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**Recent Claims of Internet “Throttling” Do Not Justify a Bright-Line Ban**

by

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**I. Introduction and Summary**

Free Press and Public Knowledge, two groups that advocate public utility-style regulation of Internet service providers (ISPs), recently asserted that Verizon Wireless has been “throttling,” or slowing, video transmissions on its network in possible violation of the 2015 *Open Internet Order*. These advocacy groups further claimed that their allegations of throttling support their argument that consumers will be harmed if the FCC does not retain Title II regulation of Internet service providers. It is far from clear that Verizon Wireless has violated the *Open Internet Order* by impermissible throttling and unlikely that its customers were harmed in any way by Verizon Wireless’s actions. But, most importantly, even if these allegations of throttling were accurate, they do not provide any support for maintaining the current ban on throttling.

If the goal is to prevent any harms from throttling on the Internet, encouraging more competition and promoting more investment is the better solution. Internet service providers that have to compete for customers will have a disincentive to slow down their transmissions if they know their customers can switch to other providers. An overly strict ban on throttling can cause harms, harms these advocacy groups are ignoring, because it can discourage capital investment and may prohibit broadband providers from taking actions that are beneficial to their customers. But even assuming for the sake of argument that Congress or the FCC were to conclude that competition is

not sufficient to address any concerns about throttling, other alternatives are available that do not require imposing rigid public utility-style regulation on the Internet.

“Throttling” is defined as the degrading of Internet traffic by broadband providers on source, destination, or content. The *Open Internet Order* imposed a bright-line ban on throttling by ISPs, subject to an allowance for reasonable network management.<sup>1</sup> Thus, the *Order* contains two important exclusions. First, it only applies to ISPs like Comcast and Verizon Wireless, and not to content providers like Netflix and on-line gaming services that are known to have throttled their own content. Second, the *Order* also allows ISPs to engage in reasonable network management. When user requests exceed the capacity of parts of a network and cause congestion, the ensuing bottlenecks can lead to data request failures and sometimes to server crashes. In order to better manage the network, server administrators may, for example, put limits on how many requests a server can respond to in a specific time period.

The 2015 FCC majority that adopted the *Open Internet Order* argued the “ban on throttling is necessary both to fulfill the reasonable expectations of a customer who signs up for a broadband service that promises access to all lawful Internet sites, and to avoid gamesmanship designed to avoid the no-blocking rule by, for example, rendering an application effectively, but not technically, unusable.”<sup>2</sup> While earlier attempts by the FCC to prohibit or punish throttling by ISPs were struck down by the D.C. Circuit Court of Appeals, that court in 2016 allowed the FCC to reclassify ISPs as Title II telecommunications service common carriers and regulate them like public utilities.<sup>3</sup>

Both Public Knowledge and Free Press, by their own admission, do not have a clear idea of what Verizon Wireless did or whether Verizon Wireless’s claims that no customers were harmed are accurate. The alleged harm is that consumers possibly might be the victims of discrimination due to video content being treated less favorably than other traffic, and that this may somehow undermine consumer confidence in their broadband service. These claims of consumer harm due to throttling by Verizon Wireless are highly speculative at best. As such, they add little to the thin evidence of harms of the types the *Open Internet Order* was supposed to prevent.

In any event, promoting competition is a better policy response to any concerns that might arise from throttling by broadband providers. If a broadband provider faces current competition, then any attempts to use throttling in ways that might harm customers will be defeated when customers switch to a competing provider. Similarly, if entry by other providers is reasonably easy, then even a firm that currently has market power will find that upsetting its customers with throttling will give other providers more incentive to enter the market and take its customers.

More competition like this should be encouraged because it defeats any incentive to restrict capacity described by the FCC’s “virtuous cycle” theory, and also brings new firms into the market that can be the source of new innovation. Unfortunately, the intrusive regulatory

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<sup>1</sup> Federal Communications Commission, FCC-15-24, In Re Protecting and Promoting the Open Internet (March 12, 2015) at ¶ 17, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

<sup>2</sup> Federal Communications Commission, “Protecting and Promoting the Open Internet Notice of Proposed Rulemaking,” WC Docket No. 17-108; FCC 17-60 at ¶17, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

<sup>3</sup> U.S. Telecom Ass’n v. FCC, 825 F.3d 674 (D.C. Cir. 2016).

approach of the *Open Internet Order* is already discouraging capital investment, and therefore having the opposite effect.<sup>4</sup> Moreover, an overly strict ban on throttling can cause other harms that these advocacy groups are ignoring, including discouraging broadband providers from taking actions that are beneficial to their customers.

Even assuming it could be shown that ISPs have market power, regulators have better policy options than a full bright-line ban on throttling. If any regulatory action at all is required to address concerns about throttling on the Internet, establishing a minimum quality standard has several advantages over the FCC's current bright-line ban. First, it focuses regulatory attention on the specific throttling concern that the 2015 FCC majority raised in the *Open Internet Order* – making sure that an ISP meets reasonable customer expectations and preventing applications from being effectively unusable.

A minimum quality standard also allows ISPs to manage congestion without fear of having to defend their decisions from second-guessing over whether they favored some applications over others. It could also protect non-priority applications on the Internet while allowing for the development of other applications that require priority access in order to meet consumer demands.

Minimum quality standards set by regulators do have some downsides, which is why it is usually preferable to have consumers and providers in a competitive market determine the quality standard through their own interactions. A regulator could potentially set the minimum quality standard too low and fail to protect some applications, or too high and price some potential Internet users out of the market.

So long as Internet users have sufficient ability to switch to another broadband provider that better meets their needs, minimum quality standards should not be necessary and these regulator errors can be avoided. ISPs that have to compete for customers will have a disincentive to slow down their transmissions in ways that harm their customers if they know their customers can switch to other providers. If, however, Congress or the FCC were to conclude that a regulatory response is required, imposing a minimum quality standard should prevent any potential harms due to throttling more effectively than the current bright-line ban on throttling, while also avoiding the chilling effects the bright-line ban will have on ISP network management and investment.

## **II. The Allegations by Free Press and Public Knowledge**

Public Knowledge and Free Press are advocacy groups that have consistently supported greater federal regulation of the Internet by the Federal Communications Commission. Public Knowledge made its allegation of illegal throttling by Verizon Wireless in a recent press release:

Today, reports indicate that Verizon Wireless reduced connection speeds for mobile subscribers accessing streaming video services as part of a “video optimization”

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<sup>4</sup> See, e.g., Michael J. Horney, “Broadband Investment Slowed by \$5.6 Billion Since Open Internet Order,” Free State Foundation Blog (May 5, 2017), available at <http://freestatefoundation.blogspot.com/2017/05/broadband-investment-slowed-by-56.html>.

systems test. The company issued no warnings to consumers prior to testing, but claims “the customer video experience was not affected”. Verizon has also stated that it applied the same speed cap to its own affiliated video service, Go90.

The Federal Communications Commission’s existing net neutrality rules generally do not permit broadband providers to impose speed caps based on source or application -- a violation referred to as “throttling.” The rules do, however, allow for reasonable network management.<sup>5</sup>

Free Press echoed these allegations in their own press release:

On Thursday and Friday, news reports documented customers’ claims that Verizon Wireless is throttling video streaming on the company’s mobile network. When asked for comment, Verizon Wireless suggested that the practice was merely a temporary network test with no impact on user experience, but the company also seemed to confirm that it was indeed optimizing video streams. ‘Optimization’ is wireless carriers’ preferred term for slowing down, reshaping or degrading video traffic that customers request using the mobile-data plans they have purchased.

Verizon Wireless customers diagnosing this issue in online user forums reported slowdowns for sites and apps like Netflix and YouTube. In response to press inquiries, Verizon Wireless said that any “optimization” also applies to its own proprietary streaming-video offerings, such as the carrier’s little-known go90 video service.

FCC Chairman Ajit Pai is attempting to roll back the agency’s open-internet rules and the legal authority they’re based on. But those rules clearly specify that broadband providers may not “impair or degrade lawful internet traffic on the basis of internet content, application, or service” unless that degradation involves reasonable network management for technical purposes. The 2015 FCC decision adopting those rules made it clear that degrading an entire class of applications, such as all video applications, “would violate the bright-line no-throttling rule.”<sup>6</sup>

Thus, Free Press and Public Knowledge are asserting that Verizon Wireless may have impaired or slowed Internet traffic in possible violation of the rules contained in the 2015 *Open Internet Order*.<sup>7</sup> As will be discussed below, it is far from clear that Verizon Wireless has violated the *Open Internet Order*, and in any event, it is unlikely that any of its customers were harmed. The FCC has opened a Notice of Proposed Rulemaking (NPRM) to reconsider the current regulatory prohibition against throttling, as well as other intrusive regulatory requirements imposed in 2015

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<sup>5</sup> Shiva Stella, “Verizon Reportedly Throttling Streaming Services in “Video Optimization Tests Without Notice, Press Release, Public Knowledge (July 21, 2017), available at <https://www.publicknowledge.org/press-release/verizon-reportedly-throttling-streaming-services-in-video-optimization-test>.

<sup>6</sup> Free Press, “Verizon Video-Throttling Allegations Show Need for Net Neutrality Rules and an FCC That Will Enforce Them,” Press Release, Free Press (July 21, 2017), available at <https://www.freepress.net/press-release/108228/verizon-video-throttling-allegations-show-need-net-neutrality-rules>.

<sup>7</sup> Federal Communications Commission, “Protecting and Promoting the Open Internet Notice of Proposed Rulemaking,” GN Docket No. 14-28, adopted February 26, 2015, available at [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-24A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-24A1.pdf).

on broadband providers.<sup>8</sup> Free Press and Public Knowledge both have filed comments in this proceeding opposing the NPRM proposal to reconsider the current bright-line rules prohibiting certain practices by ISPs, including throttling.<sup>9</sup>

### III. What Is Throttling?

“Throttling” by broadband providers is the degrading of Internet traffic based on source, destination, or content. Free Press and Public Knowledge are basing their allegations of throttling by Verizon Wireless on the ban contained in the 2015 *Open Internet Order*. That *Order* imposes a bright-line ban on throttling, based on the following definition:

A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not impair or degrade lawful Internet traffic on the basis of Internet content, application, or service, or use of a non-harmful device, subject to reasonable network management.<sup>10</sup>

The *Open Internet Order* definition contains two important exclusions. First, it only applies to ISPs like Comcast and Verizon Wireless, and not to limitations placed on business networks by system administrators, to cloud backup services during uploads of data from customers, or to online gaming services that may throttle bandwidth at certain times to prevent their services from overloading and crashing.<sup>11</sup> It also does not apply to traffic on private networks operated by “edge providers” like Google and Amazon.<sup>12</sup>

The second exclusion from the ban on throttling is for reasonable network management. Traffic on a network will vary over time, so that peak periods may occur when user requests exceed the capacity of parts of the network and cause congestion. The ensuing bottlenecks can lead to data request failures and sometimes to server crashes. In order to better manage the network, server administrators put limits on how many requests a server can respond to in a specific time period. If a server is pushed beyond its limit, the server must offload the request to another server, put the request in a queue for later response, or discard the request.

Free Press and Public Knowledge are now arguing that this recent alleged throttling by Verizon Wireless is evidence that the ban on throttling is needed and should not be repealed. Assessing the merit of these claims requires a review of the definition of throttling and the recent history of its regulatory treatment by the FCC.

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<sup>8</sup> Federal Communications Commission, “Protecting and Promoting the Open Internet Notice of Proposed Rulemaking,” WC Docket No. 17-108, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

<sup>9</sup> Comments of Free Press, WC Docket No. 17-108 (July 17, 2017), at 86, available at <https://ecfsapi.fcc.gov/file/1071818465092/Free%20Press%20Title%20II%20Comments.pdf>; Comments of Public Knowledge and Common Cause, WC Docket No. 17-108 (July 17, 2017), at 63-64, available at <https://ecfsapi.fcc.gov/file/1071932385942/PK%20CC%20Updated%20Comments%20with%20Appendices%20FINAL.pdf>.

<sup>10</sup> Federal Communications Commission, FCC-15-24, In Re Protecting and Promoting the Open Internet (March 12, 2015) at ¶ 17, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

<sup>11</sup> Tim Fisher, “What is Bandwidth Throttling & Why Do Some Companies Do It?” Lifewire (July 21, 2017), available at <https://www.lifewire.com/what-is-bandwidth-throttling-2625808>.

<sup>12</sup> See Tom Evslin, “Internet Fast Lanes: You May Be Surprised by Who Actually Has Them,” *Morning Consult* (August 4, 2017), available at <https://morningconsult.com/opinions/internet-fast-lanes-may-surprised-actually/>.

#### IV. The *Open Internet Order's* Ban on Throttling

The 2015 FCC majority's primary justification for its 2015 *Open Internet Order* bright-line prohibitions on certain conduct by ISPs was its "virtuous cycle" theory justifying imposing this regulation on the Internet. The FCC explained this theory as follows:

The key insight of the virtuous cycle is that broadband providers have both the incentive and the ability to act as gatekeepers standing between edge providers and consumers. As gatekeepers, they can block access altogether; they can target competitors, including competitors to their own video services; and they can extract unfair tolls. Such conduct would, as the Commission concluded in 2010, "reduce the rate of innovation at the edge and, in turn, the likely rate of improvements to network infrastructure." In other words, when a broadband provider acts as a gatekeeper, it actually chokes consumer demand for the very broadband product it can supply.<sup>13</sup>

While this theory seems primarily concerned about blocking and paid prioritization, the FCC explained that it was trying to prevent throttling from being used as a form of blocking:

No Throttling. The 2010 open Internet rule against blocking contained an ancillary prohibition against the degradation of lawful content, applications, services, and devices, on the ground that such degradation would be tantamount to blocking. This Order creates a separate rule to guard against degradation targeted at specific uses of a customer's broadband connection....<sup>14</sup>

The 2015 FCC majority further explained the relationship between throttling and blocking as follows:

The ban on throttling is necessary both to fulfill the reasonable expectations of a customer who signs up for a broadband service that promises access to all of the lawful Internet, and to avoid gamesmanship designed to avoid the no-blocking rule by, for example, rendering an application effectively, but not technically, unusable. It prohibits the degrading of Internet traffic based on source, destination, or content. It also specifically prohibits conduct that singles out content competing with a broadband provider's business model.<sup>15</sup>

The FCC majority then justified banning throttling by ISPs, as well as blocking and paid prioritization, using a "bright-line" approach:

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<sup>13</sup> Federal Communications Commission, "Protecting and Promoting the Open Internet Notice of Proposed Rulemaking," WC Docket No. 17-108; FCC 17-60 at ¶20, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

<sup>14</sup> Federal Communications Commission, "Protecting and Promoting the Open Internet Notice of Proposed Rulemaking," WC Docket No. 17-108; FCC 17-60 at ¶16, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

<sup>15</sup> Federal Communications Commission, "Protecting and Promoting the Open Internet Notice of Proposed Rulemaking," WC Docket No. 17-108; FCC 17-60 at ¶17, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

The record in this proceeding reveals that three practices in particular demonstrably harm the open Internet: blocking, throttling, and paid prioritization. For the reasons described below, we find each of these practices is inherently unjust and unreasonable, in violation of section 201(b) of the Act, and that these practices threaten the virtuous cycle of innovation and investment that the Commission intends to protect under its obligation and authority to take steps to promote broadband deployment under section 706 of the 1996 Act. We accordingly adopt bright-line rules banning blocking, throttling, and paid prioritization by providers of both fixed and mobile broadband Internet access service.<sup>16</sup>

Thus, the 2015 FCC majority asserted three ways in which ISPs might benefit from throttling, blocking and paid prioritization: ISPs could avoid the cost of making new investments, they could target specific content in ways that could place competing broadband providers at a disadvantage, and they could enhance their revenues by making “slow lane” traffic less attractive to force content providers to pay extra to move their content to “fast lanes” where ISPs would charge extra for better service.

The FCC argued that these three bright-line prohibitions (when combined with the general conduct rule also contained in the *Open Internet Order*) would take away broadband provider incentives to engage in gaming the system and instead encourage them to invest more in broadband infrastructure.

## **V. Current Calls for Retaining Throttling Ban Are Based on Conjecture with Little Factual Support**

The majority that voted to enact the *Open Internet Order* offered very little evidence that any blocking, throttling, or paid prioritization by ISPs had ever occurred. In fact, there had been few examples of conduct that might be characterized as blocking or throttling, despite the history of the Internet having been allowed to develop to that point with only “light touch” regulatory oversight. As then-Commissioner Ajit Pai pointed out in his dissent to the *Open Internet Order*:

Nevertheless, the Order ominously claims that “[t]hreats to Internet openness remain today,” that broadband providers “hold all the tools necessary to deceive consumers, degrade content or disfavor the content that they don’t like,” and that the FCC continues “to hear concerns about other broadband provider practices involving blocking or degrading third-party applications.” The evidence of these continuing threats? There is none; it’s all anecdote, hypothesis, and hysteria. A small ISP in North Carolina allegedly blocked VoIP calls a decade ago. Comcast capped BitTorrent traffic to ease upload congestion eight years ago. Apple introduced FaceTime over Wi-Fi first, cellular networks later. Examples this picayune and stale aren’t enough to tell a coherent story about net neutrality. The bogeyman never had it so easy (citations omitted).<sup>17</sup>

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<sup>16</sup> Federal Communications Commission, “Protecting and Promoting the Open Internet Notice of Proposed Rulemaking,” WC Docket No. 17-108; FCC 17-60 at ¶100, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

<sup>17</sup> Dissenting Statement of Commissioner Ajit Pai, Federal Communications Commission, “Protecting and Promoting the Open Internet Notice of Proposed Rulemaking,” WC Docket No. 17-108; FCC 17-60, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

Perhaps Free Press and Public Knowledge believe that Verizon Wireless has provided them with an example of a threat that is not so stale, in order to support their arguments for retaining the current regulations. Both organizations claim that this alleged throttling by Verizon Wireless possibly may lead to harm to consumers.

Harold Feld, Senior Vice President at Public Knowledge stated:

Broadband subscribers and broadband providers both need certainty about how their broadband service will work. Subscribers need to know they can count on their service to behave reliably as advertised, without discriminating between different applications or between an internet service provider's affiliated service and a competing service. At the same time, ISPs need to know that tests to improve their system or develop new products won't be mistaken for by their customers for bad behavior that undermines confidence in the network.<sup>18</sup>

Free Press Policy Director Matt Wood made a similar claim about Verizon Wireless's actions:

It's not yet clear exactly what Verizon Wireless may be doing to its customers, but it is clear that those customers are having issues with the wireless-broadband connections for which they pay so dearly. . . .

If Verizon's supposedly first-rate mobile network can't handle the load, why is it picking on video streaming instead of imposing a speed limit that applies to any bandwidth-intensive apps? Net Neutrality rules allow for reasonable network management applied in a neutral fashion. It doesn't allow broadband providers to pick and choose which kinds of apps work well, and which don't.<sup>19</sup>

As Public Knowledge and Free Press both acknowledge in these statements, they don't have a clear idea of what Verizon Wireless did or whether Verizon Wireless's claims that no customers were harmed are accurate. They also do not address whether network management action was needed or appropriate for Verizon Wireless or whether consumers are worse off if video traffic was affected more than other traffic. The alleged consumer harm is that consumers might be the victims of discrimination due to video content being treated less favorably than other traffic, and that this may somehow undermine consumer confidence in their broadband service.

## **VI. Verizon Wireless Customers Were Unlikely to Be Harmed**

The initial report that Free Press and Public Knowledge rely upon for their claims that Verizon Wireless is throttling itself undermines the claims by Free Press and Public Knowledge that Verizon Wireless customers were harmed. According to the report from *The Verge*: "The vast majority of Verizon Wireless customers would be unlikely to notice problems or experience any interruptions with a speed cap of 10Mbps for Netflix. That's more than sufficient for smooth, full

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<sup>18</sup> Harold Feld, as quoted in Shiva Stella, "Verizon Reportedly Throttling Streaming Services in "Video Optimization Tests Without Notice, Press Release, Public Knowledge (July 21, 2017), available at <https://www.publicknowledge.org/press-release/verizon-reportedly-throttling-streaming-services-in-video-optimization-test>.

<sup>19</sup> Matt Wood, as quoted in "Verizon Video-Throttling Allegations Show Need for Net Neutrality Rules and an FCC That Will Enforce Them," Press Release, Free Press (July 21, 2017), available at <https://www.freepress.net/press-release/108228/verizon-video-throttling-allegations-show-need-net-neutrality-rules>.

HD 1080p video playback.”<sup>20</sup> The same report also noted that Netflix itself has throttled Verizon’s customers and claimed it was for their own benefit:

Until one or both companies provide clarification, it’s a bit early to point the finger at Verizon. Last year, Netflix admitted that it had for years silently put a limit on the maximum connection speeds of AT&T and Verizon smartphone users. The logic at the time was that most consumers were on tiered or bucketed data plans and Netflix was saving customers from themselves and expensive phone bill overages.<sup>21</sup>

Therefore, the claims of consumer harm due to throttling by Verizon Wireless are highly speculative at best. As such, these claims add very little to the already thin evidence of harms of the types the *Open Internet Order* was supposed to prevent.

Moreover, the "reasonable network management" exception to the otherwise bright-line ban on throttling is itself an acknowledgment that discriminating against certain traffic on the Internet may sometimes be necessary for network optimization purposes and even beneficial for overall consumer satisfaction. The *Open Internet Order* has recognized that ISPs sometime require flexibility to successfully operate their broadband networks. In order to manage networks, some situations may occur where network engineers must assess network problems and find solutions. These decisions may need to be made quickly, based on the facts before the network managers, and will often require intuitive, if nevertheless informed, judgments.

Free Press and Public Knowledge are describing a regulatory system in which they have free rein to second-guess any ISP network management decisions and the burden is on ISPs to prove after the fact that their decisions were reasonable. Broadband providers would then be forced to defend their network management decisions whenever a complaint or petition is filed at the FCC by advocacy groups or a party seeking an advantage in the marketplace. Even when the decision is judged to be reasonable by the regulator, the ISP will still face significant compliance costs.

Advocacy groups and parties seeking to “game” the regulatory process could use this complaint process to bog down ISPs with challenges to their network management practices even when, as is the case with these claims by Free Press and Public Knowledge, they have no meaningful evidence of any harm. If this were allowed to be the standard for complaints, the most likely result will be that ISPs will be constrained to follow only the network practices that seem most likely to be vindicated – in hindsight – by the Commission, even when other network management decisions would have been more beneficial to their customers.

## **VII. Even if Throttling Is a Concern, Promoting Competition Is a Better Policy Option**

Even assuming a broadband provider wanted to engage in throttling that is not for reasonable network management purposes, banning the practice is not the only option for addressing any

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<sup>20</sup> Chris Welch, “Netflix Speeds on Verizon Wireless Appear to Be Capped for Some Customers,” *The Verge* (July 20, 2017), available at <https://www.theverge.com/2017/7/20/16005426/netflix-verizon-data-speeds-cap-net-neutrality>.

<sup>21</sup> Chris Welch, “Netflix Speeds on Verizon Wireless Appear to Be Capped for Some Customers,” *The Verge* (July 20, 2017), available at <https://www.theverge.com/2017/7/20/16005426/netflix-verizon-data-speeds-cap-net-neutrality>.

concerns. Free Press and Public Knowledge appear to be objecting to the practice because it violates the *Open Internet Order*. That Order, however, bases its theory of harm from throttling based on the questionable virtuous cycle theory:

The key insight of the virtuous cycle is that broadband providers have both the incentive and the ability to act as gatekeepers standing between edge providers and consumers. As gatekeepers, they can block access altogether; they can target competitors, including competitors to their own video services; and they can extract unfair tolls. Such conduct would, as the Commission concluded in 2010, “reduce the rate of innovation at the edge and, in turn, the likely rate of improvements to network infrastructure.” In other words, when a broadband provider acts as a gatekeeper, it actually chokes consumer demand for the very broadband product it can supply.<sup>22</sup>

The virtuous cycle theory is an economic theory of the incentives of a firm with market power seeking to leverage its market power to extort rents from other parties or resist investing in improving its services. For firms to benefit from the blocking, throttling, or paid prioritization practices the 2015 FCC majority described, the broadband provider (1) must have a large market share and (2) must have some protection from new firms entering the market.

If the broadband provider faces current competition, then any attempts to use throttling to try to avoid capital investment or to gain an advantage over rivals will be defeated when customers switch to a competing provider. Similarly, if entry by other providers is reasonably easy, then even a firm that currently has market power will find that upsetting its customers with throttling will give other providers more incentive to enter the market and take its customers.

The 2015 FCC majority did not even attempt to argue that ISPs have the market power to engage in throttling, and instead relied on its “gatekeeper” theory to justify banning allegedly discriminatory practices such as throttling and blocking. FCC Commissioner Michael O’Rielly explained the flaws in the FCC majority’s analysis in his dissent.

The APA requires an agency to “examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’” These rules, however, are not based on facts or data but on unsubstantiated fears of future wrongdoing. The item regurgitates the theory that ISPs act as “gatekeepers” between edge providers and consumers. Specifically, as the provider of access to end users, an ISP supposedly has the ability and incentive to disadvantage other network providers, edge providers, and end users. But while the item makes an economic argument, it does not back it up with economic analysis. The theory that rests on claims that consumers might not switch providers because consumers “may experience” switching costs, that bundled pricing “can also play a role” in reducing churn, and that consumers “may be confused” about their service. Difficulty switching providers “is

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<sup>22</sup> Federal Communications Commission, “Protecting and Promoting the Open Internet Notice of Proposed Rulemaking,” WC Docket No. 17-108; FCC 17-60 at ¶20, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

certainly a factor that might contribute to a firm’s having market power, but that itself is not market power.”<sup>23</sup>

Any advantages to ISPs from engaging in throttling in a dynamic market will not be sustainable. Whether ISPs have the market power to benefit from throttling has not been established. But even if ISPs have sufficient market power, customer objections to throttling will encourage new entry and investment by competitors. More competition like this should be encouraged because it defeats any incentive to restrict capacity described by the “virtuous cycle” theory, and also brings new firms into the market that can be the source of new innovation. Unfortunately, the intrusive regulatory approach of the *Open Internet Order* is having the opposite effect because it is discouraging capital investment.<sup>24</sup>

As former FCC Chief Economist Tim Brennan, a member of the Free State Foundation’s Board of Academic Advisors, has noted:

But the novelty – and highly problematic nature – of this approach [describing the bright-line bans in the *Open Internet Order*] is not appreciated by some. The federal government has been reluctant to regulate sectors without a clear monopoly provider, because competition between only two firms is likely to lead to a better outcome than regulation. And regulation is even harder to justify when, as in this case, technological progress rapidly changes the definition of the product one is trying to regulate.<sup>25</sup>

### **VIII. Even If Competition Were Not Sufficient to Address Throttling Concerns, Better Regulatory Options Are Available**

Even if it could be shown that ISPs have market power, it is not necessary to resort to a full bright-line ban on throttling. Tim Brennan further points out that throttling concerns can better be addressed with a minimum quality standard for broadband, although he stops well short of endorsing implementing such a policy:

While the FCC nominally rejected a minimum-quality rule, its “no throttling” rule implies minimum quality – the lower limit of what would presumably be acceptable quality, “unthrottled,” to use the FCC’s terminology. A minimum-quality rule would also address concerns that a broadband provider would diminish the quality of non-priority

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<sup>23</sup> Dissenting Statement of Commissioner Michael O’Rielly, Federal Communications Commission, “Protecting and Promoting the Open Internet Notice of Proposed Rulemaking,” WC Docket No. 17-108; FCC 17-60, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

<sup>24</sup> See, e.g., Michael J. Horney, “Broadband Investment Slowed by \$5.6 Billion Since Open Internet Order,” Free State Foundation Blog (May 5, 2017), available at <http://freestatefoundation.blogspot.com/2017/05/broadband-investment-slowed-by-56.html>; Theodore R. Bolema, “Too Much Unnecessary Regulation Is Impeding Telecom Investment,” Free State Foundation (April 17, 2017), available at [http://www.freestatefoundation.org/images/Too Much Unnecessary Regulation Is Impeding Telecom Investment\\_041717.pdf](http://www.freestatefoundation.org/images/Too_Much_Unnecessary_Regulation_Is_Impeding_Telecom_Investment_041717.pdf); Theodore Bolema, “Allow Paid Prioritization on the Internet for More, Not Less, Capital Investment,” Free State Foundation (May 1, 2017), available at [http://www.freestatefoundation.org/images/Allow Paid Prioritization on the Internet for More, Not Less, Capital Investment\\_050117.pdf](http://www.freestatefoundation.org/images/Allow_Paid_Prioritization_on_the_Internet_for_More,_Not_Less,_Capital_Investment_050117.pdf).

<sup>25</sup> Tim Brennan, “Is the Open Internet Order an “Economics-Free Zone?” Free State Foundation, June 28, 2016, available at [http://www.freestatefoundation.org/images/Is the Open Internet Order an Economics Free Zone\\_062816.pdf](http://www.freestatefoundation.org/images/Is_the_Open_Internet_Order_an_Economics_Free_Zone_062816.pdf).

service. The theoretical appeal of a minimum quality does not make such a rule operational, enforceable, and worth any costs in additional congestion management.<sup>26</sup>

If any regulatory action were required to address concerns about throttling on the Internet, a minimum quality standard has several advantages over the FCC's current bright-line ban. First, it focuses regulatory attention on the specific throttling concern that the 2015 FCC majority raised in the *Open Internet Order* – making sure that the ISP “fulfill(s) the reasonable expectations of a customer who signs up for a broadband service that promises access to all of the lawful Internet, and to avoid gamesmanship designed to avoid the no-blocking rule by, for example, rendering an application effectively, but not technically, unusable.”<sup>27</sup> A minimum standard, which, of course, would be publicly available, could be set based on these reasonable customer expectations and to prevent applications from being effectively unusable.

Second, a minimum quality standard allows ISPs to manage congestion without fear of having to defend their decision from second-guessing by advocacy groups over whether they favored some applications over others. So long as they meet the minimum standard, ISPs would be in compliance, and would not have any incentive to avoid network management decisions that are favorable to their users based on concerns that the ISP will be required to defend these decisions before regulators.

Third, a minimum quality standard could protect non-priority applications on the Internet while allowing for the development of other applications that require priority access. Prioritization arrangements have been shown to provide consumer benefits in many other markets, including package delivery, transportation, and retail sales.<sup>28</sup> Many important future Internet applications, such as telesurgery and remotely-provided education services, are unlikely to develop without priority access.<sup>29</sup> Minimum quality standard can prevent the harms to “slow lane” applications that the bright-line bans in the *Open Internet Order* were supposed to prevent, while also allowing for the development of other applications that require priority access.

But minimum quality standards set by regulators have some downsides, which is why it is usually preferable to have consumers and providers in a competitive market determine the quality standard through their own interactions. A regulator could potentially set the minimum quality standard too low, so that some applications are not protected by the low standard. The regulator could also err by setting an unnecessarily high standard, which would misdirect broadband provider resources and could lead to some potential Internet users being priced out of

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<sup>26</sup> Tim Brennan, “Is the Open Internet Order an “Economics-Free Zone?” Free State Foundation, June 28, 2016, available at

[http://www.freestatefoundation.org/images/Is\\_the\\_Open\\_Internet\\_Order\\_an\\_Economics\\_Free\\_Zone\\_062816.pdf](http://www.freestatefoundation.org/images/Is_the_Open_Internet_Order_an_Economics_Free_Zone_062816.pdf).

<sup>27</sup> Federal Communications Commission, “Protecting and Promoting the Open Internet Notice of Proposed Rulemaking,” WC Docket No. 17-108; FCC 17-60 at ¶17, adopted May 18, 2017, available at <https://www.fcc.gov/document/restoring-internet-freedom-notice-proposed-rulemaking>.

<sup>28</sup> See Theodore Bolema, “Allow Paid Prioritization on the Internet for More, Not Less, Capital Investment” Free State Foundation (May 1, 2017), available at [http://www.freestatefoundation.org/images/Allow\\_Paid\\_Prioritization\\_on\\_the\\_Internet\\_for\\_More,\\_Not\\_Less,\\_Capital\\_Investment\\_050117.pdf](http://www.freestatefoundation.org/images/Allow_Paid_Prioritization_on_the_Internet_for_More,_Not_Less,_Capital_Investment_050117.pdf).

<sup>29</sup> See, e.g., Theodore Bolema, “Allow Paid Prioritization on the Internet for More, Not Less, Capital Investment” Free State Foundation (May 1, 2017), available at [http://www.freestatefoundation.org/images/Allow\\_Paid\\_Prioritization\\_on\\_the\\_Internet\\_for\\_More,\\_Not\\_Less,\\_Capital\\_Investment\\_050117.pdf](http://www.freestatefoundation.org/images/Allow_Paid_Prioritization_on_the_Internet_for_More,_Not_Less,_Capital_Investment_050117.pdf).

the market. A minimum quality standard can also become outdated if it is not adjusted as market conditions change, so that a standard that is appropriate when implemented may become too strict or too lax due to regulatory delays.

So long as Internet users have sufficient ability to switch to another broadband provider that better meets its needs, minimum quality standards should not be necessary and these regulator errors can be avoided. Nonetheless, if Congress or the FCC were to conclude that a regulatory response is required – which I am not advocating here – imposing a minimum quality standard should prevent any potential harms due to throttling more effectively than the current bright-line ban on throttling, while also avoiding the chilling effects the bright-line ban will have on ISP network management and investment.

## **Conclusion**

Advocacy groups' claims that Verizon Wireless is engaging in throttling in violation of the *Open Internet Order* should be viewed with skepticism. These groups are using these allegations to argue for their agenda of maintaining public utility style regulation of broadband providers. When examined carefully, however, the allegations against Verizon Wireless are unlikely to have caused any harm to users and may simply be an example of permissible network management decisions that are allowed by the *Open Internet Order*.

If the goal is to prevent the harms Free Press and Public Knowledge claim will result from throttling on the Internet, encouraging more competition and promoting more capital investment is the better policy. ISPs that have to compete for customers will have a disincentive to slow down their transmissions if they know their customers can switch to other providers. An overly strict ban on throttling can cause harms, harms these advocacy groups are ignoring, because it discourages capital investment that can lead to more competition and choice for broadband customers, and also may prohibit broadband providers from taking actions that are beneficial to their customers.

Even if Congress or the FCC were to conclude that competition is not sufficient to address any concerns about throttling, less intrusive regulatory alternatives are available that do not require imposing public utility style regulation on the Internet. A minimum quality standard is a more targeted response for protecting Internet users that avoids the harms caused by the regulatory overreach of the current bright-line ban on throttling.

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