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Scott Wallsten, Sarah Oh Lam, and Thomas Lenard

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In the Matter of  
Safeguarding and Securing  
the Open Internet  

WC Docket No. 23-320

Comments of  
Scott Wallsten,* Sarah Oh Lam,† and Thomas Lenard‡

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* Ph.D., President and Senior Fellow, Technology Policy Institute.  
† J.D., Ph.D., Senior Fellow, Technology Policy Institute  
‡ Ph.D., Senior Fellow and President Emeritus, Technology Policy Institute. The views expressed here are those of the authors and do not necessarily reflect those of TPI’s staff, board of directors, or board of academic advisors.
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1. Introduction

The Federal Communications Commission (FCC) has proposed classifying Broadband Internet Access (BIAS) providers under Title II of the Communications Act. The NPRM notes correctly, that the Covid-19 pandemic highlighted the importance of broadband connections to the economy and society writ large. The Commission, however, draws the wrong conclusion from this experience. The nation’s experience with broadband, including through the pandemic, does not support the Commission’s proposal. In these comments we explain why Title II classification is unnecessary and potentially harmful.

Specifically, we make the following points:

- The NPRM focuses heavily on increasing the FCC’s authority and rarely shows that Title II would lead to improvements for consumers.
- The FCC asks commenters to submit cost-benefit analyses, but does none itself. It has data from years of experience with different broadband regulatory regimes and an entire bureau devoted to economic analysis; it should ask the bureau to evaluate its proposal.
- Consistent improvements in availability and competition, including new facilities-based competition from LEO satellites and 5G fixed wireless providers, demonstrate that Title II is not necessary to promote investment.
- The NPRM offers contradictory reasons for Title II, including that Title II is necessary in order to promote future investment and that Title II is necessary because of large amounts of recent and current investment.
- The history of common carriage shows that utility-style regulation leads to increasingly complex lobbying and pricing rules.
- The proposal assumes paid prioritization is almost always bad, but provides no evidence for that assertion. Experience with educational services and telehealth during the pandemic provide examples of potential benefits of paid prioritization.

2. NPRM Focuses on Increasing FCC Authority, Not on How Title II Classification Would Affect Broadband or Benefit Consumers

The precautionary principle holds generally that regulations should reduce the possibility of future bad outcomes. An extreme version of the precautionary principle that allows no risks would grind innovation and the economy to a halt. For that reason, no agency adheres to a precautionary philosophy completely. Economists argue that, at a minimum, the precautionary principle must be tempered by focusing on market failures–areas in which markets, left to their own devices, will lead to a suboptimal societal outcome. Policymakers should estimate the risks and associated harms without regulation and what the costs of the regulations would be.

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2 See generally NPRM ¶ 17.
The NPRM does not enumerate potential harms, the probability of those harms occurring without regulation, or the costs of the regulations it proposes. The NPRM does not even argue that any aspect of the broadband ecosystem would necessarily improve under Title II. Instead, it focuses almost exclusively on increasing the Commission’s regulatory authority.

The figure below shows the number of times the NPRM uses phrases that relate to its own authority, including “enhance the Commission’s [ability or authority],” “impact the Commission’s authority,” and “enable the Commission” compared to the 2015 Open Internet Order (“OIO”)\(^4\) and the 2017 Restoring Internet Freedom Order (“RIF”).\(^5\)

![Figure 1. Count of Phrases in Title II Orders and NPRM](image)

It is not surprising that the RIF, seen as deregulatory, would use these phrases less frequently. But the OIO had the same intent as the current NPRM—to classify broadband under Title II—but it did not focus almost exclusively on the Commission itself, rather it discussed the merits of the policy considerations at issue.\(^6\)

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\(^6\) To make even more of an apples-to-apples comparison, the OIO NPRM uses the phrase “…enable the Commission…” only once, the phrase “…impact the Commission…” only once, and never uses the phrase “…enhance the Commission’s…” See *In the Matter of Protecting and Promoting the Open Internet*, WC Docket No. 14-28, Notice of Proposed Rulemaking, FCC 14-61, May 15, 2014, [https://docs.fcc.gov/public/attachments/FCC-14-61A1.pdf](https://docs.fcc.gov/public/attachments/FCC-14-61A1.pdf) [hereinafter “OIO NPRM”].
3. FCC Should Conduct Cost-Benefit Analysis

The Commission acknowledges the importance of Cost-Benefit Analyses (CBAs) throughout the NPRM by asking commenters to submit them. It is appropriate for the Commission to ask for such analyses. But it is inappropriate for the Commission to abdicate its responsibility to conduct one itself and to exempt itself from this request. In effect, the Commission states its beliefs and asks others to disprove them without providing any evidence of its own.

The Commission is the expert agency that is expected to conduct these CBAs. The FCC established its own Office of Economics and Analytics in January 2018 with a budget and staff, explaining the office: “...is tasked with expanding and deepening the use of economics and data analytics in the Commission’s policymaking. To that end, OEA performs economic analyses of rulemakings, adjudications, and transactions.” The Economics Analysis Division (EAD) within OEA:

...has economic expertise that covers the communications landscape including broadband, wireline and wireless telecommunications, media, satellites, and public safety issues. EAD provides analytical and quantitative support to Bureaus and Offices engaged in rulemakings, assessing mergers and transactions, auctions, adjudications, and other matters. EAD aims to ground Commission policy in sound economic reasoning and provides formal economic analysis, including cost-benefit analysis, where needed.

The EAD’s purpose presumably includes activities such as economic analysis of a proposed rule as potentially far-reaching as this one. It is baffling that the FCC would release an NPRM without its own EAD report and cost-benefit analysis. The Commission’s EAD staff includes many excellent, world-renowned economists who are more than capable of conducting CBAs on proposed rules. The Commission should do its own CBA using its resources, including this talented staff or, at least, explain why it believes it need not produce one but requests of others to do so.

4. Broadband Availability and Competition Is Growing Under Title I

The NPRM claims “[c]lassifying BIAS as a telecommunications service will enable the Commission to better support the deployment of wireline and wireless infrastructure, advance universal service, and increase the accessibility of communications networks.” The NPRM does not explain how the Commission with Title II authority would better support more deployment than we have seen under Title I up to now or expect to see in the near future. As subsidies from RDOF, BEAD, RUS, Treasury, and others roll out, the Commission should articulate its theory of how those funds interact with classification.

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7 See, e.g., NPRM ¶ 100, 101, 110, 120, 121.
10 NPRM ¶ 46.
A. Availability and Competition in Traditional BIAS is Growing

Evidence demonstrates that broadband deployment has been growing without Title II. The figure below shows steadily improving availability and competition of non-satellite, fixed broadband. The FCC’s Form 477 data, which is the data source for this figure through 2021, has many well-known problems, but there is no reason to think those problems affect trendlines in any consistent way. Because the collection methods between Form 477 and the new Broadband Fabric approach are different, we cannot directly compare December 2022 onwards with data prior to that. Still, upward trends are apparent.

![Share of Households With Access to at Least Two Non-Satellite, Fixed BIAS Providers](chart)

Figure 2. Share of Households with Access to at Least Two Non-Satellite, Fixed BIAS Providers

B. New Facilities-Based Competitors

Evidence shows that facilities-based competition, which has been an objective of U.S. policy for decades, is also more robust now than it has ever been.

Satellite has long been an alternative delivery option for broadband service, although the FCC almost always excludes satellite from its discussions of competition. Two companies, Viasat and Hughes, offer service across the entire country that meets the FCC’s definition of broadband but whose service, due to their geostationary (GEO) orbit, has much higher latency than terrestrial options.
A new generation of satellite broadband provided by low earth orbit (LEO) satellites has no such latency because they are so much closer to the Earth.\textsuperscript{11} The figure below shows the closer orbits of LEO satellites providing broadband service, highlighting the main technological reason for the lower latency.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{LEO_satellite_orbits.png}
\caption{GEO, MEO, and LEO Satellite Orbit Footprints (Source: https://arxiv.org/pdf/2201.02408.pdf)}
\end{figure}

Currently one LEO network, Starlink by SpaceX, provides broadband service with nearly 4,700 operational satellites. Starlink reported 1 million subscribers by the end of 2022\textsuperscript{12} and 2 million by September 2023,\textsuperscript{13} although it is unclear how many of those were in the U.S. See Figure 4.

\begin{itemize}
\item \textsuperscript{11} See, e.g., Rosston, Gregory L., and Scott Wallsten, “Should Satellite Broadband Be Included in Universal Service Subsidy Programs?,” 6 J. of Law & Innov. 135 (2023), https://doi.org/10.58112/JLI.6-1.6.
\item \textsuperscript{12} SpaceX, https://twitter.com/SpaceX/status/1604872936976154624.
\end{itemize}
Meanwhile, other LEO networks are racing to compete. Amazon’s Project Kuiper recently launched its first prototype satellite and has permission to place 3,200 satellites in orbit. The European Union, meanwhile, is planning its own competing LEO constellation network, IRIS. It has not said anything about offering service in the U.S., but just as Starlink provides service globally, presumably IRIS could, as well. Another company, OneWeb, has more than 630 satellites in orbit and currently offers more of an internet-of-things network, although might offer home broadband in the future.

While fixed wireless networks have provided service to many for years, 5G fixed wireless is increasingly ubiquitous. T-Mobile, AT&T, and Verizon all have 5G fixed wireless networks competing with wired networks although it can be difficult to know which locations receive strong enough signals to get their full benefits. Still, according to a report by T-Mobile, between Q4 2021 and Q3 2022, 2.6 million of 3.3 million net new broadband adds were fixed wireless.

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None of this proves that Title I classification is responsible for these improvements. Still, it would seem difficult to argue that Title I has in any way held back deployment. The Commission should explain why it believes Title II classification is necessary or would promote more deployment when the evidence suggests otherwise.

C. NPRM’s Arguments About Investment Are Internally Inconsistent

The NPRM uses contradictory arguments and observations to support its contention that Title II classification is necessary to promote competition. Consider the following three arguments in the NPRM.

1. NPRM Argument 1: Title II is Needed to Promote Deployment

The NPRM argues that classification under Title II is necessary to promote deployment:

Classifying BIAS as a telecommunications service will enable the Commission to better support the deployment of wireline and wireless infrastructure, advance universal service, and increase the accessibility of communications networks.\(^\text{18}\)

According to the Commission, classifying BIAS as a telecommunications service improves wireline and wireless deployment, universal service provision, and accessibility.

\(^\text{18}\) NPRM ¶ 46.
2. NPRM Argument 2: Title I or II are Unrelated to Investment

The NPRM argues that it is “unlikely” that classification is causally connected to outcomes:

We tentatively conclude that the Commission’s conclusions in the RIF Order that ISP investment is closely tied to the classification of BIAS were unsubstantiated. Instead, we agree with the RIF Order’s statement that “owners of network infrastructure make long-term, irreversible investments,” which we believe makes it unlikely that changes in investment shortly following the adoption of each Order were actually related to the effects of each Order…. We believe, as the Commission did in 2015, that “no party [could] quantify with any reasonable degree of accuracy how either a Title I or a Title II approach may affect future investment.” As such, we tentatively conclude that changes in ISP investment following the adoption of each Order were more likely the result of other factors unrelated to the classification of BIAS, such as broader economic conditions at the time, technology changes such as the transition from 3G to 4G LTE networks, and ISPs’ general business development decisions….19

The Commission believes the classification of broadband service as either Title I or Title II did not cause changes in ISP investment “following the adoption of each Order.”20 The NPRM “tentatively concludes[s]” that investment was not the result of classification but “more likely the result of other factors.”21

3. NPRM Argument 3: Title II Is Necessary Because of High Investment

The NPRM argues that increasing mobile deployment and an increasing array of edge services justifies classifying BIAS providers under Title II.

a. Mobile Broadband Growth Necessitates Title II

The Commission argues that continued growth of mobile broadband networks is a reason to return to the 2015 OIO under a modernized definition of “public switched network.”22 The Commission writes,

The ubiquity of mobile BIAS that the Commission recognized in 2015 is even more pronounced today, as mobile broadband networks have continued to develop and grow in the intervening years, with more users and increased mobile data traffic….Continued growth of mobile BIAS is expected, with one forecast predicting that there will be 410 million 5G mobile subscriptions in North America by 2028. In light of these factors, we propose to return to the 2015 Open Internet Order’s modernized definition of “public switched network” in section 20.3 of our

19 NPRM ¶ 56.
20 Id.
21 Id.
22 NPRM ¶ 86.
rules….We believe this definition, which includes IP addresses, embodies the current technological landscape and the widespread use of mobile broadband networks, and is therefore more consistent with the Commission’s recognition that the public switched network will grow and change over time.\textsuperscript{23}

According to the Commission, the “widespread use of mobile broadband networks” is “therefore more consistent” with a Title II classification of broadband internet access service because the IP addresses and mobile networks have grown and changed over time.\textsuperscript{24}

\textbf{b. Edge Services Growth Necessitates Title II}

The Commission argues that the increasing “proliferation” of third-party services necessitates Title II classification of broadband as a telecommunications service:

We believe that since the 2018 reclassification of BIAS, and particularly as a result of the COVID-19 pandemic, there is substantial market proliferation of third-party services and devices and that consumers’ use of these offerings significantly outweigh their use of ISPs’ affiliated offerings.\textsuperscript{25}

According to the Commission, third-party services and devices “significantly outweigh” use of “ISPs’ affiliated offerings” and therefore, the 2018 reclassification was in error.\textsuperscript{26}

\textbf{4. These Three Arguments Cannot All Be True at the Same Time}

The various arguments the Commission offers to justify Title II classification are inconsistent and incoherent.

Arguments 1 and 2 conflict. In Argument 1, the Commission argues that classification under Title II is necessary to promote deployment, but in Argument 2 the Commission argues that classification is unrelated to investment and deployment. Both of these cannot be true.

Arguments 1 and 3 conflict. In Argument 1, the Commission argues that classification under Title II is necessary to promote deployment, implying that the Commission believes investment is lower than it would have been had BIAS been classified under Title I. In Argument 3, however, the Commission argues that Title II classification is necessary because there has been so much investment, both in mobile broadband and in third-party services, applications, and devices.

The Commission appears to think that Title II classification is justified by evidence that investment is too low but also by evidence that investment is too high.

\textsuperscript{23} Id.
\textsuperscript{24} Id.
\textsuperscript{25} NPRM ¶ 20.
\textsuperscript{26} Id.
The NPRM’s arguments about high levels of investment and innovation would seem to suggest generally that the 2018 reclassification has resulted in a thriving internet ecosystem. That observation casts doubt on the underlying idea that Title II classification is necessary to promote innovation and investment by entrepreneurs and other firms who rely on broadband services.

5. **FCC Ignores History of Common Carriage and Costs of Utility-Style Regulation**

The NPRM asserts in many places that BIAS providers should be considered “common carriers” and therefore subject to Title II classification. The NPRM does not offer evidence that classifying BIAS as common carriers would lead to more investment or innovation or that consumers would be better off if BIAS were classified as a common carrier. Given the nation’s troubled history with common carriage, the Commission may find it difficult to convincingly show that investment or innovation would, in fact, improve under a Title II regime.

Perhaps the biggest problem with common carrier regulation is that it requires constant regulatory decision making. As Wallsten wrote in 2015,

> Even when established with the best of intentions, however, regulations do not necessarily work for the public good. Instead, they become the product of lobbying by interested parties ranging from companies to public interest groups to Congress and others over how to distribute profits. The interactions between the regulator and those parties inevitably lead to increasingly complex and politicized regulatory regimes.\(^{27}\)

Title II rules can become increasingly complex over time, requiring the Commission to make operational decisions that are beyond its scope or expertise. The interactions between the agency and private sector are “politicalized” and invites more lobbying and public choice dynamics.

The NPRM itself hints at the complex regulatory future that would await under a Title II classification regime. For example, it frequently uses the phrase “open and fair”\(^{28}\) to describe a Title II regime. One problem with this rubric is that the word “fair,” in particular, has no generally agreed-upon definition and might mean something different in every context. Another example of a vague term in the Title II proposed rules is “unreasonable” interference or discrimination. The definition of “unreasonable,” however, is likely to open an endless procession of hearings to decide what that means in different situations.

Another example of where a Title II-type regime is likely to lead to increasingly complex regulations is where the Commission proposes “to adopt a rule concerning waiver of such a ban [on paid prioritization] that establishes a balancing test.”\(^{29}\) It is commendable that the Commission acknowledges that there may be instances where paid prioritization is beneficial and that CBAs are appropriate tools for making policy decisions but this would be another avenue for

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\(^{28}\) See, *e.g.*, NPRM ¶ 21.

\(^{29}\) NPRM ¶ 161.
creating byzantine rules. It is not feasible or desirable for firms to seek the Commission’s permission for new business models. Consider what happens when the Commission does approve one. Presumably others would also be free to use it, but would they be allowed to innovate on that model to differentiate themselves? Presumably such a waiver would be discretionary and subject to changing political administrations.

It is this phenomenon that caused railroads in a common carrier regime to file almost 229,000 rates with the Interstate Commerce Commission for different routes and cargoes. In the natural gas sector, similar outcomes were observed. By the time natural gas regulation was largely ended in 1978, the regulator had promulgated rules on 28 categories of gas. There is no reason to believe that the result would be different for broadband.

The NPRM compares broadband to utilities such as electricity and water: “Not unlike other essential utilities, such as electricity and water, BIAS connections have proved essential…” The implication is that broadband should be regulated like those services. The NPRM itself, however, reminds us that the industry definition of “utilities” does not include telecommunications services: “The U.S. Census Bureau defines the utilities sector industry as comprised of ‘establishments, primarily engaged in generating, transmitting, and/or distributing electric power.’” The statement is not quite accurate—as NPRM footnote 230 notes, that is the definition of NAICS 2211, “Electric Power Generation, Transmission and Distribution.” Still, the NAICS defines “utilities” (NAICS 22) as “establishments engaged in the provision of the following utility services: electric power, natural gas, steam supply, water supply, and sewage removal.”

To be sure, the NAICS definition should not drive regulatory decisions. But as the Commission ponders this question, it is worth comparing how the electricity sector compares to broadband. The figures below show that since 2006, internet service prices have increased much less than electricity prices even though electricity has been more heavily regulated; labor productivity has increased by more than 50 percent among wireline telecommunications carriers and more than seven times among wireless carriers, but has actually decreased among electricity providers; and telecommunications firms have had more product and process innovations than electricity providers, who have had fewer innovations than even the average firm.

31 Id.
32 NPRM ¶ 17.
33 NPRM ¶ 63.
Figure 6. Electricity and Internet Price Indices

Figure 7. Labor Productivity Changes in Electricity and Telecommunications
Some may argue that these comparisons are not apt. However, if the Commission wishes to make the comparison to utilities in the NPRM it should explain why utility-style regulation would improve investment, innovation, productivity, prices or any other important measure.

6. “Paid Prioritization” Is Not Necessarily Harmful

The NPRM proposes banning “paid prioritization.” It mentions the phrase 40 times, nearly each time asserting that it would be harmful. However, it never explains why paid prioritization would necessarily lead to harms, let alone to a situation where the costs exceed the benefits. The closest the NPRM comes to explaining potential harms is to refer to the 2015 OIO. The OIO listed what it believed might be harms but also noted that paid prioritization could have some benefits.

The argument that paid prioritization was necessarily a net harm to society was always an unproven hypothesis. The test still has not been conducted, making it impossible to draw the conclusion that it would necessarily be bad.

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36 See, e.g., NPRM ¶ 6 n.13; NPRM ¶ 9.
37 See, e.g., NPRM ¶ 114 and ¶ 119.
38 See, e.g., OIO ¶ 19.
39 It does appear, however, that the benefits of allowing prioritization are well-understood. For example, Verizon received much criticism of throttling connectivity of a fire command vehicle’s connectivity while managing a firefight in California. FCC Chairwoman Rosenworcel has referenced this example of a reason for the FCC to have Title II authority ([https://docs.fcc.gov/public/attachments/DOC-397827A2.pdf](https://docs.fcc.gov/public/attachments/DOC-397827A2.pdf)). But this example highlights the need for public safety to have prioritized access to networks, which demonstrates potential benefits of prioritization.
The Covid-19 pandemic revealed situations in which paid prioritization could be beneficial. For example, one can imagine schools purchasing higher-quality connections for students when connecting to online classes or medical offices making higher-quality connections available for patients when conducting telehealth. It is not difficult to imagine instances in which paid prioritization might yield net benefits, even if it is not yet known if these cases are necessarily useful or practical. We do know that benefits may exist, and that cost-benefit analysis (CBA) would measure tradeoffs against each other. The Commission should conduct this analysis rather than jumping to conclusions.

The NPRM itself incidentally makes the same point. The Commission writes,

As the Commission observed in the RIF Remand Order: [A]s the COVID-19 pandemic has demonstrated, many Americans rely on telemedicine over mass-market broadband services for “routine health care, triage, and basic health advice.” . . . 5G networks’ ability to transmit massive amounts of data in real time will also help enable new applications that will allow more advanced communications between the public and health care officials, such as allowing health care professionals, through ubiquitous wireless sensors, to remotely monitor patients’ health and transmit data to their doctors before problems become emergencies, and to develop connected ambulance services for faster patient transport.40

Each of these telehealth use cases might work better with different types and prioritizations of connections. Low latency connections with sufficient bandwidth for high-resolution images and high-quality audio might be necessary for some types of health care, a large amount of bandwidth with latency barely relevant better for transmitting extremely large images, and minimal bandwidth but extremely low latency best for sending sensor data. It is not necessarily true that allowing the health care provider to pay to offer the relevant broadband service would be harmful.

The Commission should not assume that paid prioritization is always harmful without analyzing these tradeoffs.

7. Conclusion

The NPRM obscures rather than clarifies the Commission’s rationale for classifying broadband under Title II, focusing more on increasing its own authority than on improving connectivity or societal well-being. The Commission should resolve inconsistencies and contradictory theories in its arguments about how classification affects investment and what a thriving ecosystem implies about classification. The Commission should also use its resources, particularly its Office of Economics and Analytics, to conduct an economic analysis of its proposal rather than simply demanding it of others. In its current state, the NPRM fails to make an economic case for Title II classification.

As another example, FirstNet is an entire network designed to prioritize public safety traffic. See https://www.att.com/firstnetandfamily/

40 NPRM ¶ 38, citing RIF Order at 12343; NPRM ¶ 30.