

BACKGROUND

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Eight Myths About FCC Regulation of the Internet

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Abstract

Proposed FCC regulation of the Internet, widely called “net neutrality” regulation, is as misunderstood as it is dangerous to the digital revolution and the U.S. economy. Rather than a long-standing set of rules that have protected innovators, net neutrality is a recently articulated idea that threatens innovation. Rather than a tool to introduce competition in a monopoly market, it would discourage competition in what is now a dynamic marketplace. These and other misconceptions obscure the lack of a compelling case for FCC regulation, and the dangers to Americans that such regulation would pose.

It ain't so much the things we don't know that get us into trouble.

It's the things we know that just ain't so.

—19th-century humorist Josh Billings (attributed)

Few policy debates in Washington have generated as many myths and mischaracterizations as the ongoing battle over proposed Federal Communications Commission (FCC) rules for broadband Internet service. Popularly known as “net neutrality” rules, these Internet regulations would limit the ability of Internet service providers (ISPs) such as AT&T, Verizon, and Comcast to speed up, slow down, or block content being sent to end users. As a consequence, a host of practices ranging from offering premium services to providing incentive discounts for selected applications could be banned.¹

The issue is complex and has left much of the public confused. To some degree, the intricacy of the issues is to blame, made worse by the legal, engineering, and economic jargon at play in the debate. Yet even on a basic level, confusion has reigned among the public, poli-

KEY POINTS

- FCC-imposed net neutrality regulation would be a radical departure from the light-touch regulatory approach that has long allowed innovation on the Internet to thrive.
- This is not a David versus Goliath battle. Supporters of FCC regulation include some of the largest corporations on earth, who believe they would benefit from FCC intervention.
- Despite claims that FCC regulation would protect the little guy against big firms, the proposed rules would hinder small start-ups and market challengers.
- Despite claims that the market for broadband Internet is not competitive, 90 percent of Americans have a choice in providers. Efforts to increase consumer choices would be hurt, not helped, by regulation.
- Competition is the first and best tool for consumer protection in this market, but broadband consumers are also amply protected by existing antitrust laws. These laws would become more limited if the FCC imposes its own rules.

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cymakers, and much of the media in its coverage of the debate. Misperceptions on fundamental questions—such as whether these are existing rules under attack or new rules being imposed—are common.

Here is a rundown of eight of the most widely repeated “facts” about net neutrality regulation that “just ain’t so.”

MYTH #1: Net neutrality has been built into the fabric of the Internet since its creation.²

The belief that net neutrality has always—was President Obama recently asserted—been part of the Internet is an enduring misconception. It is certainly false that network neutrality rules are in any literal sense part of the “fabric” of the Internet. Net neutrality is a recent invention, first articulated only a dozen years ago.³

Some say that the principles *behind* net neutrality have always been part of the fabric of the Internet. These principles, which say that Internet access providers must treat all content equally, are very similar to an engineering concept known as the “end-to-end principle,” which dates to the early days of the Internet. This concept holds that “intelligence” (i.e., processing of information) should be confined to the two ends of the network: the origination of content and receipt by the end user, or consumer. In between, the pipes connecting these pockets of intelligence should be “dumb,” i.e., confined to simply transporting content without modifying it.

Some have described this concept as part of an unwritten constitution for the net.⁴ Yet in practice, as Christopher Yoo has documented, the rule was never considered sacrosanct.⁵ Rather, it was widely seen as

a reliable, but not inviolable, rule of thumb for engineers working on the Internet. David Clark, an Internet engineer who was among the first to articulate the principle, wrote that “the end-to-end principle is not an absolute rule, but rather a guideline that helps in application and protocol design analysis.”⁶

According to Yoo, the literature on the principle shows that it always recognized that there would be exceptions. In fact, there were cases in which intelligence in the “pipes” was found to be necessary. For instance, network operators have long actively managed their networks to filter out spam and to ensure network security. Network operators consider each of these functions on a case-by-case basis, rather than apply an unbreakable rule built into the fabric of this ever-changing technology.

MYTH #2: Without net neutrality, the very start-ups that make the Internet a force of innovation will be throttled.⁷

This oft-repeated argument presumes that net neutrality regulation is already the law of the land and that the innovation that has indisputably occurred took place under such regulation. This is false.

Historically, the Internet has functioned without any government-enforced rules restricting how Internet access providers could manage traffic. The FCC did not even attempt to directly regulate Internet access services until 2007, when the agency attempted to enforce what it had previously described as “non-binding” principles. However, this action was voided in federal court three years later.⁸

In 2010, the FCC tried again to impose rules, but these also were challenged in court and eventually voided in early 2014. At no time were unchallenged

1. See James L. Gattuso and Michael Sargent, “Beyond Hypothetical: How FCC Internet Regulation Would Harm Consumers,” Heritage Foundation *Background* No. 2979, November 25, 2014, <http://www.heritage.org/research/reports/2014/11/beyond-hypothetical-how-fcc-internet-regulation-would-hurt-consumers>.
2. Barack Obama, “The President’s Statement,” <http://www.whitehouse.gov/net-neutrality> (accessed December 9, 2014).
3. See Tim Wu, “Network Neutrality, Broadband Discrimination,” *Journal on Telecommunications and High Technology Law*, Vol. 2, No. 1 (Fall 2003), p. 141, http://www.jthtl.org/content/articles/V211/JTHTLv2i1_Wu.PDF (accessed December 9, 2014).
4. See Lawrence Lessig, “Cyberspace’s Constitution,” draft 1.1, lecture at the American Academy, Berlin, Germany, February 10, 2000, <http://cyber.law.harvard.edu/works/lessig/AmAc1.pdf> (accessed December 9, 2014).
5. Christopher S. Yoo, “Would Mandating Broadband Network Neutrality Help or Hurt Competition? A Comment on the End-to-End Debate,” *Journal on Telecommunications and High Technology Law*, Vol. 3, No. 1 (Fall 2004), p. 23, http://jthtl.org/content/articles/V311/JTHTLv3i1_Yoo.PDF (accessed December 9, 2014).
6. Jerome H. Saltzer, David P. Reed, and David D. Clark, “End-to-End Arguments in System Design,” *ACM Transactions on Computer Systems*, Vol. 2, No. 4 (November 1984), p. 277, cited in *ibid.*, p. 26, note 4.
7. Demand Progress, petition to the FCC on net neutrality, https://act.demandprogress.org/sign/fcc_net_neutrality/ (accessed December 9, 2014).
8. *Comcast v. FCC*, 600 F.3d 642 (2010).

rules in place that limited the behavior of ISPs. In fact, wireless broadband—such as 4G cellular service—was exempt from previous FCC rules and thus was never even temporarily subject to FCC “neutrality” mandates. Rather than suffering reduced innovation, wireless service has been even more innovative than its wired cousin.

New FCC regulation would chill innovation, not protect it. Under FCC regulation, especially if the agency opts to impose comprehensive common carrier regulation, access providers’ new and innovative business practices, their pricing systems, and potentially even improvements in service or technologies would be subject to government approval or be banned entirely.

As a result, such regulation could be the death knell for small start-ups, not a lifesaver. In fact, Jeff Pulver, a pioneer in Internet telephone service, has stated that potential investors in his venture held back for a decade, fearing that the FCC would use regulation “as a club to force conformity and stop new upstarts.”⁹ The constant innovation that has long defined the Internet would be stymied by government regulation, not the absence of it.

MYTH #3: Net neutrality is a David versus Goliath battle.

Supporters of FCC net neutrality rules have often described themselves as a “rag-tag band” fighting for the little guys against corporate behemoths.¹⁰ Certainly, many of the Internet providers that would be subject to the restrictions are large. Yet the pro-regulation camp represents firms that are as large as or even larger than ISPs, including Google, Microsoft, and Amazon.com.

Nor would regulation necessarily aid “small” firms in their dealings with “big” firms. Many of the content providers that would benefit from such regulations are huge players in the marketplace, such as

Netflix, which accounts for 34 percent of peak Internet traffic in America.¹¹ At the same time, many firms that would be subject to the proposed rules, such as Sprint and T-Mobile, are relatively small players in the field.

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Thus, the portrayal of the net neutrality debate as a battle between corporate Goliaths versus rag-tag Davids is simply not true. The proposed rules would not help little firms as opposed to big firms—nor should they. Size alone—as opposed to other considerations such as market power—is not a particularly relevant policy consideration. The ever-tempting storyline of big versus small just does not fit the facts.

MYTH #4: All bits are created equal.

The idea that all “bits”—the basic building blocks of the digital world—are alike is often heard in the FCC regulation debate. It is a tempting concept: All Internet content is a series of such bits, so there is no technical reason that any particular set of bits should be processed differently from any other. As Nick Bhargava, founder of the crowdfunding site Groundfloor, put it:

In this world, all bits are equal, and the ISPs mandate is to move bits from provider to consumer. We pay for throughput service regardless of what content those bits will form, just like we pay for domestic telephone service regardless of who is calling us.¹²

9. Jeff Pulver, “Freedom to Innovate Key to Internet Future,” *USA Today*, September 16, 2014, <http://www.usatoday.com/story/opinion/2014/09/16/jeff-pulver-net-neutrality-open-internet-column/15663385/> (accessed December 9, 2014).

10. “Disney, Verizon, and AT&T are among the superpowers developing a shock and awe strategy intended to annihilate the rag-tag band of consumers and non-profits working to keep the Internet playing field level.” Martin H. Bosworth, “‘Net Neutrality’ Battle Heats Up,” *Consumer Affairs*, March 22, 2006, <http://www.consumeraffairs.com/broadband-and-net-neutrality?page=2> (accessed December 9, 2014). See also James Gattuso, “Rag-Tag Band for Net Neutrality?” *Technology Liberation Front*, March 23, 2006, <http://techliberation.com/2006/03/23/rag-tag-band-for-net-neutrality/> (accessed December 9, 2014).

11. Richard Davies, “Netflix Growth Makes It Road Hog of the Internet,” *ABC News*, May 14, 2014, <http://abcnews.go.com/blogs/business/2014/05/netflix-growth-makes-it-road-hog-of-the-internet/> (accessed December 9, 2014).

12. Nick Bhargava, “A Startup Founder’s Plea for Net Neutrality, and Why You Should Care Too,” *ExciteEvent*, July 17, 2014, <http://excitevent.com/article/a-startup-founders-plea-for-net-neutrality-and-why-you-should-care-too-14717> (accessed December 9, 2014).

That is an eloquent evocation of Internet equality, but it is wrong. In fact, some bits are more important than others. As Internet pioneer Nicholas Negroponte, founder of MIT's Media Lab, explained recently:

[P]eople don't appreciate that a book, a normal novel, is about a megabyte. And yet a second of video is more than a megabyte. So when you look at video for a couple of hours it's the equivalent of hundreds of books. And then if you have a pace-maker that ... monitors your health by sending data up to the Cloud. Then a few bits of your heart data are a small fraction of a book. So you have bits that represent your heart, bits that represent books and bits that represent video. And so to argue that they're all equal is crazy.¹³

The fact is that the Internet does not transmit generic, all-purpose bits of equal value that can all be treated the same way.

Regulators working to sort out the distinctions would be overwhelmed and constantly lag behind the rapid innovations that are commonplace on the Internet.

It is not just a matter of separating out a few classes of content, such as video or voice telephony, that would be permitted special treatment. Even within these general categories, there are differences: What type of video is it? Is it urgent? Does it involve a medical issue or is it a cat video? Did the recipient request that particular content? How much does the end user value quick downloads? How important is that speed to the content originator?

Accommodating the variations is not a simple matter. Regulators working to sort out the distinc-

tions would be overwhelmed and constantly lag behind the rapid innovations that are commonplace on the Internet. These innovative approaches will face added uncertainty because entrepreneurs cannot predict how regulators would choose to treat various new services.

A far better approach would be to allow content providers, ISPs, and consumers—working through markets—to sort out the varying preferences of users and various service providers. Regrettably, these market interactions are exactly what net neutrality rules would ban.

MYTH #5: No one pays for “fast lanes” on today's Internet.

Often called “paid prioritization” or simply “Internet fast lanes,” the potential business practice of offering premium service to content providers for a fee has been roundly opposed by regulation advocates. Even President Barack Obama expressed concern about the possibility of such arrangements:

I know one of the things that people are most concerned about is paid prioritization, the notion that somehow some folks can pay a little more money and get better service, more exclusive access to customers through the Internet. That's something I'm opposed [to].¹⁴

But paying more for better service is a profoundly routine practice in most markets. From airline travel to theater tickets to package delivery, premium service offerings are an established and essential part of business. Even on highways, HOT lanes¹⁵ have proven a successful and pro-consumer practice.¹⁶

Nor is the concept of a fast lane new to the Internet itself. While no ISP yet offers such service, content generators have long employed third-party networks to expedite their traffic. Companies such as Akamai and Level 3 have long operated such “content delivery networks” (CDNs), with servers installed near or

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13. Nicholas Negroponte: “Net Neutrality Doesn't Make Sense,” transcript, Big Think, <http://bigthink.com/videos/bits-bits-everywhere-with-mit-media-labs-nicholas-negroponte> (accessed December 9, 2014).
 14. Barack Obama, “Remarks by the President in a Town Hall on Innovation,” Los Angeles, October 9, 2014, <http://www.whitehouse.gov/the-press-office/2014/10/09/remarks-president-town-hall-innovation-los-angeles-california> (accessed December 9, 2014).
 15. High-occupancy/toll lanes.
 16. Martin Wachs and Brian D. Taylor, “Make HOT Lanes Permanent,” RAND Corporation, April 23, 2014, <http://www.rand.org/blog/2014/04/make-hot-lanes-permanent.html> (accessed December 9, 2014).
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at ISP data centers. For a fee, content providers can store content at these locations, allowing their data to reach the ultimate consumer more quickly and reliably. Taking the concept further, some firms own their own CDNs, allowing them to deal directly with ISPs. For instance, Netflix contracted with Level 3's CDN to handle its content until 2012, when it began to operate its own CDN.¹⁷

These arrangements are clearly beneficial to consumers because they enable users to stream high-quality digital video smoothly and quickly. Like the paid prioritization schemes denounced by President Obama and other advocates of regulation,¹⁸ they allow firms to pay a little more to receive better service. This is neither new nor problematic.

MYTH #6: Internet regulation is needed because there is no competition in broadband service.

In September of this year, FCC Chairman Tom Wheeler gave a speech assessing the state of competition in U.S. broadband markets. His key conclusion was:

At 25 Mbps, there is simply no competitive choice for most Americans.... [T]hree-quarters of American homes have no competitive choice for the essential infrastructure for 21st century economics and democracy....

Things only get worse as you move to 50 Mbps where 82 percent of consumers lack a choice.¹⁹

Grim-sounding numbers like these have led many to conclude that the broadband market is not working and that regulation is therefore required.

However, Wheeler's numbers do not stand up to scrutiny. By limiting the definition of broadband to

service offerings of 25 Mbps, much less 50 Mbps, he excluded the service that the vast majority of Americans receive. Only about one in six broadband subscribers even get 15 Mbps speeds.²⁰

The market looks a lot different at more common speeds. At 5 Mbps (fast enough to receive streaming high-definition video), the FCC says 75 percent of consumers have a choice of providers, and 15 percent have three or more.

The chairman also excluded wireless broadband from his calculations. If wireless providers are included in the mix, more than 90 percent of Americans have a broadband choice.²¹

MYTH #7: Internet regulation will increase competition.

More competition of course would always be better, but the rules that the FCC is considering would do nothing to increase competition among Internet access providers and could hinder it. No barriers to entry would be lowered, no costs reduced, and no resources made more available. To the contrary, if the rules take effect, the costs of operating a network would increase, and potential returns decrease. Costs would be significantly greater and would present more of a risk to smaller contestants in the marketplace, who have less ability to bear regulatory burdens.

Moreover, the requirement of neutrality would create a hurdle for new competitors in the marketplace. Especially in markets with strong incumbent firms such as in the U.S., the best way to establish a competitive foothold is often to find an innovative way to differentiate one's product. This can be done in a number of ways. In the airline industry, Southwest successfully took on the established carriers by offering low-cost service from underused airports. In the grocery market, Trader Joe's made a place for itself by offering unique and often quirky items.

17. CDNs are distinct from "peering arrangements" under which long-haul "backbone" networks interconnect, sometimes for a fee, with each other and with ISPs.

18. CDNs are not covered under the proposed net neutrality rules, which largely apply only to how traffic within an ISP's network is processed. However, Netflix has argued that the fees that it pays to Internet service providers should be prohibited under net neutrality. See Gattuso and Sargent, "Beyond Hypothetical."

19. Tom Wheeler, "The Facts and Future of Broadband Competition," prepared remarks, Washington, DC, September 4, 2014, p. 4, https://apps.fcc.gov/edocs_public/attachmatch/DOC-329161A1.pdf (accessed December 9, 2014).

20. Akamai, "State of the Internet," Q1, 2014 report, 2014, p. 23, <http://www.akamai.com/dl/akamai/akamai-soti-q114.pdf> (accessed December 9, 2014).

21. Everett Ehrlich, "The State of U.S. Broadband: Is It Competitive? Are We Falling Behind?" Progressive Policy Institute, June 12, 2014, http://www.progressivepolicy.org/wp-content/uploads/2014/06/2014.06-Ehrlich_The-State-US-Broadband_Is-it-competitive-are-we-falling-behind.pdf (accessed December 9, 2014).

In broadband, a new competitor could differentiate itself in a number of ways, such as offering the fastest connections or the lowest prices, providing the best mobile service, or offering optimized service for e-mail, social networks, or even peer-to-peer applications.²²

The requirement of neutrality would create a hurdle for new competitors in the marketplace.

The FCC rules would hinder each of these strategies by limiting the ability of providers to innovate. For instance, a plan floated by Sprint for a low-cost, Facebook-only service was condemned as a “neutrality” violation, as was a plan by MetroPCS to provide unlimited YouTube viewing on their wireless networks.²³ Despite potential consumer benefits and competitive effects, a neutrality regulation regime would likely foreclose such strategies.

MYTH #8: Without FCC rules Internet access providers would be unregulated.

In a competitive marketplace the first line of defense for consumers is competition, not government regulators. The ability of consumers to switch providers if they feel they are not receiving what they want is a greater and more effective constraint than any slow-moving bureaucracy.

Even if competition is insufficient for some reason, the federal antitrust and other laws provide additional protections for broadband consumers. These laws, including the 1890 Sherman Act and the 1914 Clayton Act, define a broad range of prohibited anti-competitive activities and empower the Federal Trade Commission (FTC), the Department of Justice, and private plaintiffs to bring lawsuits to stop such activity.

While not perfect, the existing competition laws are informed by a century of legal precedent and economic analysis on all manner of alleged anti-compet-

itive activity and have a time-tested framework for enforcing them—albeit the FTC and Department of Justice have often been overzealous in their enforcement. Unlike the proposed FCC rules, which would impose one-size-fits-all standards to be tested on the fly, antitrust regulators and the courts consider each case individually using established principles.

In fact, the FTC is already using its authority to bring cases related to net neutrality. As recently as October, the agency brought a lawsuit under its consumer protection authority against AT&T for improperly slowing broadband speeds for high-volume users.²⁴

Ironically, the FTC’s authority to act in broadband cases could be reduced by FCC intervention. The FTC’s antitrust authority does not extend to common carriers. The FCC is actively considering reclassifying broadband access providers as common carriers under Title II of the Communications Act. If the FCC proceeds, the FTC, which has the most experience in dealing with complex issues of competition and market power, would lose its current antitrust jurisdiction over the broadband market.

Conclusion

The FCC’s proposed regulation of the Internet is as misunderstood as it is important to the digital revolution and the U.S. economy. Rather than a long-standing set of rules that have protected innovators, it is a recently articulated idea that threatens innovation. Rather than a tool to introduce competition in a monopoly market, it would discourage competition in what is now a dynamic marketplace.

These and other misconceptions obscure the lack of a compelling case for FCC regulation, and the dangers to Americans that such regulation would pose.

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22. See Yoo, “Would Mandating Broadband Network Neutrality Help or Hurt Competition?”

23. Gattuso and Sargent, “Beyond Hypothetical.”

24. Michael Sargent, “Lawsuit Against AT&T over Slowing Customers’ Internet Shows We Have Enough Internet Regulations,” The Daily Signal, October 31, 2014, <http://dailysignal.com/2014/10/31/lawsuit-att-slowng-customers-internet-shows-enough-internet-regulations/>.