

**Before the
Federal Communications Commission**

In the Matter of

Open Internet Remand

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GN Docket 14-28

Comments of Engine Advocacy

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I. Introduction and Executive Summary

According to recent news reports, the Commission is considering adopting a rule that authorizes discrimination by ISPs and permits them to charge terminating access fees to technology companies. We believe such a rule, if adopted, would crush startups, and therefore undermine American technology entrepreneurship, innovation, and job creation.

Engine Advocacy—a research and advocacy organization representing more than 500 high-growth, entrepreneurial businesses, pioneers, innovators, investors, and technologists—strongly supports network neutrality on fixed and mobile platforms. We support the Chairman’s desire to adopt strong rules on disclosure, blocking and discrimination and believe they are necessary to support entrepreneurs. We believe, however, that Section 706 will likely not support these proposed safeguards and that reclassification is necessary. We urge the Commission to take comment on reclassification in an NPRM to better inform its decision-making. We believe it essential that the FCC take comment on a Title II approach in an NPRM.

The FCC’s conclusions in the 2010 Open Internet Order were correct: innovation depends on an open internet. Disruptive startups—and the investors funding the billions of dollars necessary for their growth—need certainty rather than the threat of unreasonable technical and commercial discrimination and blocking. The innovation ecosystem benefits from low costs of innovation, not an environment where multiple ISPs can impose above-cost, unconstrained access fees on startups. The 2010 conclusions ring even truer today, as fixed and mobile broadband revolutionize a wider range of industries daily, ranging from media to urban transportation, food, and short-

term housing. Arguments to the contrary—that startups welcome the “right” to negotiate to pay fees for access or outbid giant incumbent edge providers for special preferences—are divorced from the reality of entrepreneurship.

Properly crafted Open Internet rules are a solution to a real problem and would encourage further investment in innovation ecosystems in Silicon Valley, New York, Washington, D.C., and all over the nation in cities like Nashville, Minneapolis, Austin, and Boise. Moreover, rules adopted by the Commission will affect the ability of American startups to access consumers and markets not only in the United States, but also abroad, because foreign ISPs will seek the same powers available to U.S. ISPs to block, discriminate, and tax innovative American tech companies.

For these reasons, we support the Chairman’s proposal to strengthen the disclosure rule, to adopt a no-blocking rule, and to adopt a nondiscrimination rule. We also encourage the Chairman to address interconnection disputes involving access carriers with termination monopolies over users and we encourage the FCC not to exclude mobile platforms from this proceeding, as mobile is now the dominant way for Americans to access the internet. We urge the Commission to base its rules on Title II jurisdiction, which is required to implement these necessary mandates.

II. About Engine Advocacy: Voice for the Startup Economy’

Many of today’s technology-enabled companies seek to fundamentally alter and challenge entrenched business models, ideas, and institutions across all industries. It is these businesses that drive our economic prosperity, create jobs, and improve our lives. We advocate on their behalf. We have worked 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 represents a community of more than 500 high-technology, growth-oriented startups across the nation through research and advocacy that supports the growth of technology entrepreneurship. Our members include Meetup, Etsy, Yelp, Uber, Lyft, and Automattic. They also include much smaller companies such as Hipiti, WellDone, MentorMe, and Bot & Dolly. Our Advisory Board includes some of the nation's most influential venture capitalists and investors, including Brad Feld, John Lilly, and Ron Conway.

III. The Startup Ecosystem Depends an Open Internet

Entrepreneurs rely on an open internet to build their companies. Investors rely on the certainty of an open internet to invest billions of dollars in edge providers to power the innovation ecosystem. And the FCC's open internet, or network neutrality, actions and orders have been essential to ensuring such entrepreneurship and investment. Open internet rules are so essential because they address a real problem (not merely a solution "searching" for one) and because the FCC's actions have global impact, both on where Americans create new companies and on the foreign markets available to American companies.

A. Startups and Investors Rely on Network Neutrality

When a few bright engineers or business students have an idea, they can launch a business that can be available to billions of users all over the world, inexpensively,

and without discrimination. These founders take risks, forego stable jobs, and seek investment from friends, family, and institutional investors to face the pressure of failing or succeeding on the merits of their idea, engineering, user design, and industry knowledge. While some might fail—most startups do—the few who wildly succeed benefit millions of consumers, create thousands of jobs, create world-changing technologies, and power the innovation ecosystem that assumes a high failure rate and a few outsized successes.

This engine of innovation is only possible because today's founders—eventual failures and eventual successes alike—can take the first steps at extremely low cost. The costs are often merely the expense of hard work, low-cost cloud computing tools, and off-the-shelf laptops and mobile devices. These costs generally go down each year per unit of computing power, and competitive markets pass on those cost savings to technology companies. Startups typically pay the (falling) competitive costs of technologies rather than above-cost extraction by companies with termination monopolies.

As one investor explained in a Wall Street Journal op-ed, the cost of running a basic internet application fell from \$150,000 a month in 2000 to \$1,500 a month in 2011. That is a *99% drop in price*.¹ Because of competitive markets, the cost savings in components and services have been passed on to those applications and consumers, accelerating innovation and cost savings.

Startups rely on *not* being blocked, discriminated against, or subject to fees for access and preference. If some or all ISPs block a startup, the startup would be unable

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

to reach a subset 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 (or drivers and riders), sites for user-generated content (including reviews, photos, or micro-blogs), and payment networks. If blocked by some ISPs, these companies will be less likely to win in the market, even if consumers would otherwise prefer their services.

Discrimination could have the same competitive effect. If a startup's site does not load as quickly or if its application is not as reliable, it will be harmed in several ways. Users will switch to competitors whose services receive better treatment. 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."² Beyond moving to competitors, users will simply 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 decreased 1%;³ AOL found that users whose sites load faster view up to 50% more pages than visitors whose pages load slowly.⁴ If discrimination on networks leads to users choosing competitors and using the service less, then startups that would otherwise succeed will be more likely to fail.

In both cases, incumbent technology companies would understand their own incentive to partner with ISPs to block or discriminate against less well-resourced

² Jolie O'Dell, "Why Websites Are Slow and Why Speed Really Matters," Mashable, April 5, 2011, <http://mashable.com/2011/04/05/site-speed/>.

³ Ryan Kelly, "How Webpage Load Time is Related to Visitor Loss," Pear Analytics, Aug. 7, 2009, <https://www.pearanalytics.com/blog/2009/how-webpage-load-time-related-to-visitor-loss/>.

⁴ Jolie O'Dell, "Why Websites Are Slow and Why Speed Really Matters," Mashable, April 5, 2011, <http://mashable.com/2011/04/05/site-speed/>.

disruptive upstarts. Also in both cases, investors would quickly understand these increased risks and the need for larger minimum investments necessary for startups to overcome these risks and succeed. Some investors who would otherwise invest in a startup would therefore not invest, either because of the increase in uncertainty or the inability or unwillingness to invest the larger minimum necessary. As a result, fewer startups would be funded. Entrepreneurs would understand this environment going in, be less willing to take on the tremendous personal risk of starting a company, and there would be even fewer startups to fund.

Fees, both for access and preference, impose a slightly different, but still significant, problem for startups. The lack of fees kept the cost of innovation low. Today, it is inexpensive to start a technology company, and entrepreneurs generally do not need to raise an initial investment in the early stages of a startup. The costs are low: laptops, desks, cloud storage, and transit, all of which are competitively priced. Access fees will likely be priced far above cost because ISPs have terminating access monopolies over users, as the FCC observed in 2010. ISPs have a terminating access monopoly over their subscribers because the startup can only reach these subscribers by going through the ISPs. The startups would have to pay fees to reach subscribers. ISPs can keep these fees high and raise them every year, unlike transit costs and cloud storage, which decrease exponentially because competition drives the prices down to cost, and costs have fallen exponentially. Because ISPs with terminating access monopolies are unconstrained by competition (or the price of transit⁵), there is no clear limit to the size of these fees over time.

⁵ This is because transit connections are congested, as detailed by Level 3. Comments of Level 3, GN Docket No. 14-28, March 21, <http://apps.fcc.gov/ecfs/document/view?id=7521094640>.

Moreover, startups would not pay for preferential treatment unless preferential treatment is necessary to compete. This will give ISPs the incentive to ensure that the “basic” service available to a company may not ensure its competitiveness. Indeed, if well-resourced competitors receive preferential treatment, then startups would be forced also to pay for preference in order to stay competitive.

These access fees will reduce entrepreneurship. Some unfunded early startups may not be able to afford access fees (particularly if the product would be data-intensive) and will not start a 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 requiring the accumulation of 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 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.⁶

⁶ Preserving the Open Internet, GN Docket No. 09-191, Broadband Industry Practices, WC Docket No. 07-52, Report and Order, FCC 10-201 (Dec. 23 2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf at p. 16.

The Commission had it right. 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 and there is no reason to expect this to change. Thus, making it more difficult for those kinds of innovators to develop new applications, content, or services will significantly reduce the amount and quality of application innovation.⁷

In these ways, blocking, discrimination, and access fees would impose new burdens that would harm entrepreneurship. Today, American startups do not expect to be blocked, except perhaps abroad in countries like China or Turkey. They do not expect the existing, large competitors to receive better network access from telecommunications carriers based on payment, connections, or mere preference. They needn't hire lawyers or sales teams upfront to negotiate deals with a range of mobile, cable, and wireline telecommunications carriers to ensure "distribution" for their products or services. They needn't be Apple or Netflix in order to negotiate reliable service. They have not historically paid termination fees directly to carriers with termination access monopolies, which would essentially allow those carriers to charge prices far above marginal cost. Netflix has only recently begun paying terminating access fees, in an deal with Comcast that garnered considerable media attention because of it broke with history. To our understanding, startups have not paid these

⁷ See Barbara van Schewick, 2010, *Opening Statement at the Federal Communications Commission's Workshop on Approaches to Preserving the Open Internet*. Federal Communications Commission, http://www.law.stanford.edu/display/images/dynamic/publications_pdf/schewick-statement-20100428.pdf; 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).

termination fees; they do not even do so indirectly through transit costs and interconnection, since the largest transit providers such as Cogent refuse to pay them. The open internet has accelerated entrepreneurship and disruptive innovation on an unprecedented scale because of low transaction costs, a level playing field, and a unified network.

Investment in internet-enabled companies will likely decrease, as investors' returns will be subject to discrimination, blocking, and arbitrary terminating fees. The dynamic and competitive internet ecosystem relies on an open internet and certainty for startups that they will not face discrimination, blocking, and arbitrary fees.

B. Investment Relies on an Open Internet

Institutions, pensions, and wealthy individuals have invested billions of dollars in tech start-ups. They make these investments as individuals or through private equity and venture capital organizations, such as Andreessen Horowitz, New Enterprise Associates, Union Square Ventures, Greylock Partners, Sequoia Capital, Foundry Group, Spark Capital, and many more. These firms invest with the expectation of an open internet. Greylock Partners raised \$1 billion last September.⁸ Sequoia, a fund that was an early investor in Apple, Oracle, Google, WhatsApp, OpenDNS, and others, also raised a \$1.17 billion fund that month.⁹ Earlier this year, Andreessen Horowitz announced that it closed a \$1.5 billion fund for investments ranging from seed rounds to late stage funding rounds.¹⁰ In October, Foundry Group created a new \$225 million

⁸ Tomio Geron, "Facebook, LinkedIn Investor Greylock Partners Raised \$1 Billion for 14th Fund," Forbes, Sept. 10, 2013, available at <http://onforb.es/1jyCunc>.

⁹ "Sequoia Capital Raises \$1.17 Billion for New Funds," Reuters, <http://www.reuters.com/article/2013/08/16/us-sequoia-funds-idUSBRE97F0WW20130816>.

¹⁰ Scott Kapor, "Andreessen Horowitz Raises New Fund," Andreessen Horowitz, Mar. 27, 2014, available at <http://a16z.com/2014/03/27/andreessen-horowitz-raises-new-fund>; Romain Dillet, "Andreessen

fund devoted to “late stage growth” funding for companies in their existing portfolio.¹¹ In January of 2014, Union Square Ventures, which invested in Twitter, Tumblr, Coinbase and others, raised \$350 million for its fourth early-stage fund and its second fund backing more mature companies.¹²

These funds, and the investors in these funds, make substantial investments in startups as they scale. Every year, thousands of entrepreneurs raise hundreds of millions of dollars in their first rounds of financing; these rounds are generally below two million dollars each, and come from “angel” investors, friends, and family.¹³ Depending on how you slice the data, there are between five and ten billion dollars invested annually in Series A rounds, which are the first institutional funding rounds for a startup.¹⁴

As these internet companies grow larger, they need to raise more investment. At the beginning of April 2014, Lyft, an on-demand ride-sharing service, raised \$250 million in its fourth round of institutional funding to expand its offerings and compete with Uber.¹⁵ Last August, Uber raised \$361.2 million in a round led by Google Ventures.¹⁶

Horowitz Raises Massive New \$1.5 Billion Fund,” TechCrunch, Mar. 27, 2014, available at <http://techcrunch.com/2014/03/27/andreessen-horowitz-raises-massive-new-1-5-billion-fund>.

¹¹ Foundry Group, “Foundry Group Announces Its Newest Fund – Foundry Group Select,” Oct. 2013, available at <http://bit.ly/1qI4KVw>.

¹² Dan Primack, “Union Square Ventures raises new funds,” Jan. 24, 2014, available at <http://finance.fortune.cnn.com/2014/01/24/union-square-ventures-raises-new-funds>.

¹³ Jeff Zabel, “Analyzing the Series A Crunch,” DataHero, Oct. 1, 2013, <https://datahero.com/blog/2013/10/01/analyzing-the-series-a-crunch/>; Mark Lennon, “US Angel Investing This Year Likely Won’t Pass 2012 Levels,” TechCrunch, Oct. 1, 2013, <http://techcrunch.com/2013/10/01/us-angel-investing-this-year-likely-wont-pass-2012-levels/>.

¹⁴ Jeff Zabel, “Analyzing the Series A Crunch,” DataHero, Oct. 1, 2013, <https://datahero.com/blog/2013/10/01/analyzing-the-series-a-crunch/>; Mark Lennon, “US Angel Investing This Year Likely Won’t Pass 2012 Levels,” TechCrunch, Oct. 1, 2013, <http://techcrunch.com/2013/10/01/us-angel-investing-this-year-likely-wont-pass-2012-levels/>.

¹⁵ Ryan Lawler, “Lyft Raises \$250 Million From Coatue, Alibaba, And Third Point to Expand Internationally,” TechCrunch, Apr. 2, 2014, available at <http://techcrunch.com/2014/04/02/lyft-250m/>.

¹⁶ Alex Wilhelm, “Google Ventures Puts \$258M Into Uber, Its Largest Deal Ever,” TechCrunch, Aug. 22, 2013, available at <http://techcrunch.com/2013/08/22/google-ventures-puts-258m-into-uber-its-largest-deal-ever>.

Automattic, the company behind the blogging platform Wordpress.com (used by 19.9% of all sites on the Web), has raised over \$100 million in its last two rounds.¹⁷ Dropbox, an online file storage platform, raised a \$350 million round of funding recently after raising \$250 million from investors in 2011.¹⁸ Etsy has raised about \$92 million in venture capital funding to date.¹⁹ In April, Airbnb raised \$500 million, after having already raised \$326 million.²⁰

These investors rely on the assumption of a level playing field and one interconnected internet. They assume that blocking, discrimination, and unconstrained access fees will not threaten their investment.

C. Technology Startups Have Created Massive Value

As a result of the certainty provided by an open internet, American companies have become the envy of the world. They have been assured a large, wealthy domestic market and access to global markets without unconstrained, above-cost expenses and discrimination. As a result, we have seen immense innovation, cost-savings, job creation, and return on investment across a range of sectors.

Relying on an open internet, technology entrepreneurs have created massive global economic value and jobs. A recent report—commissioned by Engine—showed that “[d]uring the last three decades, the high-tech sector was 23 percent more likely

¹⁷ Evelyn M. Rusli, “Tiger Global Ups Investment in Creator of WordPress.com,” *The Wall Street Journal*, Sept. 17, 2013, available at <http://blogs.wsj.com/digits/2013/09/17/tiger-global-ups-investment-in-creator-of-wordpress>; Ryan Lawler, “WordPress.com Maker Automattic Sells \$50 Million in Secondary Offering to Tiger Global,” *TechCrunch*, May 24, 2013, available at <http://techcrunch.com/2013/05/24/wordpress-maker-automattic-sells-50-million-of-stock-in-secondary-offering-to-tiger-global>.

¹⁸ Anthony Ha, “Dropbox Has Raised \$350M In New Funding at A \$10B Valuation,” *TechCrunch*, Feb. 24, 2014, available at <http://techcrunch.com/2014/02/24/dropbox-filing>.

¹⁹ Frederic Lardinois, “Etsy Raises \$40M to Fuel International Expansion,” *TechCrunch*, May 9, 2012, available at <http://techcrunch.com/2012/05/09/etsy-raises-40m-to-fuel-international-expansion>.

²⁰ Ingrid Lunden, “Airbnb Has Closed Its \$500M Round Of Funding At A \$10B Valuation, Led By TPG,” *TechCrunch*, April 18, 2014, <http://techcrunch.com/2014/04/18/airbnb-has-closed-its-500m-round-of-funding-at-a-10b-valuation-led-by-tpg/>.

and [information and communication technology] 48 percent more likely than the private sector as a whole to witness a new business formation.”²¹ The high-tech jobs that are created by these businesses account for 5.6% of the job market in the United States.²² These jobs are not in Silicon Valley alone. They are in states, cities, and towns across the country, from Los Angeles to Kansas City, from Nashville to Washington, DC. As of 2011, Washington state had the highest concentration of tech jobs (11.4% of employment), followed by Massachusetts (9.4%), Virginia (9.3%), and Maryland (8.9%).²³ Additionally, these tech jobs spur further job creation and stimulate the local economy even beyond the jobs created in technology, as tech workers spend money locally, creating more jobs.²⁴ This impact is global, not national. According to McKinsey & Co., the internet economy represents 3.4% of the global GDP.²⁵

While we used to speak of a “tech sector,” technology is now an input into every industry, no less than electricity. We once shopped Borders for books; we now shop Amazon and rent ebooks through Oyster. We once rented films at Blockbuster; we now rent from iTunes or watch on Netflix. We once called on cabs for urban transportation; we now call black cars through Uber, and fellow drivers through Lyft and Sidecar. We

²¹ Ian Hathaway, “Tech Starts: High-Technology Business Formation and Job Creation in the United States,” Kauffman Foundation, Aug. 2013, available at http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2013/08/bdstechstartsreport.pdf at p. 2.

²² Ian Hathaway, “High-Tech Employment and Wages in the United States,” Bay Area Council Economic Institute, Dec. 2012, available at <http://www.bayareaeconomy.org/media/files/pdf/TechReport.pdf>, at p. 10.

²³ Ian Hathaway, “High-Tech Employment and Wages in the United States,” at p. 10.

²⁴ Ian Hathaway, “High-Tech Employment and Wages in the United States,” at p. 12. (“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.”)

²⁵ Matthieu Pélissié du Rausas, James Manyika, Eric Hazan, Jacques Bughin, Michael Chui, Rémi Said, “Internet matters: The Net’s sweeping impact on growth, jobs, and prosperity,” McKinsey & Company (May 2011), available at http://www.mckinsey.com/insights/high_tech_telecoms_Internet/Internet_matters at p.11-12. (This 2009 estimate is based on a study of 13 countries: G8 countries, as well as China, India, Brazil, Sweden, and South Korea.)

once had the option of several hotel chains; we can now use Airbnb to rent the homes of strangers—from castles to igloos—with even more variety. We could take Michael Sandel’s Justice class or Andrew Ng’s Machine Learning courses only if we could get accepted into (and afford) Harvard and Stanford; now, we can now take these classes online through EdX and Coursera, without obstacles. We once relied on annual doctor visits; we can now book those visits more conveniently through ZocDoc, and keep healthy between visits with the help of “quantified self” applications and hardware, including MyFitnessPal, Fitbit, and the Nike Fuelband. Consumers used to pay one another with cash; now they can send money through Paypal, Square, Venmo, and Dwolla. They spend not only dollars but also bitcoins. Our ready-to-eat meals were in grocery stores’ frozen food sections; now, companies like Plated and SpoonRocket enable us to order local meals delivered to our homes.

Beyond the technologies consumers see, enterprise applications transform businesses. Marketo and Salesforce make sales organizations and buyers more efficient. Companies like Wal-Mart, FedEx, and United Airlines use software to manage distribution, pricing, and optimization. Oil and gas companies use networked computing and big data to guide their gas exploration.²⁶ Agriculture today relies on internet connections for farmers to maximize output and minimize costs.²⁷

Finally, innovation has revolutionized freedom of expression. While we used to get our news from the one newspaper in town and TV news, we can now access newspapers, news clips, and analysis from all over the world. Anyone can have a blog

²⁶ Marc Andreessen, “Why Software Is Eating The World,” The Wall Street Journal, Aug. 20, 2011, available at <http://on.wsj.com/1gt4wRH>.

²⁷ Mediacom Expression of Interest, WC Docket No. 10-90, (Mar. 7, 2014), available at <http://apps.fcc.gov/ecfs/document/view?id=7521089654>.

on WordPress or Medium, a microblog on Tumblr or Twitter, and share the writings of others easily through social media. While these tools often begin in the United States, they spread to foreign nations, where they empower activists to organize politically. Put bluntly, there would not have been an Arab Spring without Facebook and Twitter.

D. This Innovation is Partly Due to the FCC's Open Internet Actions

Over the past ten years, the FCC's open internet actions have played an important role in ensuring this innovation. The FCC should be proud of this role and should build on it.

The past decade of tech innovation may not have been possible in an environment where the carriers could set exorbitant and discriminatory prices for running internet applications, even while the cost of running the applications fell 99% in a decade.²⁸ Without the FCC, established players could have paid for preferences, sharing their revenues with carriers in order to receive better service (or exclusive deals) and to crush new competitors and disruptive innovators. Venture investors would have moved their money elsewhere. Would-be entrepreneurs would have taken jobs at established companies or started companies in other nations.

While often imperfect, the FCC has done much to ensure an open internet. Carriers have not historically engaged in rampant discrimination partly due to the threat of FCC action. In 2005, when the net neutrality debate was just a few years old, the FCC adopted an Internet Policy Statement²⁹ and pledged to respond to any violations of

²⁸ See Marc Andreessen, "Why Software Is Eating The World," The Wall Street Journal, Aug. 20, 2011, available at <http://on.wsj.com/1gt4wRH>.

²⁹ 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," WC Docket No. 07-52, Nov. 1, 2007, available at http://transition.fcc.gov/broadband_network_management/fp_et_al_nn_declaratory_ruling.pdf, at p. 15-16.

the statement with swift action.³⁰ That year, the FCC also issued the *Madison River* decision, ordering an ISP to stop blocking Vonage.³¹ In 2008, after it was discovered that Comcast, the largest ISP in the nation, was interfering with some of the internet's most popular technologies—a set of five peer-to-peer (P2P) technologies—the FCC enjoined Comcast in a bipartisan decision.³² In 2010, the FCC adopted the *Open Internet Order* that was only recently struck down.³³ 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,³⁴ and SBC accepted a two-year condition in its merger with

³⁰ See *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Report and Order and Notice of Proposed Rulemaking, FCC 05-150 (Sept. 23, 2005), available at <http://www.stepto.com/assets/attachments/2040.pdf>, at para. 96.

³¹ *Madison River Communications, LLC and affiliated companies*, File No. EB-05-IH-0110; Acct. No.; FRN: 0004334082, Consent Decree, 20 FCC Rcd 4295 (2005) (*Madison River Consent Decree*), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-05-543A2.pdf; *Madison River Communications, LLC and affiliated companies*, File No. EB-05-IH-0110; Acct. No. 200532080126; FRN: 0004334082, Order, 20 FCC Rcd 4295 (Mar. 3, 2005) (*Madison River Order*), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-05-543A1.pdf.

³² *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," WC Docket No. 07-52, Memorandum Opinion and Order, FCC 08-183 (Aug. 20, 2008), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-183A1.pdf.

³³ *Preserving the Open Internet*, GN Docket No. 09-191, *Broadband Industry Practices*, WC Docket No. 07-52, Report and Order, FCC 10-201 (Dec. 23 2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf.

³⁴ *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (Mar. 26, 2007), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-189A1.pdf, at p.154-55 ("AT&T/BellSouth also commits that it will maintain a neutral network and neutral routing in its wireline broadband Internet access service. ... This commitment shall sunset on the earlier of (1) two years from the Merger Closing Date, or (2) the effective date of any legislation enacted by Congress subsequent to the Merger Closing Date that substantially addresses 'network neutrality' obligations of broadband Internet access providers, including, but not limited to, any legislation that substantially addresses the privileging, degradation, or prioritization of broadband Internet access traffic.")

AT&T.³⁵ Verizon accepted a similar condition in its merger with MCI.³⁶ 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.³⁷ Comcast has been subject to network neutrality rules since its merger with NBC in 2011, and the merger condition extends for seven years.³⁸ 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, adhered to the internet Policy Statement, among other obligations.³⁹

In light of these merger obligations, license conditions, FCC adjudications and rulemaking, and consistent threats of FCC action, startups have enjoyed a generally neutral network that is conducive to, and necessary for, innovation. The rules provide some certainty that startups would not be arbitrarily blocked, subject to technical or economic discrimination, or forced to pay carriers so that the carriers' consumers can

³⁵SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control, WC Docket No. 05-65, Memorandum Opinion and Order, November 17, 2005, http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-183A1.pdf.

³⁶Verizon Communications Inc. and MCI, Inc. Application of Approval of Transfer of Control, WC Docket No. 05-75, Memorandum Opinion and Order, FCC 05-184 (Nov. 17, 2005), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-184A1.pdf, at p. 130.

³⁷*Compare* 700 MHz order paragraph 206 (“[W]e will require only C Block licensees to allow customers, device manufacturers, third-party application developers, and others to use or develop the devices and applications of their choosing in C Block networks ... 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”).

³⁸Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licensees, MB Docket No. 10-56, Memorandum Opinion and Order, FCC 11-4 (Jan. 20, 2011), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-4A1.doc, at p. 50. (“Further, for seven years after the closing of the transaction, Comcast commits that it will not discriminate ‘against local, in-market non-NBCU stations in favor of NBCU stations with respect to certain technical signal carriage matters.’”)

³⁹American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(j), 123 Stat. 115 (codified at 47 U.S.C. § 1305).

access all the innovation online.

Following the *Verizon v. FCC* decision, that will likely change, in ways that harm entrepreneurship and the public interest.

E. In Absence of Network Neutrality, We Will See Massive Violations

For the last decade, the largest cable and phone companies have argued that network neutrality is “a solution in search of a problem.”

That assertion is false. The facts demonstrate a real problem. Even in the US—and despite the FCC’s actions on network neutrality—there have been some apparent violations. These include:

- Comcast interfering with peer-to-peer technologies, including some of the most popular technologies online;⁴⁰
- Apple blocking the application Skype on the iPhone, which is subject to a contract with AT&T, a carrier that competes with Skype;⁴¹
- Verizon, AT&T, and T-Mobile blocking Google Wallet, while all three companies are part of a competing mobile payments joint venture called Isis;⁴²
- and Comcast’s disputes with Level 3 and Netflix over termination fees and

⁴⁰ 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,” WC Docket No. 07-52, Memorandum Opinion and Order, FCC 08-183 (Aug. 20, 2008), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-183A1.pdf.

⁴¹ “AT&T Extends VoIP to 3G Network for iPhone,” AT&T, Oct. 6, 2009, available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=27207>; Ryan Singel, “AT&T Relents, Opens iPhone to Skype, VoIP,” *Wired.com*, Oct. 6, 2009, available at <http://www.wired.com/2009/10/iphone-att-skype>.

⁴² Sarah Perez, “Google Wallet Rolls Out To More Devices – Nope, Still No Love For Verizon, AT&T Or T-Mobile Owners,” May 16, 2013, available at <http://techcrunch.com/2013/05/16/google-wallet-rolls-out-to-more-devices-nope-still-no-love-for-verizon-att-or-t-mobile-owners>.

congested transit.⁴³

These are merely the American examples, and they occurred despite the FCC asserting continued support for network neutrality. In other countries, including democracies, there are numerous violations. In Canada, the telecommunications regulator has adopted network neutrality rules and has taken some action to enforce them against companies discriminating against peer-to-peer traffic.⁴⁴ One telecommunications company blocked the website of a union member during a strike against the company.⁴⁵

There have been widespread violations in Europe. In June of 2012, the Body of European Regulators for Electronic Communications (BEREC) released a report based on an investigation into practices restricting the open internet in the European Union. It found widespread violations affecting at least 1 in 5 users. In the fixed market, “at least 21% of broadband users are affected by P2P-related restrictions, either technically or contractually.”⁴⁶ In the mobile market, “at least 36% of broadband users are affected by P2P related restrictions, either technically or contractually.” Moreover, in the mobile market, “at least 21% of broadband users are affected by VoIP related restrictions,

⁴³ Drew Fitzgerald, “Level 3, Comcast Reach Accord on Internet Traffic Costs,” July 16, 2013, available at <http://online.wsj.com/news/articles/SB10001424127887323394504578609963298727892>; Shalini Ramachandran, “Netflix to Pay Comcast for Smoother Steaming,” Feb. 23, 2014, available at <http://online.wsj.com/news/articles/SB10001424052702304834704579401071892041790>.

⁴⁴ Michael Geist, “CRTC Investigation Finds Rogers Violated Net Neutrality Rules,” MichaelGeist.ca, Jan. 20, 2012, available at <http://www.michaelgeist.ca/content/view/6252/125/>; Michael Geist, “Canada’s Net Neutrality Enforcement Failure,” MichaelGeist.ca, July 8, 2011, available at <http://www.michaelgeist.ca/content/view/5918/159>.

⁴⁵ Barbara Van Schewick, “Internet Architecture and Innovation,” MIT Press (2010) at p. 267-68.

⁴⁶ BEREC, “A view of traffic management and other practices resulting in restrictions to the open Internet in Europe,” May 29, 2012, available at http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/Traffic%20Management%20Investigation%20BEREC_2.pdf, at p. 21.

either technically or contractually.”⁴⁷ Beyond P2P and VoIP, BEREC also found restrictions on “other specific applications (such as gaming, streaming, e-mail or instant messaging service) and, to a much lesser extent, on access to specific content and application providers.” Additionally, a “number of cases of operators giving preferential treatment to specific types of over-the-top traffic were also found (e.g. prioritising streaming and other real-time applications, HTTP, etc.)” Finally, in some mobile networks, “some cases of applications or websites which are excluded from the monthly data cap (HTTP traffic, customer care portals or applications such as Facebook).”⁴⁸ One well-known example is threatened discrimination in the Netherlands against U.S.-based Whatsapp. That threat prompted the adoption of a network neutrality law in the Netherlands within two months.⁴⁹

These violations are common even in the presence of disclosure rules and more robust ISP competition than available in the U.S. A recent *ex parte* letter by Barbara van Schewick sets out both the theoretical argument and evidence demonstrating that ISP competition and disclosure will not deter network neutrality violations. As a theoretical matter, the “market for Internet service is characterized by incomplete customer information, product differentiation in the market for Internet access and for wireless and wireline bundles, switching costs, and, in some countries, a concentrated market structure in the market for Internet services.”⁵⁰ These factors limit the effectiveness of

⁴⁷ BEREC, “A view of traffic management and other practices resulting in restrictions to the open Internet in Europe,” May 29, 2012, available at http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/Traffic%20Management%20Investigation%20BEREC_2.pdf, at p. 21.

⁴⁸ BEREC, “A view of traffic management and other practices resulting in restrictions to the open Internet in Europe,” May 29, 2012, at p. 8-9.

⁴⁹ Kevin J. O’Brien, “Dutch Lawmakers Adopt Net Neutrality Law,” *The New York Times*, Jun. 22, 2011, available at http://www.nytimes.com/2011/06/23/technology/23neutral.html?pagewanted=all&_r=0.

⁵⁰ Barbara van Schewick, *Ex Parte*, March 3, 2014, at 6, <http://apps.fcc.gov/ecfs/document/view?id=7521087925>. For a full analysis, see Barbara van

competition in stopping violations. The evidence bears out this theory, as network neutrality violations are common even where there is competition among ISPs, including in wireless and wireline markets in Europe.⁵¹

In short, there have been violations in the United States and abroad, and violations continue even with ISP competition for consumers and with disclosure rules. An enforceable network neutrality rule is a necessary solution to this critical problem.

F. The Commission's Rules Will Have A Global Impact

If the FCC adopts rules permitting U.S. ISPs to engage in discrimination and impose access fees on innovative startups, then foreign nations will unleash their own ISPs to block, discriminate against, and extract cost-irrelevant fees from American startups. If AT&T has the right to extract fees from and discriminate among leading American edge providers, certainly foreign ISPs will fight for the same privilege. To some governments, network neutrality is seen as protectionism for American technology companies. They would favor enabling their ISPs to extract rents from these companies while propping up their local technology companies. Indeed, many foreign governments will likely look to the FCC's rules as a floor, and enable at least as much discrimination permitted by U.S. laws. As a result, established American technology leaders and the next generation of American giants will face a patchwork of fees, technical balkanization, and veiled protectionism.

Moreover, while some foreign governments will encourage *their* ISPs to extract rents, others will attempt to lure *our* entrepreneurs and engineers to build the next billion

Schewick, "Network Neutrality and Quality of Service: What a Non-Discrimination Rule Should Look like", forthcoming, 67 Stanford Law Review ____ (2015), Section "Formal Approaches: Ban Discrimination That Is Not Disclosed."

⁵¹ Barbara van Schewic, Ex Parte, March 3, 2014, at 7, n. 17, <http://apps.fcc.gov/ecfs/document/view?id=7521087925>.

dollar innovations in their countries. When the *Verizon v. FCC* decision was issued, the European Union’s commissioner for the digital agenda tweeted, “Maybe I shd [should] invite newly disadvantaged US startups to EU, so they have a fair chance.”⁵² A few months later, the European Parliament adopted tough network neutrality rules.⁵³ Chile has sought to attract global entrepreneurs. In 2010, Chile has launched a government initiative to encourage entrepreneurship, called Startup Chile.⁵⁴ Through that program, the government has invested millions of dollars in and provided mentorship to hundreds of startups from around the world.⁵⁵ The majority of the participating founders have come from the United States.⁵⁶ Chile is also the first nation to adopt network neutrality regulations—passed almost unanimously with 100 votes to 1 abstention—in 2011.⁵⁷

A strong network neutrality rule adopted by this Commission will discourage foreign ISPs from discriminating against leading American technology companies, and will perhaps discourage Americans (and others) from leaving the country to build their businesses abroad.

⁵² Matthew Hilburn, “Net Neutrality Debate in US Could Have Global Ripple Effects,” Voice of America News, Jan. 17, 2014, available at <http://www.voanews.com/content/net-neutrality-debate-in-us-could-have-global-ripple-effects/1832561.html>.

⁵³ Mark Scott and James Kanter, “E.U. Lawmakers Approve Tough ‘Net Neutrality Rules,’” The New York Times, Apr. 3, 2014, available at <http://www.nytimes.com/2014/04/04/business/international/eu-lawmakers-approve-tough-net-neutrality-rules.html?hpw&rref=technology>; Michael Fertik, “The EU Outpaces the U.S. On Net Neutrality,” Forbes, Apr. 3, 2014, available at <http://www.forbes.com/sites/michaelfertik/2014/04/03/the-eu-outpaces-the-us-on-net-neutrality>.

⁵⁴ Andrea Huspeni, “Start-Up Chile and Why Many Americans are Itching to Enter This Early-Stage Accelerator,” Entrepreneur, Jul. 2, 2013, available at <http://www.entrepreneur.com/article/227127>; Susan Cohen and Mintz Levin, “The Start-up Chile visa program: Chile’s gain is out loss,” VentureBeat, Dec. 20, 2013, available at <http://venturebeat.com/2013/12/20/start-up-chile>.

⁵⁵ Andrea Huspeni, “Start-Up Chile and Why Many Americans are Itching to Enter This Early-Stage Accelerator,” Entrepreneur, Jul. 2, 2013..

⁵⁶ Andrea Huspeni, “Start-Up Chile and Why Many Americans are Itching to Enter This Early-Stage Accelerator,” Entrepreneur, Jul. 2, 2013.

⁵⁷ Tim Stevens, “Chile becomes first country to guarantee net neutrality, we start thinking about moving,” Engadget, July 15, 2010, available at <http://engt.co/1gSjKKQ>; OpenMedia, “Chile: A Leader in Net Neutrality Legislation,” Available at <https://openmedia.ca/plan/international-comparisons/chile>.

IV. Engine Urges the Commission to Adopt Strong Rules on All Platforms

Engine urges the Commission to adopt disclosure rules, while forbidding blocking, discrimination, and the charging of termination fees. Engine urges the Commission to adopt these rules whether the abuses happen through deep packet inspection or interconnection, and to do so for fixed and mobile platforms.

A. Disclosure

We support the Chairman's proposal to strengthen the disclosure rule, to adopt a no-blocking rule, and to adopt a nondiscrimination rule. We also encourage the Chairman to address interconnection disputes involving access carriers with termination monopolies over users, and exhort the FCC not to exclude mobile platforms from this proceeding, as mobile is now the dominant way for Americans to access the internet. We urge the Commission to determine the appropriate jurisdiction to implement these necessary rules.

We support strengthening the disclosure rule so that the Commission, the public, and technology innovators can understand what is happening within our networks, and whether and how the ISPs are engaging in discrimination. In light of recent high-profile interconnection disputes,⁵⁸ we agree that this disclosure rule should cover the interconnection agreements between ISPs with termination access monopolies and content delivery networks (CDNs) or backbone providers.

B. No Blocking

We agree with the Commission that the FCC should adopt a rule against blocking. Permitting ISPs to arbitrarily block entrepreneurs, whether technically or

⁵⁸ Jon Brodtkin, "Netflix Got a Bit Faster on Comcast After Opening its Wallet," *Ars Technica*, Mar. 10 2014, <http://arstechnica.com/business/2014/03/netflix-got-a-bit-faster-on-comcast-after-opening-its-wallet/>.

financially, would undermine certainty, cripple investment, and harm both those entrepreneurs and consumers. The D.C. Circuit suggested defining the no-blocking rule using a minimum threshold of megabits per second available to any application.⁵⁹ The Commission should consider a definition that ensures that ISPs do not effectively block applications in other ways, such as increasing jitter, increasing latency, or deliberately failing to upgrade transit links and other interconnection links in ways that ensure an application will not work for a small but significant number of users.

C. No Discrimination

We believe the Commission should forbid technical and commercial discrimination. ISPs should not engage in unreasonable technical discrimination, for pay or not. They should also not engage in non-technical discriminations, such as excluding some applications from bandwidth caps while subjecting others to them. Even if the FCC (wrongly) sanctions ISPs to charge edge innovators for termination, the ISPs should not be permitted to charge different, arbitrary rates to different edge innovators. To provide certainty to the market place, the FCC should adopt a bright-line non-discrimination rule that would allow ISPs and edge innovators and their investors to determine in advance which type of discriminatory conduct is prohibited by the rule.⁶⁰ The non-discrimination rule should ban all forms of application-specific discrimination, while allowing all application-agnostic discrimination.⁶¹

While ISPs should be allowed to engage in reasonable network management,

⁵⁹ Verizon v. FCC, 740 F.3d 623, 60-61 (D.C. Cir. 2014).

⁶⁰ Barbara van Schewick, "Network Neutrality and Quality of Service: What a Non-Discrimination Rule Should Look like", forthcoming, 67 Stanford Law Review ____ (2015), Section "Problems with Case-by-Case Adjudication."

⁶¹ Barbara van Schewick, "Network Neutrality and Quality of Service: What a Non-Discrimination Rule Should Look like", forthcoming, 67 Stanford Law Review ____ (2015), Section "Ban Application-Specific Discrimination, But Allow Application-Agnostic Discrimination."

such management should be application-agnostic. The same principles that guide the non-discrimination rule should guide the Commission's evaluation of network management practices. This is because the harm to users and innovators from exclusionary conduct is the same regardless of the network provider's motivation, making it necessary to impose these constraints on reasonable network management.⁶²

D. No Access Fees

We believe that the Commission should forbid access fees. In the 2010 Open Internet order, the Commission properly concluded that ISPs have not historically charged such fees, and that such fees will likely be inefficiently high and will suppress innovation and investment.⁶³ As the Commission did in the 2010 Open Internet Order, the FCC should again forbid access fees and presume that payment for discrimination is unreasonable and a violation of the rules.⁶⁴

E. Application to In-Network Blocking or "Interconnection" Points

We believe the FCC should forbid blocking, discrimination, or access fees whether the terminating ISPs enforce such actions through deep-packet inspection (DPI) within their networks or through interconnection at the edge of their networks. From the perspective of the ends of the networks—with edge innovators on one end and consumers on the other—blocking is blocking. Historically, ISPs would block applications within their networks through DPI, as evidenced by Comcast's blocking of

⁶² Barbara van Schewick, "The FCC's Open Internet Rules – Stronger Than You Think," Stanford CIS Blog, Jan. 2, 2011, <http://cyberlaw.stanford.edu/blog/2011/01/fcc%E2%80%99s-open-internet-rules-%E2%80%93-stronger-you-think>.

⁶³ Preserving the Open Internet, GN Docket No. 09-191, Broadband Industry Practices, WC Docket No. 07-52, Report and Order, FCC 10-201 (Dec. 23, 2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf at para. 25-26.

⁶⁴ Preserving the Open Internet, GN Docket No. 09-191, Broadband Industry Practices, WC Docket No. 07-52, Report and Order, FCC 10-201 (Dec. 23, 2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf at para. 67 & 76.

peer-to-peer uploads until 2008.⁶⁵ (They could also engage in discrimination against domain names through the DNS system.⁶⁶) But that doesn't mean that interconnection is beyond the scope of network neutrality. The FCC's open internet actions and orders have always been concerned with interconnection; their goal has been to ensure an "open and interconnected internet," and interconnection concerns were among the bases of jurisdiction asserted in both the *Comcast* and *Verizon* cases.⁶⁷ Removing interconnection from the scope of this proceeding would be at odds with that history. It would also make it more difficult for the FCC to adopt a unified view of the similar threats to innovation posed by blocking, discrimination, or access fees enforced either through DPI or interconnection.

F. Both Fixed and Mobile Access

Finally, the FCC should extend the rules to mobile broadband. The Commission in 2010 noted, "We recognize that there is one internet (although it is comprised of a multitude of different networks), and that it should remain open and interconnected regardless of the technologies and services end users rely on to access it."⁶⁸ Then the Commission determined that it was too early to impose the open internet obligations on mobile providers but promised to be vigilant in monitoring violations.

Today, it is clear that mobile should be covered. First, consumers spend more

⁶⁵ Preserving the Open Internet, GN Docket No. 09-191, Broadband Industry Practices, WC Docket No. 07-52, Report and Order, FCC 10-201 (Dec. 23, 2010), at p. 23-25.

⁶⁶ Karl Bode, "Is DNS Redirection a Network Neutrality Violation? As usual, it depends who you ask..." DSL Reports, Nov. 15, 2007, available at <http://bit.ly/1oUiuRi>; Ed Felten, "Verizon Violates Net Neutrality with DNS Deviations," FreedomToTinkler.com, Nov. 12, 2007, available at <http://bit.ly/1gSjQ5k>.

⁶⁷ Marvin Ammori, "Interconnection Disputes Are Network Neutrality Issues (of Netflix, Comcast, and the FCC)," CircleID, Apr. 7, 2014, http://www.circleid.com/posts/20140407_interconnection_disputes_are_network_neutrality_issues/.

⁶⁸ Preserving the Open Internet, GN Docket No. 09-191, Broadband Industry Practices, WC Docket No. 07-52, Report and Order, FCC 10-201 (Dec. 23, 2010), at p. 30.

time online through mobile connections than fixed connections.⁶⁹ Second, as a result, many startups develop their applications on mobile first or exclusively. These startups, which have been the next wave of innovation, also need the certainty of protection from the Open Internet rules. Third, we have seen wireless violations. For example, the three wireless providers working together to launch Isis, a mobile payments service, have excluded Google Wallet, a competitor.

V. Section 706 Cannot Support the Necessary Open Internet Rules

In light of these necessary rules, we believe that Section 706 is not up to the task of preserving investment and startup-creation in the innovation economy.

A. Section 706 Would Compromise the Nondiscrimination Rule

The D.C. Circuit in *Verizon* made it clear that a general nondiscrimination rule is impermissible under Section 706 of the Telecommunications Act.⁷⁰ Indeed, the Court suggested that the Commission would have to permit exclusive deals among edge providers and ISPs, as well as individualized decision-making in every deal. In a discussion of a hypothetical defense of the no-blocking rule that may (or may not have) persuaded the Court, the majority stated: “Verizon might, consistent with the anti-blocking rule—and again, absent the anti-discrimination rule—charge an edge provider like Netflix for high-speed, priority access while limiting all other edge providers to a more standard service. In theory, moreover, not only could Verizon negotiate separate agreements with each individual edge provider regarding the level of service provided, but it could also charge similarly-situated edge providers completely different prices for

⁶⁹ James O’Toole, “Mobile apps overtake PC Internet usage in U.S.,” CNN Money, Feb. 28, 2014, available at <http://money.cnn.com/2014/02/28/technology/mobile/mobile-apps-Internet/>.

⁷⁰ *Verizon v. FCC*, 740 F.3d 623, 4 (D.C. Cir. 2014).

the same service.”⁷¹ The implications are clear. Under Section 706, Verizon and other carriers must be allowed to charge edge providers, to charge them for priority, to charge only one company for an exclusive arrangement and limit *all other* providers to worse service, and charge different companies different prices for the same service. That is, the price of pursuing Section 706 appears to be a “yes-discrimination” rule.

B. Section 706 Would Create Impossible Procedural Hurdles

Small innovators do not have the resources to bring a case under a rule subject to Section 706’s limitations and a “commercial reasonableness” standard. Such a rule would provide no certainty and impose considerable expenses. The FCC’s data-roaming order, which survived under Section 706, was not a common carrier rule partly because it defined “commercially reasonable” using 16 different factors. These factors are not a simple checklist: they include complex economic questions regarding businesses, market dynamics regarding alternative options, and engineering issues. Each factor could require expert witnesses, including economists and engineers. In addition to these 16 factors was a final factor, for “other special” circumstances; the FCC emphasized that the factors were not “exclusive or exhaustive.”⁷²

Beyond the test, Section 706 invites as-applied challenges, as ISPs will likely argue that the FCC’s decision was in fact motivated by common carrier considerations that are impermissible under Section 706. So startups would likely face not just an FCC case, but also the certainty of appeal. Of course, these startups must undergo this gauntlet of uncertain legal actions, expert witnesses, and appeals, while being subject

⁷¹ Verizon v. FCC, 740 F.3d 623, 60-61 (D.C. Cir. 2014).

⁷² Cellco Partnership v. FCC, 700 F.3d 534 (D.C. Cir. 2012) (upholding Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile-data services, 26 F.C.C.R. 5411, 5452-53 (2011)).

to the discrimination, blocking, or access fees imposed by an ISP.

This kind of legal process would be death for startups. It provides the opposite of certainty or low costs. It benefits those who understand the Commission, who are long-time repeat players (like the carriers), and who have the largest pocket book and can survive a long, expensive, unclear case requiring expert witnesses.

Startups would be better off just paying carriers for access in order to avoid the nuisance of going through a lawsuit—as well as the nuisance of likely retaliation by carriers. Even worse, some startups would likely just close up shop. Essentially, this test would permit an ISP to engage in discriminatory behavior in the network, and then drag out a case before the Commission, bleeding a startup's business both ways.

C. Section 706 Would Particularly Hurt Small Startups

If there is discrimination, it may be against the smallest, youngest companies with the least bargaining power. Indeed, we have seen that patent trolls target startups, which often lack legal advisors and resources, and extract payments for the nuisance value.⁷³

D. With Reclassification, the Commission Could Ensure Innovation

While the FCC is the expert on its own jurisdiction, the D.C. Circuit has suggested in both the Comcast and the Verizon decisions that reclassification would result in the Commission's having the authority to implement network neutrality and other vital rules. The Commission would be able clearly to impose rules addressing blocking, discrimination, and access fees under Sections 201, 202, and 251, rather than

⁷³ See, e.g., Colleen V. Chien, "Startups and Patent Trolls," *Stanford Technology Review*, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2146251.

watering down an order to fit within the confines of Section 706. Indeed, beginning with Section 706 and working backward to define the substantive rules is unwise. The Commission should determine the requisite rules and then determine the necessary jurisdictional questions. We believe the Commission should rely on the provisions in Title II, rather than Section 706.

VI. Conclusion

The open internet has supported massive technology innovation, thanks partly to the FCC's actions over the past decade. Violations of network neutrality are a real threat and will become a bigger global threat unless the FCC adopts a strong network neutrality rule. The Commission should not adopt any problematic (and enormous) exceptions for interconnection or mobile access. And the FCC cannot protect an open internet under Section 706.