Before
The Federal Communications Commission
Washington, D.C. 20554

In the Matter of

Notice of Proposed Rulemaking
Restoring Internet Freedom
GN Docket No. 17-108

COMMENT OF

Open Media and Information Companies Initiative (Open MIC) on behalf of itself and Scott M. Stringer, New York City Comptroller; Boston Common Asset Management, Trillium Asset Management LLC, Sustainability Group of Loring, Wolcott & Coolidge, Zevin Asset Management LLC, Friends Fiduciary Corporation, Arjuna Capital LLC, Share Power Responsible Investing Inc., SRI Investing LLC, Earth Equity Advisors; Nathan Cummings Foundation, Park Foundation, Wallace Global Fund, The Russell Family Foundation, Bullitt Foundation, Robert W. Deutsch Foundation, The Prentice Foundation, The Christopher Reynolds Foundation, Singing Field Foundation, As You Sow Foundation.

Submitted by:

Open Media and Information Companies Initiative (Open MIC)
Michael Connor
Executive Director
212-875-9381
mconnor@openmic.org

July 14, 2017

This comment is offered by the Open Media and Information Companies Initiative (Open MIC), a non-profit organization, on behalf of itself and the following investment advisors, investment management firms and foundations: Scott M. Stringer, New York City Comptroller; Boston Common Asset Management, Trillium Asset Management LLC, Sustainability Group of Loring, Wolcott & Coolidge, Zevin Asset Management LLC, Friends Fiduciary Corporation, Arjuna Capital LLC, Share Power Responsible Investing Inc., SRI Investing LLC, Earth Equity Advisor, Nathan Cummings Foundation, Park Foundation, Wallace Global Fund, The Russell Family Foundation, Bullitt Foundation, Robert W. Deutsch Foundation, The Prentice Foundation, The Christopher Reynolds Foundation, Singing Field Foundation, As You Sow Foundation.

Collectively, these individuals, advisors and organizations represent approximately $190 billion in assets and Assets Under Management (AUM).

Open MIC works to foster more open and democratic media through market-based solutions, including shareholder engagement. For the past decade, Open MIC has collaborated with investors to advocate for responsible network neutrality policies and practices at leading Internet Service Providers (ISPs) and has assisted in the development and filing of multiple shareholder proposals regarding network neutrality at AT&T, Verizon, Comcast and CenturyLink.

The investment advisors, investment managers and foundations offering these comments are diversified institutional investors with fiduciary interests in a broad range of industries and businesses – including not just Internet Service Providers and technology companies, but for all intents and purposes all sectors and industries – for which a healthy and robust Internet environment is an economic necessity.

For diversified investors, it is critical that public policy be developed with an eye toward the economic health of the entire economy since a systematic governance failure in only one area can be detrimental to the investor's portfolio. The economic and investment impact of rules and regulations affecting the Internet can be profound.

An Internet which guarantees fair and equal treatment is a core driver of America’s economic growth. We believe network neutrality principles are critical to that process.

Open Internet principles also promote free speech, civic participation, democratic engagement and marketplace competition, as well as robust broadband adoption and participation in the Internet community by people of color and other socially and economically disadvantaged groups.

“What makes the internet great is the easy, unrestricted, and free availability of all kinds of information, regardless of the content provider, a regime known as network neutrality,” says Nicholas Economides, a professor of economics at NYU’s Stern School of Business. “Having supported the fast growth of internet-based companies that currently serve as the backbone of today's US economy, net neutrality is pro-business, pro-growth, and pro-freedom.”

The *Notice of Proposed Rulemaking (NPRM)*, however, proposes to "reinstate the information service classification of broadband Internet access service and return to the light-touch regulatory framework first established on a bipartisan basis during the Clinton Administration."

We strongly oppose such a change. This comment supports continued classification of broadband Internet service under Title II of the Communications Act, giving the Commission clear regulatory authority over the Internet network infrastructure that serves hundreds of millions of individuals, entrepreneurs and established businesses throughout the United States.

While there are multiple grounds for objecting to the changes proposed in the *NPRM*, we focus here on only three:

1. Investment in broadband Internet networks has increased since adoption of the Commission's Open Internet Order and Title II rules. This is healthy for the U.S. economy.

2. The market for initial public offerings (IPOs) by tech companies in 2017 is robust. Changes to the Open Internet and Title II rules could threaten IPO growth and stifle innovation on the Internet.

3. Potential blocking, throttling and paid prioritization of Internet content constitute a significant threat to economic innovation on the Internet. Current Title II rules are the most appropriate response to that threat.

---

1. Investment in broadband Internet networks has increased since adoption of the Commission's Open Internet Order and Title II rules. This is healthy for the U.S. economy.

Recent economic analysis by the Internet Association, an organization supported by leading tech companies, has found that "ISP investment is up over time, and shows no decline as a result of Title II reclassification in 2015."[1] According to the analysis:

- SEC filings show a 5.3% or $7.3 billion increase in telecom investment among publicly traded companies from 2013-14 to 2015-16;
- OECD and U.S. Telecom data show a 5.1% or $4.7 billion increase in telecom investment in 2014 to 2015; and
- SNL Kagan and NCTA: the Internet and Television Association data show a 56% or $89.9 Billion increase in cable investment from 2009 to 2016.

Projecting a clear sense of optimism, the Internet and Television Association - *the principal trade association of the cable industry* - paints a vision of bright future for U.S. broadband[2]:

[1] https://internetassociation.org/wp-content/uploads/2017/05/InternetAssociation-NetNeutrality-Facts.pdf
[2] https://www.ncta.com/NearFuture

> Right now, the way we live, learn, work, and play is being reimagined. But the technology of the near future will require powerful networks with the speed and capacity to support rich, immersive experiences. The next generation services featured here are currently in development, and coming to homes. We're already building the networks to be ready for the future. It's closer than you think.

The trade association's web site recently reported:

> **The US is now in the top ten countries for adoption of internet speeds over 15 and 25 Mbps as well as the top ten for overall average speed...If the last five years are any indication, internet speeds in America will continue to rise, broadband technology will continue to improve, and more Americans will reap the benefits of living in one of the world's most connected countries.[3]**

These findings correspond to our own research and experience, as detailed in the analysis below.

We believe the *NPRM* is fundamentally flawed in its assertion that Title II regulation adopted in 2015 "has put at risk online investment and innovation, threatening the very open Internet it purported to preserve. Investment in broadband networks declined. Internet service providers have pulled back on plans to deploy new and upgraded infrastructure and services to consumers."

As investors, we find no evidence that the Commission's 2015 Open Internet order has caused publicly-held ISPs to reduce their investment in broadband networks. Such a conclusion is at odds with multiple public statements by corporate executives of the leading ISPs as well as data the companies have previously supplied to shareholders in their filings to the Securities and Exchange Commission.

Open MIC's research examined recent financial statements from ISPs holding an estimated total of 86% of the U.S. broadband Internet market.[4] Those firms include Verizon, AT&T, Comcast, Charter, CenturyLink and Altice. Overwhelmingly and without exception, the leading providers of broadband internet service in the U.S. portray an outlook for network investment that is healthy and robust. Here are the specifics:

Verizon Communications Inc.

On May 19, 2017, an analyst for Trillium Asset Management asked Verizon executives to respond to assertions that Title II had curtailed ISP investment in broadband infrastructure. In a conference call with investment companies, the Trillium analyst noted that following the

---

[3] https://www.ncta.com/platform/broadband-internet/americas-internet-speeds-continue-to-soar/

[4] http://www.leichtmanresearch.com/press/111716release.html

adoption of Title II, Verizon's chief financial officer had told investors, "we remain committed to consistently investing in our networks for the future." Additionally, Verizon had reported *increased* capital expenditures following the 2015 vote. The question: *Was this correct?*

Verizon executive Michael Giordano, director of investor relations, declined to counter the analyst's interpretation of data. Mr. Giordano replied that from an investment perspective, Verizon is "a consistent CapEx spender," investing around $17 billion a year. Whether or not that fluctuates up or down 3-5%, he said, is more based on timing "as opposed to regulation." While Verizon would prefer less regulation, he said, "We will continue to invest in the network."

Verizon's 2016 annual report stated[5]:

> The foundation of Verizon's performance – in 2016, as in every year in our history – is our consistently superior network…
>
> In order to respond to our customers' needs, we continue to evolve our network architecture to increase efficiency and provide the highest quality experience. Our superior 4G LTE Advanced wireless network will be our mainstay for years to come. We are constantly adding to its capacity to handle increased traffic, and preparing for the future by deploying and recycling spectrum while building small cells at a significant reduction in cost.
>
> In keeping with our history of network innovation, we are also reinventing our network architecture around a common fiber platform that will support all of Verizon's businesses.
>
> With so much of daily life and commerce dependent on our networks, we take our responsibility to deliver the promise of the digital world to customers very seriously. With every technological advance, the potential for creating value – for shareholders and for society – gets bigger and more exciting.

AT&T Inc.

AT&T's 2016 annual report to shareholders stated[6]:

> Our first priority continues to be investing for growth.
>
> We operate in a highly capital-intensive industry. Leadership and competitive advantage over the long term require sustained investment. In fact, over the past 5 years, we have invested $140 billion, including capital investments in our wireless and wireline networks and acquisitions of wireless spectrum and operations, to build out one of the

[5] https://www.verizon.com/about/sites/default/files/annual_reports/2016/letter.html

[6] https://www.att.com/Investor/ATT_Annual/2016/downloads/att_ar2016_completeannualreport.pdf

most advanced wireless, fiber and IP networks in the world.

We believe it's critical to lead in developing new technologies to ensure we have the integrated products and services that will set us apart and give us the lowest cost structure with the greatest efficiency and productivity in the industry. We expect to remain one of the largest investors in the United States.

Comcast Corporation

Comcast reported[7] that among the "more significant developments" of its business in 2016 was an increase in capital expenditures of 7.9% from the year earlier, to $7.6 billion, primarily due to:

- an increased investment in line extensions, primarily for the expansion of our business services
- an increased investment in scalable infrastructure to increase network capacity
- the continued deployment of wireless gateways
- the continued deployment of our X1 platform, which is now available in all of the markets in which we operate, and our cloud DVR technology, which is now available in substantially all of our markets.

In January 2017, Michael Cavanagh, Comcast's Chief Financial Officer, told analysts[8]:

Through consistent investment and innovation, we offer the best broadband product on the market. We double the capacity of our network every 18 to 24 months, have increased Internet speed 17 times in the past 16 years, and now over 50% of our residential customers have speeds of 100 megabits per second or higher.

Charter Communications Inc.

In May 2015, Charter told investors that its proposed acquisitions of Time Warner Cable and Bright House Networks would be a "win for consumers and commercial customers" because "continued network investments will drive faster broadband speeds, better video products and more competition."[9]

By one estimate, Charter's pro forma capital expenditures have exceeded guidance it gave investors in an August 2015 proxy statement. It estimated pro forma capital expenditures would be $12.979 billion for 2015–2016. The actual amount proved to be $14.514 billion, 12

---

[7] http://www.cmcsa.com/secfiling.cfm?filingID=1193125-17-30512
[8] https://seekingalpha.com/article/4040405-comcast-cmcsa-q4-2016-results-earnings-call-transcript?part=single
[9] http://s1.q4cdn.com/730563363/files/doc_presentations/2015/Charter-BHN-and-TWC-Public-Presentation-FINAL_v001_j73c9t.PDF

percent higher than anticipated 16 months prior.[10]

In February 2017, Charter chairman and CEO Thomas M. Rutledge, when asked by analysts about the company's future capital expenditure plans, told analysts that "without giving specific guidance, 2017 is probably a bit higher in terms of absolute dollars than what we were performing in 2016."[11]

CenturyLink

CenturyLink's 2016 Letter to Shareholders stated[12]:

> Our network is our principal asset, key differentiator and source of attractive growth opportunities. We operate a 265,000-route-mile U.S. fiber network and a 360,000-route-mile international transport network connecting millions of businesses and consumers around the world. This robust network positions us well to capitalize on the remarkable increase in data traffic driven by video streaming, new applications and services related to the Internet of Things (IoT), virtual and augmented reality and 5G wireless technology. As the digital world continues to expand, the potential of our network to deliver value and opportunity to our stakeholders expands as well.

Altice (which acquired Cablevision Inc. in 2016)

In its 2016 Pro Forma Results[13], Altice reported:

- Announced substantial 5-year upgrade of Altice USA network from fiber HFC to FTTH to deliver 10 Gbps broadband speeds ("Generation GigaSpeed");
- Whole Optimum network already offering 300/350Mbps broadband speed), increased from 101 Mbps pre-Altice;
- 58% of Suddenlink network now offering 1 Gbps speeds, from 20% pre-Altice;

Smaller ISPs

In June 2017 more than 40 smaller non-publicly-held ISPs filed a Comment regarding the *NPRM* stating that the Commission's 2015 Open Internet Order hasn't hurt their ability to develop and expand their networks. Their letter said[14]:

> We write to inform you that as Internet Service Providers located across the country

[10] https://www.freepress.net/sites/default/files/resources/internet-access-and-online-video-markets-are-thriving-in-title-II-era.pdf
[11] https://seekingalpha.com/article/4046778-charter-communications-chtr-q4-2016-results-earnings-call-transcript?part=single
[12] http://centurylink.uberflip.com/i/807294-2016-letter-to-shareholders
[13] http://altice.net/sites/default/files/pdf/ALT-Q4-16-results-press-release.pdf
[14] https://www.eff.org/files/2017/06/27/isp_letter_to_fcc_on_nn_privacy_title_ii.pdf

> that we are in full support of the current Open Internet Order and its underlying legal foundation under Title II of the Communications Act. We have encountered no new additional barriers to investment or deployment as a result of the 2015 decision to reclassify broadband as a telecommunications service and have long supported network neutrality as a core principle for the deployment of networks for the American public to access the Internet.
>
> We wish to further express our opposition to the proposed plans to reverse course and again undergo another reclassification of broadband back into an information service. The federal courts have made it very clear that network neutrality depends on the FCC maintaining that broadband is a telecommunications service and that other approaches have already failed as a legal matter. We have always supported a neutral network approach to the Internet and see no reason why it should not be required as a matter of law.
>
> Without a legal foundation to address the anticompetitive practices of the largest players in the market, the FCC's current course threatens the viability of competitive entry and competitive viability. As direct competitors to the biggest cable and telephone companies, we have reservations about any plan at the FCC that seeks to enhance their market power without any meaningful restraints on their ability to monopolize large swaths of the Internet.

2. The market for initial public offerings (IPOs) by tech companies in 2017 is robust. Changes to the Open Internet rules could threaten IPO growth and stifle innovation on the Internet.

Following a somnolent 2016, the tech IPO market has exploded in 2017. By May 2017, nine tech IPOs with an aggregate value of $37.5 billion had been executed; in contrast, by the same time in 2016 only one IPO had taken place. TechCrunch reports that in 2017, "we have averaged an IPO every 13.3 days—just under two weeks. 2016, by mid-May, was at a pace of one every 66.5 days."[15]

"We're in the best of all IPO markets," Renaissance Capital's Kathleen Smith recently told CNBC. "If you're not moving forward, you need to have your head examined."[16]

The changes proposed in the NPRM, however, would threaten that dynamic marketplace.

For example: In February 2017, Snap, the parent company of Snapchat, filed for a $3 billion initial public offering, positioning itself to be the third-largest technology debut in history. In its IPO filing, the company specifically mentioned that it is worried about the future of net neutrality regulations, saying it could be "seriously harmed" by changes to the current rules.[17]

---

[15] https://techcrunch.com/2017/05/01/2017-tech-ipos-are-on-a-tear-compared-to-last-year/

[16] http://www.cnbc.com/2017/05/18/ipo-watch-11-tech-companies-most-likely-to-go-public.html

[17] https://www.washingtonpost.com/news/the-switch/wp/2017/02/03/snapchat-files-for-its-initial-public-offering-here-are-the-10-most-interesting-things-weve-learned-so-far/

Current FCC rules "prohibit mobile providers in the United States from impeding access to most content," Snap said. "If the FCC, Congress, the European Union, or the courts modify these open internet rules, mobile providers may be able to limit our users' ability to access Snapchat or make Snapchat a less attractive alternative to our competitors' applications."

Another leading example of American innovation on the Internet — Dropbox, a popular cloud storage and backup service — is weighing what has been called "one of 2017's most interesting IPOs."[18]

But in an open letter to stakeholders, Dropbox has warned that the rules proposed in the current *NPRM* "could hurt the future of online innovation. For instance, developers could be discouraged from creating new apps and sites without net neutrality rules in place. There are over 300,000 apps built on the Dropbox platform alone, and these developers' success depends on an open Internet where traffic is treated equally."[19]

In April 2017, more than 1,000 startups, innovators, investors, and entrepreneurial support organizations from all 50 states sent a letter to Commission Chair Ajit Pai explaining that each of their businesses is "an example of the sort of innovation and investment that meaningful broadband access has fueled."[20]

The signers of the letter warned that without net neutrality:

> …the incumbents who provide access to the Internet would be able to pick winners or losers in the market. They could impede traffic from our services in order to favor their own services or established competitors. Or they could impose new tolls on us, inhibiting consumer choice. Those actions directly impede an entrepreneur's ability to "start a business, immediately reach a worldwide customer base, and disrupt an entire industry." Our companies should be able to compete with incumbents on the quality of our products and services, not our capacity to pay tolls to Internet access providers.

3. Potential blocking, throttling and paid prioritization of Internet content constitutes a significant threat to economic innovation on the Internet. Current Title II rules are the most appropriate response to that threat.

In the absence of Title II rules, we believe the leading broadband service providers would have enormous incentives to favor some forms of content over others. As investors, we are troubled by the potential negative impact that paid prioritization could have on innovative technology start-ups, which drive so much economic growth.

We note that in oral arguments before a U.S. Court of Appeals panel in 2014, attorneys for Verizon Communications strongly suggested that the company would like to pursue different service pricing models which could lead to paid prioritization for some Internet content.

---

[18] https://www.technologyreview.com/s/603204/dropbox-could-have-one-of-2017s-most-interesting-ipos/
[19] https://blogs.dropbox.com/dropbox/2014/09/stand-up-for-the-open-internet/
[20] http://www.engine.is/startups-for-net-neutrality

Verizon lawyer Helgi Walker told the court: "I'm authorized to state from my client today that but for these [FCC] rules we would be exploring those types of arrangements."[21]

We anticipate that in the absence of rules barring paid prioritization, leading broadband providers would quickly begin carving out Internet "fast lanes" for businesses that are willing and able to pay for them while leaving newer upstart businesses in "slow lanes" that would prove less attractive to potential customers.

Additionally, leading broadband providers have in recent years also become owners and distributors of much of America's news, information and entertainment content – *providing them with powerful financial incentives to prioritize their own content.*

For example:

- AT&T purchased DirecTV nearly two years ago to become the nation's largest pay-TV company, with about 21 million subscribers. AT&T has also proposed to acquire Time Warner Entertainment for $85.4 billion, a transaction that would make it the owner of such prominent media assets as CNN, HBO, TBS, Cartoon Network and the Warner Bros. studio.

- Comcast Corp. operates over-the-air national broadcast network channels (NBC and Telemundo), multiple cable-only channels (including MSNBC, CNBC, USA Network, NBCSN, E!, The Weather Channel, among others), the film production studio Universal Pictures, and Universal Parks & Resorts in Los Angeles and Orlando.

- Verizon Communications Inc. has previously acquired AOL, a leading online content company; Huffington Post; and recently completed its acquisition of Yahoo!. The company says it is launching a "global brand" — offering news, sports, finance, entertainment, and lifestyle content — to more than one billion consumers.

In an Internet economy that thrives on individualism and attention-grabbing headlines, speed and ease are non-negotiable requirements for the success of an online business. With paid prioritization, small companies could be forced to pay ISPs extra just to make sure their content was available — and delivered quickly — to potential customers. For those who couldn't afford it, their content could be relegated to the Internet "slow lane," which could hurt the bottom line.

Net neutrality is about "allowing consumers to pick the winners and losers and not [having] the cable companies make those decisions for them," says Michael Cheah, general counsel at Vimeo, a video-sharing application which enables users to upload, share and view videos.

[21] https://www.washingtonpost.com/news/the-switch/wp/2014/01/14/d-c-circuit-court-strikes-down-net-neutrality-rules/?utm_term=.6bd1202d0833

Venture capitalists have played a critical role in financing the explosive growth of the Internet; they foresee great threats to innovation if network neutrality regulations are gutted, as the *NPRM* proposes. A number of leading venture firms in 2014 filed an *amicus curiae* brief with the U.S. Court of Appeals, explaining: "In a world without network neutrality rules, network providers are allowed to discriminate against applications. If a network provider blocks an application, that application will not reach its users, and the application provider will not profit. Because application discrimination threatens application providers' profits, it also reduces application providers' incentives to innovate. Finally, it reduces the incentive of investors...to invest in new technologies."[22]

Research in 2017 by Akamai Technologies found that a 100-millisecond delay in website load time can hurt sales conversion rates by 7 percent. "Customers have extremely short attention spans, and degradations in website performance – no matter how small – can cause consumers to go elsewhere in an instant," Akamai said.[23] Amazon research shows that "a page load slowdown of just one second could cost [Amazon] $1.6 billion in sales each year."[24]

Barbara van Schewick, professor of law, Helen L. Crocker Faculty Scholar, and director of the Center for Internet and Society at Stanford University, says: "If ISPs are allowed to charge application providers for preferential treatment, they have an incentive to reduce the quality of the 'normal' service to make it more attractive to pay for preferential treatment. Allowing payment for technical forms of preferential treatment, ISPs have an incentive to lower the quality of the baseline service or not to upgrade in additional capacity over time…The resulting reduction in the quality of the normal service hurts users and all application providers that cannot afford to pay for better treatment."[25]

According to NYU's Economides, "Network neutrality is crucial for growth of both new and established companies; virtually all sales, from the largest company to the smallest new business, now rely on the internet. Eliminating unfettered access to internet content and services would hamper these businesses' ability to grow and would negatively impact economic growth nationwide."[26]

Conclusion

As investors, we believe continued classification of broadband Internet service under Title II of the Communications Act would best protect the open Internet as a platform for economic growth and innovation.

---

[22] https://www.fcc.gov/document/amicus-brief-venture-capital-no-11-1355-dc-cir

[23] https://www.akamai.com/us/en/about/news/press/2017-press/akamai-releases-spring-2017-state-of-online-retail-performance-report.jsp

[24] https://www.fastcompany.com/1825005/how-one-second-could-cost-amazon-16-billion-sales

[25] https://ecfsapi.fcc.gov/file/60001032169.pdf

[26] https://www.wired.com/2017/01/dont-gut-net-neutrality-good-people-business/

With this notice of proposed rulemaking, the Commission is addressing matters of extreme importance to our economy, with impact on both widely diversified investors as well as shareholders in individual companies. We thank the Commission for this opportunity to comment and look forward to participating in the ongoing discussion regarding these proceedings.