

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Preserving the Open Internet	)	GN Docket No. 09-191
	)	
Broadband Industry Practices	)	WC Docket No. 07-52

**COMMENTS OF THOMAS M. LENARD, PH.D.\***

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**ON**

**PRESERVING THE OPEN INTERNET  
NOTICE OF PROPOSED RULEMAKING**

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\* The views expressed here are those of the author and not necessarily those of the TPI board, fellows, or staff.

## I. Introduction and Summary

1. These comments are submitted in response to the Commission’s Notice of Proposed Rulemaking on Preserving the Open Internet (NPRM). The proposed rules would codify the four Internet policy principles that the Commission adopted in 2005. These principles (which were not formally adopted through a notice-and-comment rulemaking) have the goal of “entitling” users to access content, applications, services (CAS) and devices of the user’s choice, and to competition among network and CAS providers. The NPRM includes two major additional provisions: a provision that would prohibit broadband providers from discriminating against or in favor of any CAS; and a provision that would require “transparency”—the disclosure of relevant network management practices on the part of broadband providers. Each of the proposed rules is “subject to reasonable network management.”

2. These comments argue that the Commission should not adopt the proposed rules. The Commission has not provided the necessary data and analysis to support promulgation of these rules. Specifically, the Commission has not provided evidence showing that the rules would address a significant problem or market failure, has not identified harms to users that the proposed rules would remedy, and has not demonstrated that the benefits of the proposed rules would exceed their costs.<sup>1</sup> The Commission’s rationale for the proposal is that there are “emerging challenges to the open Internet,”<sup>2</sup> but the Commission’s support for that assertion is weak.

3. There is significant risk that the proposed rules would adversely affect the Internet, which is evolving rapidly. Broadband is a capital intensive industry, requiring billions of dollars of investment in technologies that are sometimes quite risky. Regulatory mandates of the sort the Commission is proposing would inhibit the development of new business models, increase risk, reduce expected returns, and therefore adversely affect incentives for investment and innovation in the broadband infrastructure and possibly in CAS as well. This can reduce overall economic growth and productivity change, which have to a significant extent been determined by investments in information and communications technology.<sup>3</sup> Higher productivity, of course, is the source of increases in real wages and living standards.

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<sup>1</sup> As we explain in Section III, below, this type of analysis is widely accepted as a prerequisite for making good regulatory policy decisions.

<sup>2</sup> *Notice of Proposed Rulemaking*, ¶6 (“FCC NPRM”),

<sup>3</sup> After almost a quarter century of a productivity slowdown (i.e., productivity growth of 1.6 percent per year), U.S. productivity increased at a rate of 2.7 percent from 1996 to 2001, and 2.4 percent from 2002 to 2008. This resurgence is largely, if not entirely, due to the contribution of information technology. Jorgenson, Ho, and Siroh estimated that IT explained more than three-quarters of the increase in productivity growth after 1995, while Oliner

4. The proposed rules would hinder efforts to extend broadband penetration. There are at least two reasons for this. First, the rules would preclude the introduction of innovative pricing plans that might reduce prices to some or all consumers—particularly more price-sensitive consumers—thereby inducing them to increase their adoption of broadband. Second, the rules would adversely affect investment incentives (partly because of the limitations on pricing) and therefore the buildout of the broadband infrastructure. Thus, the proposed rules would undermine the goals of the National Broadband Plan the Commission is currently developing.

5. Perhaps the major aim of the proposal is to protect incentives to invest in CAS and innovate at the “edge” of the network. The Commission provides no evidence that the proposal would be successful in achieving this goal. It may, in fact, have the opposite effect. For example, if the proposal precludes pricing plans that would increase broadband subscribership, this would decrease returns to providers of CAS, adversely affecting innovation at the “edge.”

## **II. The Proposal Is a Sharp Departure from the Status Quo**

6. The Commission characterizes its proposal as “draft rules to preserve an open Internet.”<sup>4</sup> This suggests that the purpose of the rules is simply to preserve the status quo. This is not what the rules would do, however. If adopted, the rules would signify a sharp departure from the status quo.

7. The broadband market has thus far been subject to minimal regulation. The Commission’s proposal would change that. The proposal would subject broadband to non-discriminatory open access requirements and to price regulation, which are defining features of public utility regulation. The Commission’s assertion that the proposed rules “are not intended to regulate the Internet itself”<sup>5</sup> is misleading.

8. The broadband market has generally thrived under the current regulatory regime. In contrast, public utility regulation has not been notably conducive to innovation. The Commission’s strategy is risky, especially for such a dynamic industry. Broadband business

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and Sichel estimated that it explained essentially all of it. See Dale W. Jorgenson, Mun Ho, and Kevin J. Stiroh, “Projecting Productivity Growth: Lessons from the U.S. Growth Resurgence,” *Federal Reserve Bank of Atlanta Economic Review*, 8(3), 1-13, 2002; Dale W. Jorgenson, Mun S. Ho, and Kevin J. Stiroh, “A Retrospective Look at the U.S. Productivity Growth Resurgence,” *Journal of Economic Perspectives*, 22(1), 3-24, Winter 2008; and Stephen D. Oliner and Daniel E. Sichel, “The Resurgence of Growth in the Late 1990s: Is Information Technology the Story?“, *Journal of Economic Perspectives*, 14(4), 3-22, 2002.

<sup>4</sup> FCC NPRM, ¶2

<sup>5</sup> *Id.*, ¶14

models are evolving rapidly. Regulatory mandates that deprive providers of the flexibility to experiment with new business models can have serious deleterious effects for the Internet and consumers.

### **III. The Commission Has Not Provided the Necessary Support for its Proposal**

9. The proposed rules would have far-reaching consequences and therefore should be subject to careful scrutiny before being adopted. The Commission has not performed the requisite analysis.

10. In order to decide whether regulation should be undertaken, and, if so, what form it should take, basic public policy questions should be answered:<sup>6</sup>

- a. Is there a market failure?
- b. If so, how does it affect consumers?
- c. Can the failure be effectively remedied by government action?
- d. Would the benefits of such action exceed the costs?

Despite the fact that the Commission's proceedings "have generated over 100,000 pages of input in approximately 40,000 filings,"<sup>7</sup> the NPRM answers none of these questions.

11. The NPRM contains a lengthy discussion of the success of the Internet under the current regulatory regime.<sup>8</sup> The logical conclusion is to maintain that regime. But the NPRM states, "Despite our efforts to date, some conduct is occurring in the marketplace that warrants closer attention and could call for additional action by the Commission, including instances in which some Internet access service providers have been blocking or degrading Internet traffic, and doing so without disclosing those practices to users."<sup>9</sup> The instances to which the Commission refers are the well-known cases of Madison River blocking VoIP (2005) and Comcast engaging in network management practices that were criticized for lack of transparency (2007). These are

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<sup>6</sup> See, e.g., EXECUTIVE ORDER 12866, September 30, 1993, which states: "Federal agencies should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary by compelling public need, such as material failures of private markets.... In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating.... Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits... unless a statute requires another regulatory approach." E.O. 12866 is one of a series of executive orders over the past 30 years requiring this type of regulatory analysis. Although these executive orders did not typically apply to independent agencies such as the FCC, they represent widely accepted principles of sound regulatory decision making.

<sup>7</sup> FCC NPRM, ¶2

<sup>8</sup> *Id.*, ¶¶17-23

<sup>9</sup> *Id.*, ¶50

the only actual problems discussed in the NPRM. Both of these problems were remedied relatively quickly and easily. The NPRM presents no evidence of current problems.

12. The NPRM contains much discussion of potential threats to the open Internet, which is reflected in the fact that the Commission’s notice contains the word “may” 199 times. Indeed, the Commission notes that, “Other parties have suggested that ‘the problems are all potential problems, not actual problems’ and that the ‘fundamental inability to demonstrate any evidence of an actual market failure confirms what all the rhetoric in the world cannot obscure: net neutrality is a solution in search of a problem’.”<sup>10</sup> The NPRM does not refute this claim.

13. The Commission bears the burden of proof to show that its proposal is warranted and would yield net benefits. The NPRM states that the Commission is “interested in fact-based answers to the questions we pose.”<sup>11</sup> However, the Commission has not presented facts to support its proposal. The public should not have to bear the burden of showing that the rules may not be desirable.

14. For example, in discussing perhaps the most stringent part of the proposal, the nondiscrimination provision, the NPRM states: “We seek comment generally on the costs and benefits of this proposed nondiscrimination rule, both in the near-term and long-term. In particular, would a rule prohibiting broadband Internet access service providers from charging content, application and service providers fees be likely to result in higher social welfare than would result in a market in which no constraints on such fees are imposed? What would the effects be on future innovation?”<sup>12</sup>

15. As discussed above (see ¶10), before proposing major rules, the Commission should present an analysis showing that the rule would result in higher social welfare. If the Commission has such an analysis, it should share it. The appropriate way to go about rulemaking is for the Commission to prepare the cost-benefit analysis before proposing a rule, and then put the rule and analysis out for public comment, rather than ask the public to do the cost-benefit analysis after the rule has been proposed.

#### **IV. The Economics of Broadband Platforms**

16. Broadband has characteristics that can lead to practices that might be viewed as non-neutral, but in fact benefit consumers and provide investment incentives. In an effort to avoid

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<sup>10</sup> FCC NPRM, ¶60

<sup>11</sup> *Id.*, ¶16

<sup>12</sup> *Id.*, ¶111

potential problems, the Commission may end up prohibiting practices that are pro-competitive, pro-consumer, and pro-investment.

17. Broadband is a distribution business. Consumers don't have a demand for broadband by itself; they want the content and applications that it provides. Behavior that might be viewed as "discriminatory" is common in distribution industries (despite the lack of market power). It is common for distributors that sell to consumers to sell their own products and services along with those of other vendors. Supermarkets are an obvious example.<sup>13</sup> Nevertheless, distributors will generally not find it in their interest to block their customers from accessing goods and services they find valuable.

18. The economics of broadband make it strongly in the provider's interest to offer broad access to content. This is because the incremental cost of subscribers (once an area is wired) is quite small, so content that will drive incremental subscribership is likely to be profitable. For the same reasons, blocking content is likely to be unprofitable.

19. Broadband is a capital-intensive business that requires large up-front investments. Demand-based pricing structures, which might be viewed as non-neutral, are common for this type of industry. The Commission acknowledges "economic theory that holds that benefits can arise from price and quality discrimination, at least in certain cases. For example, . . . the ability of a provider to price discriminate not only will benefit the provider, but may also benefit the public as a whole (although not necessarily in all cases)."<sup>14</sup> Barring demand-based pricing structures could (a) diminish the resources available for infrastructure investment, and (b) raise prices for users with less intense demand for broadband. These effects would hinder efforts to extend broadband access to new subscribers.

20. Broadband platforms are intermediaries in two-sided markets, with users on one side and applications and content providers on the other side. More applications and content make the platform more valuable to users. More users make the platform more valuable to applications and content providers. The Commission acknowledges that, "Theoretical economic analyses

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<sup>13</sup> See Thomas M. Lenard and David T. Scheffman, "Distribution, Vertical Integration and the Net Neutrality Debate," in Thomas M. Lenard and Randolph J. May, eds., *Net Neutrality or Net Neutering: Should Broadband Internet Services Be Regulated*, 2006, p. 15. ("The typical supermarket clearly does not have market power. Nonetheless, the typical supermarket engages in practices that, from a classic regulatory perspective, might be characterized as unfair and discriminatory. These practices are key to the messy system by which a competitive marketplace allocates scarcity (shelf space, "consumer attention" span, etc.).")

<sup>14</sup> FCC NPRM, ¶66

suggest that price discrimination may be more beneficial in a two-sided market than in the standard one-sided market.”<sup>15</sup>

21. The NPRM defines the “term ‘nondiscriminatory’ to mean that a broadband provider may not charge a content, application, or service provider for enhanced or prioritized access to the subscribers of the broadband Internet access service provider...”<sup>16</sup> The rule “would not prevent a broadband Internet access service provider from charging subscribers different prices for different services.”<sup>17</sup> However, it could preclude demand-based pricing, which may be efficient. Thus, the rule would impose price regulation on both sides of the market. It would preclude any positive price on the CAS side of the market and on the user side of the market could be interpreted to permit only permit pricing variation that reflects different services. As discussed above,<sup>18</sup> demand-based pricing can produce benefits for consumers, as the Commission acknowledges.

22. There is nothing in the economics literature that suggests that, as a general rule, a zero price on one side of a two-sided market is economically efficient or good for consumers. Under different circumstances the efficient price broadband providers charge to CAS providers could be zero, positive, or negative (i.e., broadband providers pay CAS providers). Particularly since the Internet is rapidly evolving, the Commission should not preclude experimentation with different business models.<sup>19</sup>

23. A rule specifying a zero price for CAS providers to access the Internet can be costly to consumers. If infrastructure providers can’t charge CAS providers, then the infrastructure providers may charge end users more in order to cover the costs of the infrastructure. Payments by CAS providers can help defray the infrastructure costs and therefore lower prices to users, increasing subscribership, particularly among more price-sensitive users.

24. The Commission is concerned that if Internet service providers were able to charge CAS providers, that would make it more difficult for CAS entrepreneurs to enter the market and therefore would deter innovation. That is possible, but seems unlikely because it would be in the broadband provider’s interest to prevent it from happening. The broadband providers want to

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<sup>15</sup> FCC NPRM, ¶66

<sup>16</sup> *Id.*, ¶106

<sup>17</sup> *Id.*, ¶106

<sup>18</sup> *See supra* ¶18 of these comments.

<sup>19</sup> *See* Robert Hahn and Scott Wallsten, “The Economics of Net Neutrality,” *The Economists’ Voice*, June 2006. (“The point is that there is not one ‘right’ way to charge different customers in these markets, and firms should be allowed to experiment to find out what works best. Because these markets are so dynamic, pricing can be expected to change over time in response to new demands and opportunities.”)

maximize the value of their networks, which means they want to make as much CAS available to consumers as possible. Therefore, it would not be in the interest of a broadband provider to price CAS entrepreneurs out of the market. To do so would reduce the profits that the broadband network could generate and thus, the value of the network. One would expect that if the broadband providers were to charge CAS providers, they would establish a very low (perhaps zero) price for new entrants.

25. The Commission is also concerned that, due to a collective action problem, broadband providers might charge an inefficiently high price to CAS providers, thereby discouraging innovation at the “edge.”<sup>20</sup> But even if such a collective action problem exists, the Commission’s analysis is incomplete. As indicated above,<sup>21</sup> charging usage prices to CAS providers could enable broadband providers to lower prices to end users. More end users increases revenues to CAS providers (from, e.g., advertising revenues). The most one can conclude is that the net effect on incentives to invest and innovate in CAS is ambiguous.

## V. The Rule Would Increase Uncertainty

26. A major goal of the Commission’s proposal is to “provide greater predictability,”<sup>22</sup> but it is more likely that the proposal would increase uncertainty, perhaps substantially, and therefore the risks to broadband providers. Greater uncertainty would adversely affect investment.

27. The Commission is seeking comment on a case-by-case approach to enforcing the rules, rather than writing detailed rules.<sup>23</sup> Economists have generally been favorable toward using the antitrust laws, which rely on a case-by-case approach, to address net neutrality issues.<sup>24</sup> Though antitrust is not without problems, it rests on a fairly well defined set of pro-consumer, economic efficiency principles and goals, which gives antitrust enforcement some predictability. The Commission has not specified a similar set of pro-consumer principles for its proposed rules. This would make it more difficult to predict the outcome in any given case.

28. Each of the proposed rules is “subject to reasonable network management.” The definition of reasonable network management (NPRM Appendix A) is sufficiently open that it

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<sup>20</sup> FCC NPRM, ¶¶68-69.

<sup>21</sup> *Id.*, ¶23

<sup>22</sup> *Id.*, ¶6

<sup>23</sup> *Id.*, ¶12

<sup>24</sup> William J. Baumol, Martin Cave, Peter Cramton, Robert Hahn, Thomas W. Hazlett, Paul L. Joskow, Alfred E. Kahn, Robert Litan, John Mayo, Patrick A. Messerlin, Bruce M. Owen, Robert S. Pindyck, Scott J. Savage, Vernon L. Smith, Scott Wallsten, Leonard Waverman and Lawrence J. White, “Economists Statement on Network Neutrality Policy,” March 2007.



would take many cases before it became well-defined (and therefore predictable), particularly because there is no overarching criterion on which reasonableness will be evaluated. In contrast, the antitrust laws have an overarching economic efficiency criterion.

29. The possible category of “managed or specialized services” that would be exempt from the proposed rules also increases uncertainty.<sup>25</sup> Is the Commission contemplating a pre-clearance process for specialized services? What would the criteria be? Under what rules would managed services operate?

30. The case-by-case approach would be an invitation to rent-seeking behavior on the part of firms seeking to raise their rivals’ costs. We already see this type of behavior in the regulatory maneuverings of CAS and broadband providers, but adoption of this proposal would provide many more opportunities for participants to make complaints. The costs to individual complainants are low, but to the system as a whole they can be quite high.

## **VI. Conclusion**

31. There is widespread agreement that the Internet should provide consumers with access to CAS of their choice. The economic environment should be conducive to investment and innovation in the network and in CAS, and to increased penetration of broadband to those populations not yet served. The debate is over how to achieve those goals and whether the open Internet is really at risk—is there a problem that needs to be solved?

32. The Commission has not demonstrated that there is a need for the proposed rules or that they would produce net benefits (or any benefits) for consumers or for the economy as a whole. There is good reason to believe that the proposed rules would be harmful. The proposed rules do not take into account the complex economics of the broadband industry. They are likely to inhibit the development of new business models, increase uncertainty and decrease the expected returns to investment in the broadband infrastructure. The proposed rules are also likely to decrease Internet access for consumers, particularly price-sensitive consumers, which will decrease returns to CAS providers and the incentive to innovate at the “edge.” The ultimate effect of the proposed rules is likely to be counter to the goals of the National Broadband Plan.

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<sup>25</sup> FCC NPRM, ¶¶148-153