.¹⁴

To be effective, online courses and digital applications must transmit digital data to end-users outside of private on-campus networks. Nearly every online class now incorporates data-rich videos, dynamic simulations and other multimedia resources, which “require[] both high speeds and substantial monthly data allowances.” FCC Order, ¶ 133; *see also id.* ¶ 107 n.406 (stating that online video traffic accounted for 76% of Internet traffic in 2015). Although online courses may include video lectures, the multimedia learning experience is much more varied and interactive. For example, online biology courses can, and often do, “us[e] virtual reality to place students inside a human body or even inside a single microscopic cell.” Bailey, *supra* at 8.

Students who continue to take entirely on-campus classes will also increasingly rely on educational digital content delivered through the Internet. Traditional in-person classes regularly incorporate Internet applications to perform basic functions like tracking progress or administering exams. And more complex “media-rich courses” allow students to remotely take advantage of online “learning resources,” bring guest lecturers or commentators into the classroom from remote

¹⁴ *ABA Accreditor For Law Schools Recommends Expanding Distance Learning Opportunities*, Am. Bar Ass’n (Feb. 12, 2018), available at https://www.americanbar.org/news/abanews/aba-news-archives/2018/02/aba_accreditor_forl.html.

locations, and receive “academic and student support.” ACE Comments, *supra*, at

7. Like distance learning, these resources and applications require reliable Internet connections and will become even more common over time.

2. Universities and libraries rely on digital transmissions to make online data and research available to students, faculty, and the general public.

Closely related to structured learning—and equally important to an informed citizenry—is the housing of and access to knowledge and information.

Universities and libraries rely on digital transmissions to make their research repositories and databases accessible to students and faculty living off-campus, as well as the broader public. Nearly all universities now “subscribe to online resources (full text journal and newspaper articles, legal, health, employment, and learning information) that can only be accessed via a robust and consistent Internet connection.” Reply Comments of American Association of Community Colleges et al., *Protecting & Promoting the Open Internet*, GN Docket No. 14-28, at 6 (Sept. 15, 2014);¹⁵ see also *Subscriptions: The Landscape*, Univ. of Pittsburgh: Univ. Library Sys. (2018) (stating that the University of Pittsburgh provides access to 37,500 journal subscriptions, of which just 2,000 are print subscriptions).¹⁶

Libraries, too, subscribe to digital media services to provide their members with

¹⁵ Available at <https://library.educause.edu/~media/files/library/2014/10/epo1403-pdf.pdf>.

¹⁶ Available at <https://www.library.pitt.edu/subscriptions>.

remote access to video, audiobooks, e-books, and e-magazine titles. ACE Comments, *supra*, at 13; *see also* Comments of American Association of Law Libraries et al., *Restoring Internet Freedom*, GN Docket No. 17-108, at 7-11 (July 17, 2017) [hereinafter ALA Comments].¹⁷

Already expensive, the costs of these essential resources continue to rise. *See, e.g.*, Univ. of Pittsburgh, *supra* (“For 2015 alone, to maintain the current number of subscriptions would require an additional \$300,000”); *id.* (stating that in 2016 the University of Pittsburgh’s University Library System spent over \$3.9 million on access to electronic databases alone). In 2016, access to online journals and databases “drew more than 60 percent of the materials-allocations budget at libraries at four-year public and private nonprofit colleges,” versus just 14 percent of budgets going towards print sources. Peter Monaghan, *As Libraries Go Digital, Costs Remain Tangible*, *Chron. Higher Educ.* (Aug. 13, 2017).¹⁸

In addition, and significantly, preservation and storage of collections have evolved towards digitizing, premised on Internet-based user accessibility. Indeed, at most academic libraries, “usage of digital and electronic materials surpasses—often far surpasses—that of physical books.” *Id.* For example, University of

¹⁷ Available at <http://www.ala.org/advocacy/sites/ala.org.advocacy/files/content/telecom/netneutrality/AALL%20ALA%20ACRL%20COSLA%20Comments%20July%202017.pdf>.

¹⁸ Available at <https://www.chronicle.com/article/As-Libraries-Go-Digital-Costs/240858>.

California, Merced's entire library collection is now more than 90 percent digital or electronic. *Id.*

Nearly all universities also create their own digital content, "cover[ing] a wide range of disciplines." *See, e.g., Collections*, PennState Univ. Libraries (2017).¹⁹ Much of this material is unique, requiring end-users to go directly to the university's website. For example, Columbia University's library created and exclusively houses the 9/11 Oral History Project, which includes "over 900 recorded hours on digital media." ACE Comments, *supra*, at 10; *see also Oral History Archives: September 11, 2001 Oral History Projects*, Columbia Univ. Libraries.²⁰ Similarly, the University of North Carolina at Chapel Hill offers access to its own digital humanities portal "spanning history, the arts, archeology, geography and urban studies, literature and languages, and classical studies." ACE Comments, *supra*, at 11; *see also DH Projects @ UNC*, Univ. of N. Carolina at Chapel Hill.²¹

Students, faculty, and the broader public need reliable access to these online resources. For the increasing numbers of off-campus students, a dependable remote connection to their university's digital resources and educational materials

¹⁹ Available at <https://libraries.psu.edu/about/collections> (last visited Aug. 23, 2018).

²⁰ Available at <http://library.columbia.edu/locations/ccoh/digital/9-11.html> (last visited Aug. 23, 2018).

²¹ Available at <http://dhprojects.web.unc.edu/> (last visited Aug. 23 2018).

is necessary to complete assignments and access course material. Moreover, university libraries provide students with an incredible range of specialized online support. For example, the University of Nevada – Reno’s De La Mare Science and Engineering Library uses cutting-edge technology to offer students a “dynamic media lab” to work on engineering projects and hone their training. ALA Comments, *supra*, at 11.

Faculty, too, must be able to quickly and reliably obtain and share scholarly research and literature. Researchers build on and incorporate previous studies to create an “intellectual discourse.” ACE Comments, *supra*, App. B, at 1. Without digital research repositories and databases, “scholarly collaboration” would break down—defeating *amici*’s core research mission. ACE Comments, *supra*, at 9.

Access to university research also benefits industry and government. For example, academic studies can provide “information to dairy farmers about the latest research to increase the health and productivity of their stock,” or allow park rangers to develop informed “protocols for setting hunting and fishing limits.” *Id.* at 8. These efforts “provide diverse societal benefits, from improving the productivity and competitiveness of American business and industry, to educating our citizenry and enriching civic life.” Letter from Am. Council on Educ. et al. to

Hon. Ajit Pai, et al., Fed. Commc'ns Comm'n, *Restoring Internet Freedom*, WC Docket No. 17-108, at 2 (Dec. 7, 2017) [hereinafter Ex Parte Letter].²²

University and library resources also provide learning and educational benefits to the public at-large. Although universities typically do not allow unrestricted access to all of their research materials, a substantial portion is made publically available. *See* Univ. of Pittsburgh, *supra* (as “an enthusiastic participant in the Open Access movement,” the University of Pittsburgh makes “40 scholarly peer reviewed journals” publically available); Monaghan, *supra* (stating 40 percent of universities with doctoral programs “are participating in open-education efforts, such as publishing open-access textbooks”). And much of what universities and libraries offer are designed to directly support the general public. For example, like other institutions, the University of Kansas Library System offers online resources to help high school students prepare for college. ACE Comments, *supra*, at 8.²³

²² Available at <https://library.educause.edu/~media/files/library/2017/12/henn-december2017fccletter.pdf>.

²³ Similarly, public libraries offer a host of online resources to enable students and patrons to enroll in distance classes, receive free tutoring services, prepare for tests, complete homework assignments, and receive high school diplomas or GED certifications that would otherwise be unavailable. *See Local Public Libraries to Celebrate First Class of Graduates to Receive Diploma Through Online Program*, WTKR (Apr. 18, 2018), <https://wtkr.com/2018/04/18/local-public-libraries-to-celebrate-first-class-of-graduates-to-receive-diploma-through-online-program/> (describing public libraries in Norfolk and Virginia Beach, Virginia celebrating their first class of students to receive online high school diplomas); *To the Rescue:*

B. *Amici* And Their Members Constantly Experiment With Innovative Ways To Use The Internet To Better Serve Students, Faculty, And The General Public.

From the inception of the Internet, “[h]igher education institutions and libraries have been leaders in developing innovative uses of Internet bandwidth and learning methodologies.” ACE Comments, *supra*, at 9. As described above, universities and libraries substantially invest in the creation of their own innovative digital content. But they also support the use of experimental technologies as consumers and recipients of digital data. Medical schools, for example, use newly developed virtual reality programs to allow their students to interact with “anatomically accurate visuals in 3D,” instead of relying on cadavers. Sue Workman, *Mixed Reality: A Revolutionary Breakthrough in Teaching and Learning*, EDUCAUSE Rev. (July 30, 2018).²⁴ This technology “revolutionize[s]” how medical students “learn about medicine and come to understand the human body.” *Id.* Other disciplines use virtual reality programs to create fully immersive educational experiences, enabling students to more easily master a foreign language or fully appreciate the details of a specific historical period. Annie Rota,

Boca Raton Public Library Offers Free Tutoring Help for Area Students, Boca Raton Observer (July 31, 2018), available at <https://bocaratonobserver.com/observed/buzz/2018-08-to-the-rescue/> (describing free public access to Tutor.com and other online resources).

²⁴ Available at <https://er.educause.edu/articles/2018/7/mixed-reality-a-revolutionary-breakthrough-in-teaching-and-learning>.

Three Examples from the Field: AR and VR in Teaching and Research,
EDUCAUSE Rev. (Aug. 2, 2018).²⁵

Moreover, many universities have implemented or are evaluating “transition[s] to cloud-based productivity suites (e.g., Google Apps for Education, Microsoft 365) to support faculty and student access to email, word processing, and related applications.” Reply Comments of American Association of Community Colleges et al., *Restoring Internet Freedom*, WC Docket No. 17-108, at 5 (Aug. 30, 2017).²⁶ The University of Texas – Austin, for example, increased its cloud storage by over 400 percent from 2014 to 2016. Univ. of Texas Sys. Audit Office, *The University of Texas System Cloud Computing and Storage Report FY 2016*, at 2 (Feb. 2017).²⁷

In the future, universities will continue to “specialize[] in developing innovative online services.” ACE Comments, *supra*, at 9. Twenty years ago, the distance learning and digitized research materials that exist today would have been unimaginable. It is similarly unpredictable what the next twenty years will bring.

²⁵ Available at <https://er.educause.edu/blogs/2018/8/three-examples-from-the-field-ar-and-vr-in-teaching-and-research>.

²⁶ Available at <https://library.educause.edu/~media/files/library/2017/8/aug2017enet-nreplycomment.pdf>.

²⁷ Available at <https://www.utsystem.edu/sites/default/files/documents/UT%20System%20Administration%20Cloud%20Computing%20and%20Storage%20Report/cloud-computing-and-storage-audit-report.pdf>.

This continued innovation will require universities and libraries to transmit and receive increasing amounts of digital data in a fast and reliable way.

II. THE FCC’S ORDER WILL SERIOUSLY DISADVANTAGE UNIVERSITIES AND LIBRARIES.

The Order eliminates the FCC’s previous bright-line prohibitions on “paid prioritization, blocking, throttling.” FCC Order, ¶ 239. This will make it more expensive for universities and libraries to function, compromise the quality of their services, and imperil academic freedom.

A. Paid Prioritization Will Make It More Expensive For Universities And Libraries To Function And Compromise The Quality Of Their Services.

“Paid prioritization occurs when a broadband provider accepts payment (monetary or otherwise) to manage its network in a way that benefits particular content, applications, services, or devices.” *Protecting & Promoting the Open Internet*, Report and Order on Remand, Declaratory Ruling, and Order, 30 FCC Rcd. 5601, ¶ 18 (2015) [hereinafter 2015 FCC Order]. The FCC had previously banned that practice to prevent the emergence of “fast lanes,” opting instead to require content providers compete on an even playing field. *Id.* The new Order scraps that system and permits ISPs to engage in “tiered pricing,” in which they charge content providers higher prices for faster and more reliable transmission. FCC Order, ¶ 133; *see also id.* ¶¶ 17-18, 253-62.

This change will have severe implications for libraries and all sectors of higher education. *First*, a large portion of what universities and libraries do will become more expensive, and likely significantly so. Content providers “who are able to pay for preferential treatment will pass along their costs to their consumers and/or subscribers.” ACE Comments, *supra*, at 13. As a result, the prices for universities’ and libraries’ electronic media and research subscriptions will go up, further increasing their already daunting costs. *See supra*, p. 16 (noting expense of those resources already). Costs will also increase for other Internet services that universities purchase, from online, multimedia educational applications and resources to cloud services that allow students and stakeholders to efficiently and effectively engage with their institutions. To the extent possible, universities in particular will be forced to look for ways to pass these rising costs on to students and their families, even though the costs do not come with any additional benefits. Terry W. Hartle & John Fansmith, *FCC’s Proposed Internet Rules Could Raise College Costs and Hinder Free Exchange of Ideas*, Wash. Post (Dec. 8, 2017).²⁸

Libraries face similar cost constraints, and their patrons will likewise feel the brunt of the FCC’s Order. Libraries subscribe to online media services such as Hoopla, OverDrive, and Zinio to provide digital content freely to the communities

²⁸ Available at https://www.washingtonpost.com/news/grade-point/wp/2017/12/08/fccs-proposed-internet-rules-could-raise-college-costs-and-hinder-free-exchange-of-ideas/?utm_term=.43e5e997215f.

they serve. ACE Comments, *supra*, at 13. Under paid prioritization, these content providers would pass much of their increased costs onto subscribing libraries. As a consequence, libraries will be less able to provide their communities—including older adults, non-English speakers, low-literacy individuals, low-income individuals, and patrons that otherwise lack access to the Internet—the opportunity to use video, audiobooks, e-books, and e-magazine titles. These digital tools are often essential for these patrons' ability to fully participate in twenty-first century economy and society.

Second, prioritized treatment risks a meaningful degradation in the quality of education a university can provide and the research that it can perform.

Universities will “rarely if ever have the resources to pay for priority treatment of their content.” *Id.* at 12. Most of their content is therefore likely to be “relegated to the ‘slow lane’ on the Internet.” ACE Comments, *supra*, App. B, at 2. With little leverage over ISPs, many universities will face the unenviable choice of accepting ever-greater declines in the speed and quality with which students can access their content and services, or increasing the costs students have to bear to effectively use the content and services they need. Hartle & Fansmith, *supra*.

Slower transmission speeds will hurt students. It will be more difficult for them to watch a high-bandwidth video stream of a lecture, conduct online research, use interactive learning applications, and take online exams. Just as slow Internet

speeds can make an online video unwatchable, this “degradation could easily frustrate” a student’s online learning experience. ACE Comments, *supra*, at 8. If students “cannot use online educational resources effectively,” many will simply abandon these resources altogether, regardless of how crucial they are to educational success. *See* ACE Comments, *supra*, App. B, at 2. Moreover, in many cases, slower transmission speeds will make valuable in-class technologies unworkable. Especially as universities “deploy new innovations in simulations, alternative/augmented reality, and artificial intelligence to advance learning and research, the negative implications of blocking, throttling, and paid prioritization for [universities’] public service missions will grow.” Ex Parte Letter, *supra*, at 2.

Faculty and members of the broader community will also suffer. It will be more difficult for faculty to collaborate beyond the boundaries of their school, which in turn will slow research. And as transmission speeds slow, the government, industry, and members of the public will face new limitations on access to the wide range of information and services that campuses provide to their communities.

B. Eliminating The Bright-Line Rules Prohibiting Blocking And Throttling Imperils Academic Freedom.

The FCC’s previous bright-line rules prohibited ISPs from blocking or degrading digital “content, applications, [and] services.” 2015 FCC Order, ¶¶ 15-16 (describing the “No Blocking” and “No Throttling” rules). Even now, the FCC

agrees that an open Internet requires a “no-blocking rule on principle.” *Restoring Internet Freedom*, Notice of Proposed Rulemaking, 32 FCC Rcd. 4434, ¶ 80 (2017); *see also* Joint Non-Gov’t Pet’rs Br. 51; Reply Comments of Association of Research Libraries, *Restoring Internet Freedom*, WC Docket No. 17-108, at 10 (Aug. 29, 2017) [hereinafter ARL Reply Comments]²⁹ (“If there is any consensus in the record thus far, it is that ISPs should not be free to arbitrarily block BIAS connections.”). The FCC Order nonetheless rescinded these critical front-end prohibitions. FCC Order, ¶ 239. Content providers will now have to bring “antitrust and consumer protection” actions *after* showing that they have been targeted for blocking or degradation. *Id.*

This reliance on an after-the-fact and cost-intensive enforcement structure is at odds with universities’ and libraries’ missions to promote the free flow of information and encourage strong debate on controversial issues. *See, e.g.*, ARL Reply Comments, *supra*, at 18 (“The core mission of research libraries is the dissemination of information.”). With these new rules, ISPs will be able to block, restrict, or degrade unpopular or controversial content. *See* Joint Non-Gov’t Pet’rs Br. 53-54.

This risk is not hypothetical. “In 2007, Verizon temporarily blocked the usage of text messaging over its network by a group that supports abortion rights,

²⁹ Available at <http://www.arl.org/storage/documents/2017.08.29-Reply-Comments-Net-Neutrality.pdf>.

arguing that it had the right to block ‘controversial or unsavory’ speech.” Hartle & Fansmith, *supra*. Such suppression ignores that “the open internet [is] a cornerstone for preserving our democracy and enhancing freedom of speech in the information age.” ALA Comments, *supra*, at 6; *see also* ARL Reply Comments, *supra*, at 14. And it serves as a direct threat to *amici*’s mission to advance intellectual dialogue and disseminate information.

III. THE FCC FAILED TO CONSIDER THE UNIQUE AND NEGATIVE IMPACT ITS ORDER WILL HAVE ON UNIVERSITIES AND LIBRARIES.

During the notice and comment period, a broad coalition of higher education and library associations explained to the FCC how the Order would significantly and uniquely harm them and their members. They succinctly pointed out the Order “overlooks the degree to which bandwidth-intensive, multimedia content and services increasingly define the online learning, research, and knowledge resources that colleges, universities, and libraries provide.” Ex Parte Letter, *supra*, at 2. The coalition stressed that with respect to paid prioritization, when “commercial providers can pay for enhanced transmission that libraries and higher education cannot afford, [it] endangers our institutions’ ability to meet” their educational and research missions. ACE Comments, *supra*, App. B, at 2; *see also id.* (“By and large” higher education and library “institutions cannot afford to pay for prioritized access.”). As for blocking and throttling, they “reiterate[d]” that because their

organizations “will never have the resources to pursue litigation remedies such as antitrust,” the FCC’s after-the-fact regulatory scheme will leave them particularly vulnerable. Ex Parte Letter, *supra*, at 3.

The FCC disregarded these concerns. It responded that (1) its Order will cause “ISP[s] to invest more in network capacity,” increasing transmission speed and “reducing congestion,” FCC Order, ¶ 257; (2) content providers could enter into quality of service agreements with ISPs to guarantee baseline transmission speeds, *see id.*; and (3) transparency, market pressure, and antitrust remedies will prevent blocking and throttling, *id.* ¶¶ 263-264. These explanations are wholly inadequate.

First, regardless of the potential for increased broadband investment, universities and libraries will be harmed by prioritized treatment and relatively slower transmission speeds. Even if in absolute terms, the “slow lane” gets faster over time, universities will be disadvantaged as users come to expect even faster and more reliable transmission. Many students will simply abandon online educational resources once they experience them as slower and less reliable than commercial content. ACE Comments, *supra*, App. B, at 2. This problem could spiral as commercial content providers continue to drive production standards, prompting multimedia educational tools to become increasingly data-intensive. Moreover, future investment does nothing to address problems with slower

university and library transmission in the present and short-term. While waiting for additional investments—that may or may not come—current students and researchers will suffer slower transmission speeds as commercial providers out-bid them for currently-available end-user bandwidth.

Second, most universities and libraries will not have the leverage necessary to negotiate favorable terms in quality of service agreements with ISPs. Glaringly, when the FCC speaks about the power content providers will have over ISPs, it focuses on companies like Netflix and Amazon. FCC Order, ¶ 134 (“In addition, larger edge providers, such as Amazon, Facebook, Google and Microsoft, likely have significant advantages that would reduce the prospect of inefficient outcomes due to ISP market power.”); *id.* ¶ 136 (“It is unlikely that any ISP, except the very largest, could exercise substantial market power in negotiations with Google or Netflix.”). *id.* ¶ 171 (“[M]ajor edge providers, including Netflix, YouTube . . . [can] shape consumer perceptions in the event of any dispute with ISPs.”). But the fact that Netflix and Amazon have so much leverage over ISPs actually *hurts* higher education and other non-profits; these institutions must directly compete with such large companies for faster transmission and guaranteed access.

Moreover, even when the FCC explained the purported benefits the Order will provide to smaller content providers, it failed to consider universities, libraries, and other non-profits. In the FCC’s view, relatively cheaper and slower

transmission speeds may actually benefit smaller companies because it could ease entry costs for “new providers and brands.” *Id.* ¶ 255. But this argument “assumes access to investor capital by such start-ups that higher education, research, and library organizations will never have.” *Ex Parte Letter, supra*, at 2. Instead, higher education and libraries will be left behind.

Third, increased transparency and market pressure will principally protect broadly popular content—harming universities and libraries much more than commercial providers. The FCC’s new transparency rules and reliance on market pressures assume that end-users will respond to blocking by changing ISPs. But with no guarantee that end-users will protest the blocking of their sometimes unpopular or controversial content, universities and libraries will be less able to safeguard their academic freedom. Even universities and libraries’ non-controversial content is at greater risk of being blocked than commercial content. Most end-users will not switch providers if an ISP interrupts educational content sent to students seeking specialized degrees or researchers steeped in a technical discipline. And if university and library transmissions are blocked, the theoretical availability of expensive, after-the fact remedies through antitrust and consumer protection actions will often fail to fully cure the harm. As opposed to profit-driven commercial providers, much of *amici*’s digital content is offered for the benefit of the general public.

Finally, the Order simply never addresses the very real concern that colleges, universities, and public libraries are non-commercial entities with limited resources and important public missions. *See* ACE Comments, *supra*, at 13 (“[The] missions and resource constraints” on higher education institutions and libraries “preclude them from paying . . . additional [transmission] fees.”). Instead, the Order treats all content providers as though they are profit-motivated commercial actors, whose content provides no broader public benefit. *See* FCC Order, ¶ 254 (describing the ban on paid prioritization as the best way to “allocat[e] resources in [the] market economy” for broadband). The FCC even goes so far as to say that the Order somehow benefits universities, libraries, and other non-profits because, more broadly, it benefits “[t]he public.” *Id.* ¶ 253, n.914. This wholly inadequate explanation demonstrates the FCC has no response to *amici*’s concern that the Order will make it substantially more difficult to expand educational opportunities, instruct students, advance research, and broadly share information with the public.

In sum, the Order will imperil *amici*’s important public missions and make it more difficult for universities and libraries to function in an increasingly interconnected world. Because the FCC disregarded an “important aspect of the problem,” *amici* agree with the petitioners that the Court should vacate the Order. *State Farm*, 463 U.S. at 43.

CONCLUSION

For the foregoing reasons and those in Petitioners' joint briefs, the Court should vacate the FCC's Order.

Respectfully submitted,

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August 27, 2018

CERTIFICATE OF COMPLIANCE

1. This document complies with the type-volume limits of Fed. R. App. P. 32(a)(7) and Fed. R. App. P. 29(a)(5) because, excluding the parts of the document exempted by Fed. R. App. P. 32(f), this document contains 6,471 words.

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/s/ Jessica L. Ellsworth
Jessica L. Ellsworth

CERTIFICATE OF SERVICE

I certify that on August 27, 2018, the foregoing was electronically filed through this Court's CM/ECF system, which will send a notice of filing to all registered users.

/s/ Jessica L. Ellsworth
Jessica L. Ellsworth

ADDENDUM

ADDENDUM – LIST OF AMICI CURIAE

The **Accreditation Council for Pharmacy Education (ACPE)** is the national agency for the accreditation of professional degree programs in pharmacy and providers of continuing pharmacy education. ACPE also offers evaluation and certification of professional degree programs internationally and with ASHP accredits pharmacy technician education and training programs.

The **American Association of Colleges for Teacher Education (AACTE)** is a national alliance of educator preparation programs dedicated to high-quality, evidence-based preparation that assures educators are profession-ready as they enter the classroom. AACTE member institutions include public and private colleges and universities in every state, the District of Columbia, the Virgin Islands, and Guam. Through advocacy and capacity building, AACTE promotes innovation and effective practices that strengthen educator preparation.

The **American Association of Colleges of Nursing (AACN)**— is the national voice for academic nursing. Representing over 800 member schools offering baccalaureate and graduate programs in nursing at public and private universities nationwide, AACN works to establish quality standards for nursing education; assists schools in implementing those standards; influences the nursing profession to improve health care; and promotes public support for professional nursing education, research, and practice.

The **American Association of Community Colleges (AACC)** is the primary advocacy organization for the nation’s community colleges. It represents more than 1,100 two-year, associate degree-granting institutions.

The **American Association of State Colleges and Universities (AASCU)** is a Washington, D.C.-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. These are institutions Delivering America’s Promise of Opportunities for All.

The **American Library Association (ALA)** is the oldest and largest library association in the world. Founded in 1876, the mission of ALA 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.”

The **Association of American Universities (AAU)** is a non-profit organization, founded in 1900 to advance the international standing of United States research universities. AAU’s mission is to shape policy for higher education, science, and innovation; promote best practices in undergraduate and graduate education; and strengthen the contributions of research universities to society. Its members include 62 public and private research universities.

The **Association of College & Research Libraries (ACRL)** is the higher education association for academic libraries and library workers. Representing more than 10,000 individuals and libraries, ACRL (a division of the American Library Association) develops programs, products, and services to help those working in academic and research libraries learn, innovate, and lead within the academic community. Founded in 1940, ACRL is committed to advancing learning and transforming scholarship.

The **Association of Jesuit Colleges and Universities (AJCU)** represents all 28 Jesuit institutions in the U.S. and is affiliated with over 100 Jesuit institutions worldwide.

The **Association of Public and Land-grant Universities (APLU)** is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities in the U.S., Canada, and Mexico. With a membership of 237 public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement. Annually, member campuses enroll 4.8 million undergraduates and 1.3 million graduate students, award 1.3 million degrees, employ 1.3 million faculty and staff, and conduct \$44.9 billion in university-based research.

The **Association of Research Libraries (ARL)** is a nonprofit organization of 123 research libraries at comprehensive, research institutions in the U.S. and Canada that share similar research missions, aspirations, and achievements.

The **College and University Professional Association for Human Resources (CUPA-HR)**, the voice of human resources in higher education, represents more than 23,000 human-resources professionals at over 2,000 colleges and universities. Its membership includes 93 percent of all United States doctoral institutions, 78 percent of all master's institutions, 53 percent of all bachelor's institutions, and nearly 600 two year and specialized institutions.

The **Consortium of Universities of the Washington Metropolitan Area (CUWMA)** is a nonprofit organization founded in 1965 to advance joint educational opportunities for students; collaborate on critical issues and shape policy in higher education; collaborate with regional governments, businesses, and organizations to ensure an educated workforce and citizenry; and increase the postsecondary attendance rates of students in the Washington, DC region. CUWMA currently has 17 members across all sectors of nonprofit higher education.

EDUCAUSE is a nonprofit association and the foremost community of information technology leaders and professionals committed to advancing higher education. Through analysis, advocacy, and professional development, EDUCAUSE supports IT professionals and the contributions technology makes to institutional and community-wide strategic initiatives. EDUCAUSE membership includes 2,300 colleges, universities, and related organizations.

The **Middle States Commission on Higher Education (MSCHE)** is the agency that accredits degree-granting institutions in the Mid-Atlantic region of the United States. The mission of MSCHE is to assure students and the public of the educational quality of higher education. The Commission's accreditation process ensures institutional accountability, self-appraisal, improvement, and innovation through peer review and the rigorous application of standards within the context of institutional mission.

The **National Association for Equal Opportunity in Higher Education (NAFEO)**, is the Washington, D.C.-based, 501(c)(3) association of presidents and chancellors of 105 public, private, land-grant, 2- and 4-year, undergraduate, graduate and professional Historically Black Colleges and Universities (HBCUs)

and more than 80 Predominantly Black Institutions (PBIs). NAFEO serves as “the voice for blacks in higher education” and its members represent more than 700,000 students, 70,000 faculty, and 7 million alumni worldwide.

The **National Association of Independent Colleges and Universities (NAICU)** serves as the unified national voice of private, non-profit higher education in the United States. It has more than 1,000 members nationwide.

The **Student Affairs Administrators in Higher Education (NASPA)** is the leading association for the advancement, health, and sustainability of the student affairs profession.

Established in 1987, the **Thurgood Marshall College Fund (TMCF)** is the nation’s largest organization exclusively representing the Black College Community. TMCF member-schools include the *publicly-supported* Historically Black Colleges and Universities (HBCUs) and Predominantly Black Institutions (PBIs). *Publicly-supported* HBCUs enroll over 80% of all students attending HBCUs. Through scholarships, capacity building and research initiatives, innovative programs, and strategic partnerships, TMCF is a vital resource in the K-12 and higher education space. The organization is also a source for top employers seeking top talent for competitive internships and good jobs.