

ORAL ARGUMENT SCHEDULED FOR DECEMBER 4, 2015

No. 15-1063 (and consolidated cases)

**In the United States Court of Appeals
for the District of Columbia Circuit**

UNITED STATES TELECOM ASSOCIATION, *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**

***AMICUS CURIAE* BRIEF IN SUPPORT OF RESPONDENTS ON
BEHALF OF ENGINE ADVOCACY, DWOLLA, INC., OUR FILM FESTIVAL, INC.,
FOURSQUARE LABS, INC., GENERAL ASSEMBLY SPACE, INC., GITHUB, INC., IMGUR,
INC., KEEN LABS, INC., MAPBOX, INC., SHAPEWAYS, INC.**

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CORPORATE DISCLOSURE STATEMENT

Pursuant to Fed. R. App. P. 26.1 and D.C. Cir. R. 26.1, Engine Advocacy (“Engine”), Dwolla, Inc. (“Dwolla”), Our Film Festival, Inc. (“Fandor”), Foursquare Labs, Inc. (“Foursquare”), General Assembly Space, Inc. (“General Assembly”), GitHub, Inc. (“GitHub”), Imgur, Inc. (“Imgur”), Keen Labs, Inc. (“Keen IO”), Mapbox, Inc. (“Mapbox”), and Shapeways, Inc. (“Shapeways”) submit the following corporate disclosure statements:

Engine is a non-profit corporation organized under the laws of the state of California. Engine does not have any parent company and no publicly held corporation owns 10% or more of its stock.

Dwolla is a corporation organized under the laws of the state of Delaware. Dwolla does not have a parent company and no publicly held corporation owns 10% or more of its stock.

Fandor is a corporation organized under the laws of the state of Delaware. Fandor does not have a parent company and no publicly held corporation owns 10% or more of its stock.

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General Assembly is a corporation organized under the laws of the state of

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GitHub is a corporation organized under the laws of the state of Delaware. GitHub does not have any parent company and no publicly held corporation owns 10% or more of its stock.

Imgur is a corporation organized under the laws of the state of Delaware. Imgur does not have any parent company and no publicly held corporation owns 10% or more of its stock. Imgur is an online image sharing community and image host.

Keen IO is a corporation organized under the laws of the state of Delaware. Keen IO does not have any parent company and no publicly held corporation owns 10% or more of its stock.

Mapbox is a corporation organized under the laws of the state of Delaware. Mapbox does not have any parent company and no publicly held corporation owns 10% or more of its stock.

Shapeways is a corporation organized under the laws of the state of Delaware. Shapeways does not have any parent company. Koninklijke Philips N.V. is a publicly held corporation holding more than 10% of the stock of Shapeways.

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to D.C. Circuit Rule 28(a)(1), undersigned counsel and *amici curiae* certify that:

1. Parties and Amici

All parties appearing in this Court are listed in the Joint Brief for Petitioners USTelecom, NCTA, CTIA, ACA, WISPA, AT&T and CenturyLink.

2. Rulings Under Review

Protecting and Promoting the Open Internet, 30 FCC Rcd 5601 (2015) (“Order”).

3. Related Cases

Counsel is aware of no related cases.

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GLOSSARY

edge provider	Companies, like Amazon or Google, that provide content, services, and applications over the Internet
Internet Policy Statement	<i>Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review-Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities</i> , GN Docket No. 00-185, CC Docket Nos. 02-33, 01-33, 98- 10, 95-20, CS Docket No. 02-52, Policy Statement, 20 FCC Rcd 14986 (2005)
Open Internet Order	<i>In re Preserving the Open Internet, Broadband Industry Practices</i> , Report and Order, GN Docket No. 09-191, WC Docket No. 07-52, FCC 10-201, 25 FCC Rcd 17905 (Dec. 23, 2010)
Order	<i>In the Matter of Protecting and Promoting the Open Internet, Report and Order on Remand, Declaratory Ruling, and Order</i> , GN Docket No. 14-28, FCC 15-24, 30 FCC Rcd 5601 (2015)
Petitioners	United States Telecom Association, National Cable & Telecommunications Association, CTIA – The Wireless Association®, American Cable Association, Wireless Internet Service Providers Association, AT&T Inc., and CenturyLink
terminating monopoly	When a broadband provider controls an edge providers' access to an end user because the end user has limited choices as to broadband providers or the costs of switching broadband providers is too high

INTERESTS OF *AMICI CURIAE*¹

Engine Advocacy (“Engine”) supports the growth of technology entrepreneurship through economic research, policy analysis, and advocacy on local and national issues. Engine works with the White House, Congress, federal agencies, state and local governments, and also international advocacy organizations to educate and inform them of the changing face of American high-tech entrepreneurialism. Engine has a strong interest in this proceeding because if Petitioners are allowed to block, discriminate, or prioritize network traffic, the Internet, which has been an engine of growth, employment, and innovation in our country for the past two decades, would become a fractured and inhospitable environment for entrepreneurship and technological innovation.

Dwolla, Fandor, Foursquare, General Assembly, GitHub, Imgur, Keen IO, Mapbox, Shapeways are innovative technology companies spanning diverse industries that all benefit from the fast, unfettered and equal access that an open Internet offers to millions of consumers around the world. Dwolla is changing the way digital payments are made. Its digital payment network securely connects

¹ *Amici* state pursuant to Federal Rule of Appellate Procedure 29(c) that no party’s counsel authored this brief in whole or in part, and that no person or entity, other than *amici* and their counsel, contributed money to fund the preparation and submission of this brief. Pursuant to D.C. Cir. R. 29(a), all petitioners, respondents, and intervenors in this appeal have consented, or indicated that they do not oppose, to the filing of this brief.

with U.S. banks and credit unions to enable safe, fast, account-to-account transfers.

Fandor is an online video subscription service and social video sharing platform

specializing in independent films, classics, silent films, foreign films,

documentaries and shorts. Foursquare develops technology to help people explore

the world. People use Foursquare's products and services to discover great places,

find the best experiences around them, and meet up with friends. General

Assembly is an educational institution offering full-time immersive programs,

long-form courses, and classes and workshops on topics such as web development

and user experience design, business fundamentals, data science, product

management, and digital marketing. GitHub is a web-based hosting and

collaboration platform where people discover, share and contribute to software.

GitHub hosts over 26 million software projects and a community of more than 10

million people. Keen IO develops and provides a cloud application programming

interface that allows companies and people to collect, analyze, and visualize events

from anything connected to the Internet. Mapbox provides a platform for

designing and publishing custom online maps that are easy to integrate into mobile

and online applications. Mapbox's platform is changing the way people move

around cities and understand our planet. Shapeways provides a 3-D printing

marketplace and service. Shapeways hosts a community that is fostering a culture

of creativity. Each of these companies depends and relies on an open Internet to

reach their customers. Without an open Internet, many of these companies would have never existed. *Amici* have a significant interest in the issues on appeal and believe their viewpoints will assist the Court.

ARGUMENT

I. THE FCC PROPERLY CONCLUDED THAT RECLASSIFICATION WOULD PROMOTE THE “VIRTUOUS CYCLE” THAT DRIVES INNOVATION AND PROMOTES BROADBAND ADOPTION

Over the past two decades, the open Internet has provided the ideal conditions for innovation and in turn, unprecedented business opportunities for creative entrepreneurs and engineers across the country. Today, a website or mobile app developer toiling in a dorm room, a garage, or the local library to unleash the next big thing knows that after countless hours of work, his or her creation can be instantly accessed by the billions of Internet and mobile users around the world. They will be able to reach the *entire* Internet audience on *equal* terms, not some fragment of the world’s Internet users arbitrarily defined by a patchwork of policies, uneven speeds, and additional discriminatory fees imposed by the world’s most powerful broadband providers.

In light of the court’s holding in *Verizon v. FCC*, 740 F.3d 623, 644 (D.C. Cir. 2014) that the FCC cannot enact and enforce bright-line net neutrality protections unless it first reclassifies broadband as a “telecommunications service” under the Communications Act, the practical effect of rejecting the *Order*’s

reclassification decision would be the reversal of the policies responsible for the growth of America's booming startup sector and the rich ecosystem of content and services these companies have created. While the FCC's decision to reclassify broadband is a valid exercise of Commission authority independent of the important policy goals reclassification supports,² the rules that the Commission was able to enact pursuant to reclassification are the most important aspects of the rulemaking and this case. In the wake of *Verizon*, failing to reclassify broadband as a telecommunications service would mean that consumer broadband providers will have the power and incentive to block, discriminate, and offer preferences to some edge providers over others, distorting competition, raising the cost of innovation, and paving the way for a fractured Internet with artificial barriers to entry. Granting Petitioners the relief they request would introduce prohibitive transaction costs and impossible capital outlays into the entrepreneurship process. And, as the FCC correctly found, the increased cost of entrepreneurship would in turn lead to a decrease in demand for broadband services and consequently

² As the FCC found, while "an agency's evaluation of its prior determinations naturally includes consideration of the law affecting its ability to carry out statutory policy objectives...changed factual circumstances [in the broadband market] cause us to revise our earlier classification of broadband Internet access service based on the voluminous record developed in response to the *2014 Open Internet NPRM*." See, e.g., *Order* ¶¶ 328-30 (emphasis in original).

diminish incentives for broadband providers to invest in their networks. *See, e.g., Order* ¶ 125-27.

A. The FCC Found, and *Verizon* Affirmed, That Reclassification And Open Internet Rules Would Promote Broadband Deployment By Promoting Investment At The Edge

Petitioners claim that the FCC failed to provide even a “colorable justification” for reclassifying broadband Internet access services and failed to substantiate any need for reclassifying broadband. J. Br. of Pet’rs U.S. Telecom Ass’n et al., Docket #1565510, at 23, 47. Petitioners’ claims are demonstrably wrong. The FCC recognized that a uniform Internet is paramount in driving innovation today when it made its fundamental finding—which the *Verizon* court upheld—that Internet openness drives a “virtuous cycle” in which innovations at the edges of the network enhance consumer demand for more broadband, leading to expanded investments in broadband infrastructure that, in turn, spark new innovations at the edge. *Verizon*, 740 F.3d at 644. The *Verizon* court also affirmed the FCC’s conclusion that “broadband providers represent a threat to Internet openness and could act in ways that would ultimately inhibit the speed and extent of future broadband deployment.” *Id.* at 645. To protect this virtuous cycle, the *Order* sets, *inter alia*, three bright-line rules vital to an open Internet:

- No Blocking Rule – broadband providers may not block access to legal content, applications, services, or non-harmful devices;

- No Throttling Rule – broadband providers may not impair or degrade lawful Internet traffic on basis of content, applications, services, or non-harmful devices;
- No Paid Prioritization – broadband providers may not favor some lawful Internet traffic over other lawful traffic in exchange for consideration of any kind.

Order ¶¶ 14-19. The *Order* adopts an additional, flexible standard to protect the open Internet from new and unknown threats by establishing that Internet service providers (“ISPs”) cannot “unreasonably interfere with or unreasonably disadvantage” the ability of consumers to select, access, and use lawful content, applications, services or devices. *Id.* at ¶¶ 20-22.

Crucially, because the *Verizon* court held that the FCC could not enact bright-line rules banning ISP discrimination and blocking unless it first reclassified broadband as a telecommunications service,³ reclassification was a necessary prerequisite to crafting rules adequate to protect edge provider competition (and consequently thereby promote the virtuous cycle). The FCC therefore recognized that it must reconsider its prior classification decisions if it wished to promote its

³ The court held that bright-line prohibitions on discrimination and blocking constituted *per se* common carrier obligations, and because such common carrier obligations could not be imposed on “information services,” the FCC would need to reclassify broadband as a “telecommunications service” to impose these *per se* common carrier rules on ISPs. *See Verizon*, 740 F.3d at 628; *see also Order* ¶ 328.

important policy goal of “encourag[ing] the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans.” Section 706 of the 1996 Act, Pub. L. 104-104, §706, 110 Stat. 153, codified at 47 U.S.C. § 1302. The rules established in the *Order* that flow from this reclassification decision form a strong foundation for an open Internet that is crucial to drive innovation in technology and investment in broadband infrastructure.

B. Competition and Innovation At The Edge Drives Consumer Demand For Broadband Services

The “virtuous cycle” is made possible — and drives demand for broadband services — because of competition and innovation by edge providers. Consumers do not seek broadband services because of some intrinsic desire to access AT&T’s (or any other broadband company’s) technology infrastructure. Rather, they seek broadband services for one reason and one reason only: because they want to access the overwhelming universe of content, information, and services offered by edge providers, the vast majority of which either are, or began life as, startups. Consumers that want access to these services demand higher quality connections to take full advantage of the Internet’s full potential, prompting broadband providers to invest more money in their networks. And creative entrepreneurs find new ways to utilize these faster, better, and cheaper broadband connections to build more innovative services that spur consumer demand even higher. The growth of digital

movie distribution services like Fandor exemplifies this positive feedback cycle: pioneers in the digital video space sparked consumer demand for faster Internet connections to access these new services, and broadband companies invested more money into their networks to satisfy this growing consumer demand. Fandor recognized that these better connections could be used to give consumers access to independent films that have historically had limited distribution, and built a platform to provide access to such films, benefitting artists and audiences alike. The services that startups like Fandor and the other signatories to this brief have built with access to an open Internet have transformed the economy and the world, all while growing the market for broadband.

People once shopped Borders for books; they now shop at Amazon.com and rent ebooks through Oyster. People once rented films at Blockbuster; they can now watch on online streaming services such as Fandor. Consumers used to pay one another with cash; now they can send money through services such as Dwolla. Where people used to look businesses up in the Yellow Pages, Foursquare allows people to quickly and easily find the best experiences around them. People once called on cabs for urban transportation; they now call cars through Uber and Lyft. People once had to enroll in college courses to learn how to program. Today, anyone with a computer and Internet access can learn online from professors and industry professionals through courses offered by General Assembly. Startups

such as Mapbox are helping companies change the way people move around cities and understand our planet, while others like Keen IO help Internet businesses collect and understand the vast amounts of data they generate every day. Others such as Shapeways combine the Internet with 3-D printing to offer anyone with an imagination the ability to make and sell custom designed products. And the list goes on and on and on.

Without strong open Internet protections, many of these companies would not have been started, as entrepreneurs and investors would not have taken the risk of founding these companies.⁴ The past decade of tech innovation would not have been possible in an environment in which broadband providers could set exorbitant and discriminatory prices for accessing customers, even while the cost of running the applications themselves fell 99% in a decade.⁵ And without edge providers such as these startups, demand for broadband Internet would be miniscule to non-existent. In which case broadband providers would have little or no reason to

⁴ *In the Matter of Open Internet Remand*, Reply Comments of Imgur, Inc., GN Docket No. 14-28 (Aug. 12, 2014), available at <http://goo.gl/788GMf>; *In the Matter of Open Internet Remand*, Reply Comments of Shapeways, GN Docket No. 14-28 (Aug. 5, 2014), available at <http://goo.gl/E9FpiU>; *In the Matter of Open Internet Remand*, Comments of Fandor, GN Docket No. 14-28 (July 25, 2014), available at <http://goo.gl/57eFXi>; *In the Matter of Open Internet Remand*, Comments of General Assembly, GN Docket No. 14-28 (July 1, 2014), available at <http://goo.gl/V14JpK>.

⁵ Marc Andreessen, *Why Software Is Eating The World*, The Wall Street Journal, (Aug. 20, 2011), available at <http://on.wsj.com/1gt4wRH>.

invest in infrastructure, and the virtuous cycle would come to a screeching halt.

The spillover effects of net neutrality rules are not limited to increased broadband deployment. Technology entrepreneurs, enabled by open Internet policies, have created massive global economic value and job growth. A report from 2013 showed that “[d]uring the last three decades, the high-tech sector was 23 percent more likely and [information and communication technology] 48 percent more likely than the private sector as a whole to witness a new business [startup].”⁶ The jobs created by companies in the technology sector account for 5.6% of the job market in the United States.⁷ These jobs are in states, cities, and towns across the country, from Los Angeles to Kansas City, from Nashville to Washington, DC.⁸ These tech jobs further stimulate the local economy, as tech workers spend money locally, creating even more jobs.⁹ The impact of these technology companies is global, not national. According to McKinsey & Co., the Internet economy represents 3.4% of the global GDP.¹⁰ The economic growth that

⁶ Ian Hathaway, *Tech Starts: High-Technology Business Formation and Job Creation in the United States*, Kauffman Foundation, at 2 (Aug. 2013), available at <http://goo.gl/PoN6vX>.

⁷ Ian Hathaway, *High-Tech Employment and Wages in the United States*, Bay Area Council Economic Institute, at 10 (Dec. 2012), available at <http://goo.gl/u1NJLX>.

⁸ *Id.* at 10.

⁹ *Id.* at 25. (“For each job created in the local high-tech sector, approximately 4.3 jobs are created in the local non-tradable sector in the long run.”)

¹⁰ Matthieu Pélissié du Rausas, James Manyika, Eric Hazan, Jacques Bughin, Michael Chui, Rémi Said, *Internet Matters: The Net’s Sweeping Impact on*

open Internet policies promote feed back into the broadband system, as greater purchasing power and economic freedom will only increase demand for edge provider services and, consequently, greater broadband deployment.

C. **Strong Net Neutrality Rules—Not Regulatory Classifications of Broadband Access—Are Responsible for Protecting The Virtuous Cycle of Innovation**

The connection between net neutrality and the explosive growth of the Internet economy is not a coincidence. Though *Petitioners* attempt to confuse the issue by conflating the regulatory classification of broadband with the actual regulations enacted pursuant to that classification, it is undeniable that the Internet has operated under a de facto net neutrality regime over the past decade, leading to a tremendous expansion of both edge provider services and broadband adoption—the virtuous cycle in action. *Petitioners* repeatedly assert that “classifying broadband as an information service furthered congressional intent by encouraging investment in broadband” to argue that classifying broadband as a telecommunications service is anathema to broadband expansion and investment. But, in doing so, *Petitioners* ignore that it was the actual substance of the principles that the FCC enacted pursuant to the “information service” classification that facilitated the explosive growth of the broadband market, not the mere

Growth, Jobs, and Prosperity, McKinsey & Company, at 11-12 (May 2011), available at <http://goo.gl/6yfcGt> (This 2009 estimate is based on a study of 13 countries including G8 countries.)

classification itself. *J. Br. of Pet'rs U.S. Telecom Ass'n et al.*, at 50. Indeed, even under the prior classification, the FCC endeavored to provide for an open Internet,¹¹ and it is these net neutrality principles and regulations, not the technical classification itself, that spurred the virtuous cycle.

In 2005, when the net neutrality debate was just a few years old, the FCC adopted the *Internet Policy Statement* that set forth that consumers had the right, subject to reasonable network management, to: (1) “access the lawful Internet content of their choice;” (2) “run applications and use services of their choice;” (3) “connect their choice of legal devices that do not harm the network;” (4) enjoy “competition among network providers, application and service providers, and content providers.” *Internet Policy Statement* ¶ 4. The statement pledged to respond to any violations of these principles with swift enforcement action. *Id.* at ¶ 96. That same year, the FCC issued its seminal Madison River decision, ordering an ISP to stop blocking Vonage.¹² In 2008, after it was discovered that the largest ISP in the nation Comcast was interfering with some of the Internet’s most popular

¹¹ As described in section I.A, *supra*, the decision in *Verizon v. FCC* nullified the FCC’s attempt to protect the open Internet while broadband remained classified as an information service.

¹² *In re Madison River Communications, LLC and affiliated companies*, Consent Decree, 20 FCC Rcd 4295 (Mar. 3, 2005), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-05-543A2.pdf; *In re Madison River Communications, LLC and affiliated companies*, Order, 20 FCC Rcd 4295 (Mar. 3, 2005), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-05-543A1.pdf.

technologies—a set of five peer-to-peer (P2P) technologies—the FCC enjoined Comcast in a bipartisan decision.¹³ In 2010, the FCC further formalized its net neutrality stance, adopting the *Open Internet Order* that was partially vacated just last year.¹⁴ Additionally, in the years since 2005, the FCC has conditioned spectrum assignments and mergers on net neutrality rules. The largest three broadband providers have been (or remain) subject to net neutrality for many years. AT&T accepted two-year net neutrality conditions in its merger with BellSouth.¹⁵ SBC accepted a two-year condition in its merger with AT&T.¹⁶

¹³ *In re Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices, Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application Violates the FCC's Internet Policy Statement and Does Not Meet an Exception for "Reasonable Network Management,"* Memorandum Opinion and Order, WC Docket No. 07-52, FCC 08-183, 23 FCC Rcd 13028 (Aug. 20, 2008), available at

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-183A1.pdf.

¹⁴ *In re Preserving the Open Internet, Broadband Industry Practices, Report and Order*, GN Docket No. 09-191, WC Docket No. 07-52, FCC 10-201, 25 FCC Rcd 17905 (Dec. 23, 2010), available at

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf.

¹⁵ *In re AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, Memorandum Opinion and Order, WC Docket No. 06-74, FCC 06-189, 22 FCC Rcd 5662, at 154-55 (Mar. 26, 2007), available at

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-189A1.pdf.

(“AT&T/BellSouth also commits that it will maintain a neutral network and neutral routing in its wireline broadband Internet access service...”)

¹⁶ *In re SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, Memorandum Opinion and Order, WC Docket No. 05-65, 20 FCC Rcd 18290 (Nov. 17, 2005), available at

http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-183A1.pdf.

Verizon accepted a similar condition in its merger with MCI.¹⁷ Verizon purchased a 22MHz band of spectrum (the C block) in the FCC's 2008 700MHz auction for \$4.7 billion dollars, and did so subject to open Internet conditions modeled on the *Internet Policy Statement*.¹⁸ Comcast has been subject to network neutrality rules since its merger with NBC in 2011, and the merger condition extends for seven years.¹⁹ Both Verizon and Comcast's conditions still apply today. Moreover, Congress imposed contractual obligations on Internet networks built with stimulus funds—nondiscrimination and interconnection obligations that, at a minimum,

¹⁷ *In re Verizon Communications Inc. and MCI, Inc. Application of Approval of Transfer of Control*, Memorandum Opinion and Order, WC Docket No. 05-75, FCC 05-184, 20 FCC Rcd 18433, at 130 (Nov. 17, 2005), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-184A1.pdf.

¹⁸ *Compare Service Rules for the 698–746, 747–762 and 777–792 MHz Bands*, Second Report and Order, WT Docket No. 06-150, 22 FCC Rcd 15289 ¶ 256 (2007) (“Specifically, a C Block licensee may not block, degrade, or interfere with the ability of end users to download and utilize applications of their choosing on the licensee’s C Block network, subject to reasonable network management.”) *with Internet Policy Statement*, at 3 (“consumers are entitled to access the lawful Internet content of their choice. ... consumers are entitled to run applications and use services of their choice”).

¹⁹ *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licensees*, Memorandum Opinion and Order, MB Docket No. 10-56, FCC 11-4, 26 FCC 4238 ¶ 120 (Jan. 20, 2011), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-4A1.doc. (“Further, for seven years after the closing of the transaction, Comcast commits that it will not discriminate [against local in-market non-NBCU stations.]”)

adhered to the *Internet Policy Statement*, among other obligations.²⁰

All of these net neutrality principles, rules, merger obligations, and license conditions were in operation while the FCC classified broadband as an information service, and it is largely these rules—not the information service classification itself—that promoted the growth of the Internet economy. *Order* ¶ 76 (“[T]he remarkable increases in investment and innovation seen in recent years—while the [*Open Internet Order*’s] rules were in place [under the “information services” classification]—bear out the Commission’s view” that net neutrality protections promote the virtuous cycle.”)

The value of strong net neutrality rules and the logic of the virtuous cycle of innovation has been recognized time and again by the FCC and the courts. *Order* ¶ 7. So long as strong net neutrality rules remain in effect, there is little reason to believe that the virtuous cycle will slow with the change in the classification of broadband.

But if broadband providers are permitted to “deneutralize” the Internet, the consequences for startups — and, due to the “virtuous cycle,” for further investment in broadband infrastructure and further innovation at the edge — will be devastating. For example, a blocked startup would be unable to reach a subset

²⁰ American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(j), 123 Stat. 115 (codified at 47 U.S.C. § 1305).

of users in the market. This is a particular problem for startups whose products rely on network effects—those that become more valuable with more users— such as social networks, e-commerce platforms connecting buyers and sellers, sites for user-generated content (including reviews, photos, or micro-blogs), cloud-based application programming interfaces, and payment networks. If blocked by some ISPs, these companies will be less likely to survive in the market, even if consumers would otherwise prefer their services.

Similarly, discrimination or throttling network traffic could have a detrimental competitive effect. A startup with a site that does not load quickly or is less reliable than a competitor's will be harmed in several ways. First, users will likely switch to competitors whose services receive better treatment from ISPs. According to research compiled by Strangeloop Networks, “three out of five [users] say that poor performance will make them less likely to return” and two of five said “they'd likely visit a competitor's site next.”²¹ Second, besides moving to competitors, users will either spend less money on e-commerce sites or view fewer pages on sites that garner advertising revenue through the number of page views. For example, in 2007, for every 100ms increase in load time, Amazon's sales

²¹ Jolie O'Dell, *Why Websites Are Slow and Why Speed Really Matters [INFOGRAPHIC]*, Mashable, (Apr. 5, 2011), available at <http://mashable.com/2011/04/05/site-speed/>.

decreased 1%;²² AOL found that users whose sites load faster view up to 50% more pages than visitors whose pages load slowly.²³

Paid prioritization, or charging fees, both for access and preference, also imposes a significant problem for startups. Today it is inexpensive to start a technology company, with the minimal costs consisting of: computers, software, and office space, all of which are competitively priced. Due to these low costs, entrepreneurs generally do not need to raise money in the early stages of a startup. But, without open Internet protections, access and prioritization fees priced far above cost by ISPs with terminating monopolies would be added to the cost of entry, pricing many potential startups out of existence before they even began. Unlike software costs, which decrease exponentially due to competition, ISPs generally face no competition, meaning that there is no clear limit to the size of these fees over time.

These access fees will in turn reduce entrepreneurship. Some unfunded early startups may not be able to afford access fees, particularly if the product is data-intensive like a video streaming service, and will decide not to start a

²² Ryan Kelly, *How Webpage Load Time is Related to Visitor Loss*, Pear Analytics Blog, (Aug. 7, 2009), available at <https://www.pearanalytics.com/blog/2009/how-webpage-load-time-related-to-visitor-loss/>.

²³ Jolie O'Dell, *Why Websites Are Slow and Why Speed Really Matters [INFOGRAPHIC]*, Mashable, (Apr. 5, 2011), available at <http://mashable.com/2011/04/05/site-speed/>.

company. Others will start the company but will need to raise money earlier and will need to raise more of it. That makes fund-raising harder in three ways: the entrepreneur will have done less to test the market in ways that lower investors' risk, would need to raise a larger round of initial financing (therefore drawing from a smaller number of larger investors or more small investors), and could only offer investors a smaller potential reward. It would also likely result in a lower valuation for the entrepreneur, meaning the entrepreneur would need to sell more of her company in the fund-raising.

The Commission correctly recognized the problem with access and prioritization fees in its 2010 *Open Internet Order*:

Fees for access or prioritization to end users could reduce the potential profit that an edge provider would expect to earn from developing new offerings, and thereby reduce edge providers' incentives to invest and innovate. In the rapidly innovating edge sector, moreover, many new entrants are new or small "garage entrepreneurs," not large and established firms. These emerging providers are particularly sensitive to barriers to innovation and entry, and may have difficulty obtaining financing if their offerings are subject to being blocked or disadvantaged by one or more of the major broadband providers.

Open Internet Order ¶ 26. Fees for access or prioritization will chill investment and innovation across the domestic and global economy. Throughout the history of the Internet, entrepreneurs without significant outside funding have developed some of the most important innovations. There is no reason to expect this to

change unless the Court vacates the *Order*. Without rules protecting an open Internet it will be more difficult for those kinds of innovators to develop new applications, content, or services, which will in turn significantly reduce the amount and quality of innovation.²⁴ Less innovation will curtail demand for broadband services, diminishing incentives for broadband providers to invest in their networks.

II. THE TRUE RELIANCE INTERESTS LIE WITH THE TECHNOLOGY STARTUPS AND NOT WITH THE BROADBAND PROVIDERS

Petitioners claim that the FCC “induced” and then somehow disrupted “massive reliance interests” by changing the regulatory classification of broadband from an “information service” to a “telecommunications service.” J. Br. of Pet’rs U.S. Telecom Ass’n et al., at 50. However, Petitioners entirely gloss over precisely how the *Order*’s reclassification decision harmed their reliance interests. That is, Petitioners fail to adequately identify any change in the actual rules governing the provision of broadband access that would somehow harm “\$800 billion” in broadband investment. *See id.* at 51. Instead, to gin up claimed harm

²⁴ See Barbara van Schewick, 2010, *Opening Statement at the Federal Communications Commission’s Workshop on Approaches to Preserving the Open Internet* (Apr. 28, 2010), available at <http://goo.gl/GZOqGf>; Barbara van Schewick, *Internet Architecture and Innovation*, MIT Press 2010, pp. 204-213, 310-314, 318-328, 334-345 (discussing the importance of different types of low-cost innovators, including many examples).

where none exists, Petitioners craft conspiracy theories about how the FCC might, pursuant to the new classification, eventually enact rules and exercise powers that the *Order* expressly disclaims. *Id.* at 55. Once Petitioners' straw man arguments are revealed as such, it becomes clear that the true reliance interest at issue here lie with startups that built their companies and grew the Internet economy with the expectation that providers would not be able to use their gatekeeper power to discriminate against them.

A. Petitioners Fail To Identify Any Practical “Reliance Interests” At Issue

Though Petitioners repeatedly claim that the *Order*'s reclassification of broadband upsets their reliance interests, they fail to properly identify the aspect of the prior classification upon which they relied. Petitioners cannot plausibly argue that simply changing how the FCC classifies broadband without any practical change in the rules governing broadband provision disrupt their reliance interests. Yet, Petitioners' brief is devoid of any clearly identifiable change in the actual treatment of broadband that would constitute such a disruption. The distinction between a change in *classification* and a change in the *rules* is crucial, since only the latter could plausibly have any bearing on the value of Petitioners' investments. Beyond conclusory claims that they invested under the FCC's prior Title I classification because it represents “light touch” regulation, whereas the new Title

II classification is “heavy handed,” Petitioners nowhere attempt to identify the actual rule changes under the *Order* that so disrupt their expectations. J. Br. of Pet’rs U.S. Telecom Ass’n et al., at 51-55. Indeed Petitioners cannot, as the FCC applied significant forbearance, precluding the application of over 700 codified rules in the Title II framework. *Order* ¶¶ 37, 51.

Instead of identifying any actual changes that disrupt their reliance interests, Petitioners point to hypothetical conspiracy theories to justify their arguments, arguing that the FCC’s forbearance was a sham and that the Commission will eventually regulate “matters covered by certain provisions from which it nominally forbore, thus applying ‘all of Title II ... through the backdoor of sections 201 and 202.’” J. Br. of Pet’rs U.S. Telecom Ass’n et al., at 55. Even though the FCC expressly stated on the first page of the *Order* that it has no intention—now or in the future—to impose rate regulation on broadband providers (“We expressly eschew the future use of prescriptive, industry-wide rate regulation.” *Order* ¶ 5), Petitioners base their claim of harmed reliance interests on the FCC’s “threatened rate regulation.” J. Br. of Pet’rs U.S. Telecom Ass’n et al., at 55. Petitioners’ paranoia about future FCC actions cannot plausibly constitute changed circumstances that disrupt reliance interests.²⁵

²⁵ The investment data also belies the Petitioner’s reliance argument. From 2011 to 2013, when the FCC’s Open Internet Rules were in place, broadband providers

B. The True Reliance Interests Lie With The Edge Providers

The countervailing interests of the technology community far outweigh the non-existent reliance interests of broadband providers. Pursuant to the decision in *Verizon v. FCC*, it is clear that the FCC cannot protect the open Internet through the strong net neutrality rules and principles that have historically governed the Internet, unless it first reclassifies broadband as a “telecommunications service.” *See Verizon*, 740 F.3d at 650-58. Thus, up until the decision in *Verizon v. FCC* was decided, players in the Internet ecosystem justifiably expected the FCC to protect an open Internet by promoting strong net neutrality policies. Therefore, if the FCC’s decision to reclassify broadband as a Title II service is overturned, the innumerable startups that relied on the expectation that the Internet would remain open and free from ISP discrimination will be irreparably harmed. There are countless examples of startups and technology companies who would not have found success without open access to the Internet.

invested over \$212 billion dollars in their networks, more than in any three year period since 2002. *Order* ¶ 2. The evidence also shows that substantial investments were made in broadband infrastructure over the last 20 years, a period when the Internet operated under de facto net neutrality rules. *In the Matter of Protecting and Promoting the Open Internet*, Comments of Free Press, GN Docket No. 14-28, at 98-99, 103, 104, 107 (July 17, 2014), available at http://www.freepress.net/sites/default/files/resources/Free_Press_14-28_Comments_7-18-2014.pdf. These investments were the byproduct not of a particular classification but of the growth of consumer demand for the exponentially expanding edge provider market that was only made possible by the expectation of an open Internet. *Order* ¶¶ 7, 76-77.

Imgur, for example, has created an online image sharing community that allows users to consume, create, and share tomorrow's viral content, today. It is one of the largest websites in the world, hosting over 130 million unique users per month, and serving over 5 billion pageviews. Imgur is home to a diversity of human expression: users share opinions, discuss popular culture, debate current events, share personal dilemmas, and everything in between.

Imgur would not exist without an open Internet. Alan Schaaf, the founder of Imgur, launched the website from his college dorm room. The concept was simple: allow anyone to easily and anonymously upload an image at any time and without limits on access. Imgur began as a side project, not a formal startup. The open Internet, without blocking, discrimination, and paid prioritization, enabled fair competition between Imgur and other websites. If broadband providers were allowed to charge arbitrary rates for "fast lane" access to their users, Imgur, lacking formal support and financial resources, would have never come into existence.

As another example, Shapeways is the world's leading 3D printing marketplace and community. Shapeways enables designers to bring products to life. Shapeways also empowers entrepreneurs and small businesses to sell their products. Shapeways hosts over 33,000 Shapeways shops. Shapeways shop owners earned over \$500,000 in profit in 2012 from customers in 113 countries.

This success happened because of an open Internet. Without open Internet rules in place, discriminatory practices by ISPs would likely have made the cost of entry prohibitive and denied Shapeways and its shop owners access to the billions of Internet users around the globe. Shapeways' success was built upon its ability to provide a first class service to its community, not on cutting deals with Internet service providers. Additionally, were discrimination allowed today, resulting in Shapeways site loading slower or being blocked for some users, it would disadvantage the thousands of businesses that Shapeways supports.

The story continues with General Assembly, a company disrupting the traditional education sector. General Assembly offers several online learning products and has created an innovative and effective model for job creation. Students come to General Assembly to learn how to take an idea and turn it into a business, creating an engine for new job growth.

General Assembly, like Imgur and Shapeways, could not have found the success it has without an open Internet. General Assembly competes with traditional for-profit and not-for-profit education institutions that also offer online programs. Without a net neutrality regime, General Assembly would have had an even harder time competing with established industry players who can more easily afford to pay for priority access to Internet users. General Assembly continues to depend on an open Internet so that it can offer its programming and services for

years to come.

The other *amici* on this brief, Dwolla, Fandor, Foursquare, GitHub, Keen IO, and Mapbox similarly relied on the open Internet when they were started and continue to rely on it today. Without an open Internet, many of these companies likely would have never been started due to the increased costs and uncertainty that comes with discrimination and paid prioritization. Others would have wilted in the face of their deep-pocketed competitors who would have been able to afford access to the “fast lane.” To change the rules of the game now by permitting blocking, discrimination, and paid prioritization would disadvantage not only the *amici*, but also the hundreds of thousands of other startups and technology companies that have come to rely on an open Internet.

III. THE INTERNET CONDUCT STANDARD PROHIBITING UNREASONABLE INTERFERENCE OR UNREASONABLE DISADVANTAGE IS NECESSARY TO PREVENT FUTURE HARM

Petitioners also take aim at the *Order*'s “Internet Conduct Standard,”²⁶ arguing that it is unconstitutionally vague and fails to provide broadband providers adequate notice of what conduct is permissible.²⁷ J. Br. of Pet'rs U.S. Telecom

²⁶ The *Order* refers to a “no-unreasonable interference/disadvantage standard,” which Petitioners call the “Internet Conduct Standard.” *Order* ¶ 137. Hereafter, references to the “Internet Conduct Standard” refer to this standard.

²⁷ Petitioners also argue that the Internet Conduct Standard is an unlawful byproduct of the FCC's improper reclassification of broadband Internet access

Ass'n et al., at 79. These arguments reflect an incorrect understanding of the law and good policy. A regulation, such as the Internet Conduct standard, that offers “flexibility and reasonable breadth, rather than meticulous specificity[,]” does not violate the void for vagueness doctrine. *See Grayned v. City of Rockford*, 408 U.S. 104, 110 (U.S. 1972). “Reasonableness” standards permeate telecommunications law. Indeed, the terms “unreasonably,” “interfere,” and “disadvantage,” are no less vague than the flexible “commercial reasonableness” standard supported by broadband providers that would have allowed ISPs to profit from discriminatory behavior.²⁸

As a matter of sound policy, the *Order*'s approach to protecting edge providers and consumers from ISPs abusing their gatekeeper power must necessarily involve a combination of bright-line prohibitions and flexible standards. Bright-line rules are preferable to flexible standards and case-by-case adjudication in many cases, since the startups and consumers that are most

service. J. Br. of Pet'rs U.S. Telecom Ass'n et al., at 27. While *amici* believe that this argument is unfounded, it is beyond the scope of this brief.

²⁸ See, e.g., *In re Protecting and Promoting the Open Internet*, GN Docket No. 14-28, *Framework for Broadband Internet Services*, GN Docket No. 10-127, Comments of The United States Telecom Association, at 50 (July 16, 2014), available at <http://goo.gl/KW0EdY>; *In re Protecting and Promoting the Open Internet*, GN Docket No. 14-28, *Framework for Broadband Internet Services*, GN Docket No. 10-127, Comments of Comcast Corporation, at 23-25 (July 15, 2014) (arguing that “commercially reasonable” standard is “legally sound”), available at <http://apps.fcc.gov/ecfs/comment/view?id=6017984223>.

dependent on the *Order*'s protections lack the resources necessary to litigate against well-heeled incumbents over obvious discriminatory practices like paid prioritization. For such companies, protections that are only realizable through protracted enforcement actions—such as the “commercially reasonable practices rule” envisioned in the original Notice of Proposed Rulemaking—are no protections at all.²⁹ Where it is possible to identify obvious, immediate threats to the open Internet, the FCC should strive to establish bright-line prohibitions on such practices. However, the fast pace of technological development means that ever new threats to the open Internet will continue to emerge faster than the FCC can create specific bright-line rules to address them.

Recognizing that broadband providers have the incentive and ability to use their gatekeeper power to discriminate against edge providers for their own financial gain, the FCC rightly concluded that broadband providers will have strong incentives to develop new discriminatory mechanisms that accomplish the

²⁹ See *In the Matter of Protecting and Promoting the Open Internet*, Notice of Proposed Rulemaking, GN Docket No. 14-28, 29 FCC Rcd 5561 ¶ 95 (2014). The FCC's NPRM issued in response to the court's decision in *Verizon v. FCC* proposed case-by-case adjudication of net neutrality complaints subject to a multi-factor reasonableness test without bright-line bans on paid prioritization or throttling. *Id.* at ¶¶ 116-35. The startup community vigorously opposed these rules on the grounds that the significant cost of enforcement would render the prohibition on unreasonable practices dead letter. *In re Open Internet Remand*, Reply Comments of Engine Advocacy, GN Docket No. 14-28 (Sept. 15, 2014), available at <http://apps.fcc.gov/ecfs/comment/view?id=6019183419>.

same goals but evade the *Order*'s bright-line rules.³⁰ *Order* ¶ 80. As such, the *Order* includes a flexible Internet Conduct Standard that establishes a conceptual framework to evaluate whether ISP practices not addressed by the *Order*'s bright line rules nevertheless violate core net neutrality principles. This Internet Conduct Standard provides that broadband providers may not “unreasonably interfere with or unreasonably disadvantage” end users’ ability to access Internet content and edge providers’ ability to make content available to end users and sets forth specific factors guiding application of the rule. *Id.* at ¶¶ 136, 138-145. These factors properly focus on the underlying principles behind net neutrality policy, disapproving of activities that distort competition amongst edge providers, *id.* at ¶ 140, harm the virtuous cycle, *id.* at ¶ 141, or disadvantage specific applications or sources of traffic, *id.* at ¶ 144. Contrary to Petitioners’ claims, the Internet Conduct Standard provides a reasonably clear explanation of what sort of conduct is impermissible: practices in which ISPs exploit their terminating access monopoly power to disadvantage and distort competition amongst particular edge providers to the detriment of consumer choice and the virtuous cycle are

³⁰ For example, when the FCC issued the *Open Internet Order* in 2010, the FCC failed to anticipate the rise of so-called “zero-rating” or “sponsored data” programs that most net neutrality advocates believe should be subject to bright-line prohibitions. This form of ISP discrimination simply did not exist in 2010, and the FCC could not reasonably have been expected to craft any specific rules governing such practices in the 2010 proceeding.

prohibited. While a list of specifically identified prohibited practices would be ideal, the complexity of technology and fast pace of innovation make this an impossible request. The FCC cannot reasonably be expected to accurately predict ahead of time how technology will develop, nor should it be required to engage in a lengthy rulemaking process each time ISPs unveil a new discriminatory practice. The startups that are responsible for growing the Internet economy and driving the virtuous cycle need a cop on the beat that can react quickly to new developments. Startups simply don't have the time to wait a year or more for the FCC to enact a specific bright-line rule prohibiting some new form of provider discrimination. By the time such a rule is passed and in effect, the impacted startups will be out of business. Were the FCC only limited to establishing rigid, practice-specific rules incapable of flexibly responding to the changing Internet landscape, the entire Internet ecosystem—edge providers and ISPs alike—would be injured, and the virtuous cycle would slow to the speed of bureaucratic rulemaking.

IV. CONCLUSION

The Commission's *Order* should be affirmed.

Dated: September 21, 2015

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I hereby certify that:

This brief complies with the type-volume limitations of Fed. R. App. P. 32(a)(7)(B) because this brief contains 6,993 words, excluding those parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

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Dated: September 21, 2015

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CERTIFICATE OF SERVICE

I hereby certify that, on September 21, 2015, I caused to be electronically filed the foregoing joint brief with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit using the appellate CM/ECF system. Participants in the case who are registered CM/ECF users will be served by the appellate CM/ECF system.

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