NETWORK NEPOTISM AND THE MARKET FOR CONTENT DELIVERY

Tejas N. Narechania*

INTRODUCTION

This summer, the Federal Communications Commission (FCC) officially launched its third attempt to impose network neutrality rules on Internet traffic.1 But before the Commission could release its proposed regulations, they leaked to the Wall Street Journal2 and were quickly embroiled in controversy.3 Chief among the objections was the possibility that the new regulations would allow broadband carriers, such as Verizon, to prioritize certain traffic, thereby creating an Internet “fast lane” that could be dedicated to select content, websites, or applications. Of particular concern was the possibility that carriers would use this power to accord special treatment to other members of its corporate family: Comcast might, for example, favor Hulu (which it partially owns4) at the expense of other online video services.

In general, these concerns about network nepotism have focused on content and applications. For example, carriers could favor Isis, a mobile wallet application owned by the mobile networks, by blocking access to competitors such

* Julius Silver Fellow, Columbia Law School. I served as Special Counsel at the Federal Communications Commission (FCC) through September 2013, where I held primary responsibility for matters relating to the FCC’s Open Internet Order concerning network neutrality. The views expressed in this Essay are solely my own and do not represent those of the FCC or of the U.S. government. I owe many thanks to Brad Greenberg, Scott Hemphill, Bert Huang, Taylor Kirklin, Khushali Narechania, Henning Schulzrinne, and Tim Wu for very helpful comments on earlier drafts of this Essay. My thanks also to the members of the Stanford Law Review for their editorial assistance.

1. See Protecting and Promoting the Open Internet, 79 Fed. Reg. 37,448 (proposed July 1, 2014) (to be codified at 47 C.F.R. pt. 8).
as Google Wallet. Similarly, carriers could give Hulu preferential access, disadvantaging outsiders such as Netflix. In this context, prioritization—access to the “fast lane”—is a tool by which broadband networks can favor affiliated content.

This discussion, however, has largely overlooked other forms of vertically affiliated services that benefit from prioritized access. Just as carriers are in content markets, they are also in content delivery markets. That is, broadband carriers not only deliver traffic between the Internet and their own subscribers across their last-mile facilities but also are beginning to help carry traffic across the Internet. And so just as regulators have shown concern for a broadband carrier’s desire to use prioritization to favor affiliated content, they should be equally concerned that a carrier may attempt to favor affiliated content delivery services.

The upshot of this short Essay is this: When a broadband carrier, such as Verizon, offers a commercial prioritization service, it offers a unique service over the last-mile connection that only it controls. This termination monopoly not only gives carriers the power to favor selected content but also allows them to monopolize other markets for content delivery. Thus, the introduction of this new option gives carriers a new tool with which to discriminate against potential competitors and may make the existing markets for content delivery less competitive over the long term, with potentially significant effects for the economics and innovation at the center of the Internet.


6. See Applications of Comcast Corp., Gen. Elec. Co. & NBC Universal, Inc. for Consent to Assign Licenses & Transfer Control of Licensees, 26 FCC Rcd. 4238, 4268 (2011) (“We conclude that Comcast-NBCU will have the incentive and ability to discriminate against, thwart the development of, or otherwise take anticompetitive actions against [online video distributors].”).


8. As an example, Comcast has a partial stake in Hulu. See supra note 4 and accompanying text. Comcast also offers content delivery facilities that send Hulu content to viewers. See infra note 29 and accompanying text.

9. The term “last mile” refers to the segment of a telecommunications network that connects individuals and households to the broader network. See JONATHAN E. NUECHTERLEIN & PHILIP J. WEISER, DIGITAL CROSSROADS: TELECOMMUNICATIONS LAW AND POLICY IN THE INTERNET AGE 25, 72 fig.2.2 (2d ed. 2013).

I. SCRUTINY FOR NETWORK NEPOTISM

The FCC’s latest proposal for network neutrality rules creates space for broadband carriers to offer “paid prioritization” services. While the sale of such prioritization has been characterized as a stark and simple sorting into “fast” and “slow” traffic lanes, the offering is somewhat more subtle: a paid prioritization service allows broadband carriers to charge content providers for priority when allocating the network’s shared resources, including the potentially scarce bandwidth over the last-mile connection between the Internet and an individual broadband subscriber. Such allocation has historically been determined by detached—or “neutral”—algorithms. The Commission’s newly proposed rules, however, would allow carriers to subject this allocation to a content provider’s ability and willingness to pay.

The Commission’s decision has earned the scorn of many proponents of network neutrality, who argue that the new policy amounts to an abandonment of a core principle that had guided every prior attempt at network neutrality regulation. In order to allay these concerns, the Commission has proposed several tight boundaries around the scope of permissible prioritization.

Among these restrictions is the proposal’s presumption against nepotistic behavior by broadband carriers to favor vertically affiliated services. Indeed, the concern that carriers would favor their own traffic in order to exclude competitors motivated some of the earliest network neutrality proposals. Despite this long-standing concern, competition policy and antitrust law have tended to favor vertical integration on the economic theory that a monopolist cannot increase its profit by leveraging its power in one market into a second monopoly. There are, however, several instances where the theory favoring vertical integration breaks down. Among them is the scenario in which a platform owner leverages its status as a gatekeeper to “hold up” new innovations, thereby excluding competitors in those new markets and extracting additional reve-

11. See Protecting and Promoting the Open Internet, 79 Fed. Reg. 37,448, 37,463 (proposed July 1, 2014) (to be codified at 47 C.F.R. pt. 8).
14. Id. at 37,465 (“[W]e propose to adopt a rebuttable presumption that a broadband provider’s exclusive (or effectively exclusive) arrangement prioritizing service to an affiliate would be commercially unreasonable.”).
15. Id. at 37,465 (“[W]e propose to adopt a rebuttable presumption that a broadband provider’s exclusive (or effectively exclusive) arrangement prioritizing service to an affiliate would be commercially unreasonable.”).
Broadband carriers may present such a threat: control over the physical channel that connects their subscribers to the Internet endows them with “gatekeeper” status, giving them significant economic power over incoming traffic.19

Indeed, this threat of hold-up in an adjacent market is the primary concern that has driven nearly every significant network neutrality complaint thus far. The FCC’s first major network neutrality adjudication involved a traditional telephone company that had blocked online voice applications that competed with its legacy business.20 More recently, the Department of Justice has investigated allegations that broadband carriers used data caps (limits on consumer use) to advantage affiliated old-world cable television products as well as new-world Internet applications.21 Mobile telephone providers have similarly attempted to restrict applications that compete with their traditional voice products and with their data products, mobile carriers have also blocked other applications, such as Google Wallet, that compete with their own proprietary offerings.22

Thus, economic theory, together with the empirical examples described above, suggest that broadband carriers may profitably discriminate against unaffiliated services. This is true even for services that consumers might prefer: so long as any given set of restrictions is not so onerous as to cause consumers to quit, the exclusionary conduct may be designed profitably.23 The Commission’s proposed presumption against network nepotism is thus an important and necessary safeguard that is consistent with its long-held regulatory aims in the sector.24 Preventing carriers from using paid prioritization to advantage affiliated applications mitigates the risk that they will leverage their gatekeeper power in the content markets.

---


24. See Goldman, supra note 5.

25. See Verizon, 740 F.3d at 648.

The market for content, however, is far from the only critical market at issue. To be sure, competition among video applications such as Netflix, Amazon, Hulu, YouTube, and traditional television is fierce. But just as there is much competition among these content services, there is also much competition between the companies that offer to deliver this content to subscribers.

An online store, such as Overstock.com, is a company that transmits large amounts of data but does not directly compete with any of the broadband carriers’ businesses. To facilitate the delivery of that content, Overstock.com could contract with a variety of providers.27 Several companies (e.g., Cogent) offer to deliver content from websites (e.g., Overstock.com) to points across the Internet. Others offer more sophisticated solutions: some companies purchase access from the first set of providers, only to resell it to websites after optimizing it for those customers; other companies, such as Akamai and Limelight, which fall into a class of services known as content delivery networks (CDNs), operate servers across the Internet that contain caches of popular content in order to deliver it more quickly. Importantly, the robustly competitive markets for content delivery have—so far—largely excluded broadband carriers. Verizon, Comcast, and other broadband carriers have traditionally focused on selling retail Internet access to consumers. AT&T once offered its own CDN service, but it has since abandoned its proprietary solution.28

Carriers, however, are beginning to enter the content delivery markets in important ways. Comcast recently announced the introduction of its own CDN service. Similarly, Verizon has made moves suggesting that it will soon offer a CDN service as well.29 Furthermore, while the FCC’s previous rules effectively


To be sure, Comcast is regulatorily prohibited from offering paid prioritization as a condition of its merger with NBC. See Applications of Comcast Corp., Gen. Elec. Co. & NBC Universal, Inc. for Consent to Assign Licenses & Transfer Control of Licensees, 26 FCC Red. 4238, 4275 (2011) (“Comcast and Comcast-NBCU shall also comply with all relevant FCC rules, including the [Open Internet Order adopted in 2010], and, in the event of any judicial challenge affecting the latter, Comcast-NBCU’s voluntary commitments concerning adherence to those rules will be in effect.”).
prevented carriers from charging websites and applications for delivering their content to consumers over the carriers’ last-mile facilities, the proposed rules change this: by allowing broadband carriers to sell prioritized access to their last-mile facilities, the FCC has invited carriers to offer a new, specialized content delivery option. Under the proposed regulations, a broadband carrier can use its last-mile facilities not only to sell consumer Internet access but also to deliver online content.

Thus, a website like Overstock.com now has more options to consider when deciding how to ensure its content reaches consumers quickly and reliably. It could continue its relationship with Akamai, or it might choose to hire one of the new carrier-based CDN providers. It could also pay for last-mile priority. Paid prioritization cannot, of course, substitute for other content delivery services. CDNs, prioritization, and other acceleration services all offer different types of service. But the relative newness of paid prioritization makes it especially difficult to know whether, or under what conditions, a company might prefer prioritization over, or integrated with, prevailing content delivery options.  

In ordinary circumstances, regulatory action that invites new competition into a market is a welcome development. Unique features of this new entrant, however, suggest that this is no ordinary situation. As described above, the broadband carrier’s status as a gatekeeper between its subscribers and the greater Internet gives it substantial economic power over incoming traffic. Concerns over this power have typically focused on discrimination by content type. But that is not the only salient distinction. A broadband carrier also has the ability to discriminate against content on the basis of who delivers it. That is, a carrier might discriminate against Overstock.com traffic not because the carrier competes with Overstock but because the traffic was sent by a competing delivery service. Since there is no other route to the destination, the carrier’s action both harms Overstock.com and, perhaps more importantly, degrades the value of the competing delivery service.

Thus, just as carriers can strategically use prioritization to favor affiliated content, they may have a powerful incentive to provide an advantage to affiliated content delivery services.  

30. Some content providers may find that a combination of CDN service and prioritization suits their needs. Other providers, perhaps some that rely on localized peer-to-peer connections, might prefer prioritization to other content delivery services.

31. NUECHTERLEIN & WEISER, supra note 9, at 222 (“[E]conomic regulation should be designed to promote competition in the interests of consumers . . . .”); cf. Howard A. Shaleski, Justice Breyer, Professor Kahn, and Antitrust Enforcement in Regulated Industries, 100 CALIF. L. REV. 487, 508-09 (2012) (noting that where regulatory action addresses competition, antitrust enforcement “becomes less warranted”).

32. See supra notes 5-6, 20-24 and accompanying text.

33. See, e.g., NUECHTERLEIN & WEISER, supra note 9, at 221-24 (describing “a number of important exceptions” to the general economic principle that carriers “have no rational incentive to favor their affiliates”).

move the price of its broadband offerings, possibly for press- or policy-related reasons, then capturing the market for content delivery may be an attractive substitute source of those foregone profits. Indeed, for broadband services that carriers are required by regulation to provide at low costs, control over the adjacent content delivery market could provide an important source of additional revenue. Similarly, a carrier might use control over the CDN market to approximate metered pricing while avoiding the customer service, press-related, and regulatory and political costs of adopting a new pricing model. Or it might simply be that carriers are slowly replicating the oligopoly market conditions that have previously proved to be profitable. The relative recency of this development makes it difficult to know exactly what is motivating carriers to enter a market characterized by commodity pricing—but the fact that this entry is occurring may provide a small, but important, clue.

Such vertical integration may, of course, also yield important efficiencies. An integrated provider may be better able to predict and make necessary network upgrades on a timely basis. If a carrier is extending a proprietary CDN—one built for its own content—then the new offering might have positive scale and network effects. Integrating content delivery with last-mile access may also result in lower costs for content providers. Indeed, as one carrier has argued, entry into the CDN market will allow content providers to “bypass network middlemen and deliver their services directly” to consumers.

While there are efficiencies to be gained from such integration, the combination of last-mile control, paid prioritization, and recent carrier entry into the existing content delivery markets poses important risks to these markets. This


36. This strategy could allow price discrimination along two axes: (1) connection speed (or capacity) and (2) actual volume.

37. See NUECHTERLEIN & WEISER, supra note 9, at 184-85.

38. See Rayburn, supra note 29 (noting possibility of forty percent cost savings); cf. Jon Healey, Netflix’s Deal with Comcast Isn’t a Sign of the Apocalypse, L.A. TIMES (Feb. 24, 2014), http://articles.latimes.com/2014/feb/24/news/la-ol-netflix-comcast-net-neutrality-isp-consolidation-20140224 (noting Rayburn’s prediction that “Netflix will actually save money by dealing directly with Comcast rather than using a third party to deliver its video streams”). The deal between Netflix and Comcast, however, does not appear to involve Comcast’s CDN service.

concern is distinct from that which has troubled most network neutrality proponents. It is not that broadband carriers will use prioritization to favor affiliated content; rather, the concern is that a broadband carrier will use prioritization to disadvantage competitors in the market for content delivery. As noted above, several network neutrality complaints are the result of carriers’ attempts to advantage a new, proprietary offering in an existing market. And some have alleged that carriers are using their control over the interconnection points between the Internet and the last mile to degrade traffic and charge new fees for content delivery. To the extent that prioritization is aimed at content delivery, it is another variant of this interconnection game: content delivery services are a new, plausible target, and prioritization provides one more arrow in the carrier’s quiver.

III. PRESERVING COMPETITION FOR DELIVERY SERVICES

Reduced competition in the content delivery markets could result in significant welfare losses. For one, oligopoly control over various content delivery markets could have substantial price effects for the transmission of traffic across the Internet, thereby altering the economics for online content. Perhaps more important than these price effects, however, would be the potential for lost innovation at the core of the Internet. Constant competition among delivery services has led to important innovations. Some companies offering content delivery services have made significant advancements in software-based networking. Others practically invented entire methods of improving content delivery. The exponential growth within the Internet has been supported—and, indeed, driven by—the advances architected at content delivery companies. Monopolization of this market could threaten this continued innovation.

The FCC has several options to stave off such a threat. For one, the Commission could decide that all incoming traffic, regardless of its sender, is subject to aspects of its authority to regulate common carriers. This designation

---

42. See Brief for Respondents at 1-2, 4-6, Limelight Networks, Inc. v. Akamai Techs., Inc., 134 S. Ct. 2111 (2014) (No. 12-786), 2014 WL 1260422.
would allow the FCC to proscribe “unjust” or “unreasonable” conduct by broadband carriers, including discrimination that could reduce competition in either the content or the content delivery markets. This solution, however, would require the Commission to either cabin or overturn its Cable Modem Order and extend the common carrier designation to broadband providers—a move that may prove to be politically costly, as some politicians and interest groups have stigmatized the common carrier designation as the product of a bygone era of regulation.

Alternatively, the Commission could rely on its newly affirmed and preferred source of regulatory authority, section 706 of the Telecommunications Act, to craft a set of prophylactic rules that address the threat of monopolization. To be sure, an approach under section 706 presents some legal risk given the still-developing scope of the FCC’s jurisdiction under the statute. Nevertheless, the FCC seems likely to be able to exercise authority under the statute to subject those carriers that offer both prioritization and CDN service, for example, to enhanced reporting requirements, a formal complaint procedure, and regulatory scrutiny. Most importantly, the Commission’s rules should address all of the tools available to a carrier that might seek to monopolize a delivery market: Commission scrutiny should extend not only to prioritization arrangements with affiliates but also to the terms of interconnection in order to ensure that carriers do not anticompetitively affect the value of competing services.


Of course, the Commission could also decide that all broadband traffic, regardless of the direction in which it flows, is subject to the FCC’s jurisdiction to regulate common carriers. See Protecting and Promoting the Open Internet, 79 Fed. Reg. at 37,468; Narechania & Wu, Sender Side Transmission Rules, supra (manuscript at 30).


47. See Narechania & Wu, Sender Side Transmission Rules, supra note 43 (manuscript at 30).


51. See NUECHTERLEIN & WEISER, supra note 9, at 215.
Regardless of the path the Commission chooses, choose it must. As the Commission moves to finalize its most recent iteration of network neutrality regulation, it should be careful not to accidentally create a new threat. Practically every significant network neutrality complaint has alleged some form of carrier nepotism. The potential threat posed by the combination of gatekeeper power and paid prioritization to the critical market for content delivery services should not be overlooked.