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NOTE

UNLIMITED DATA, BUT A LIMITED NET:
HOW ZERO-RATED PARTNERSHIPS BETWEEN MOBILE
SERVICE PROVIDERS AND MUSIC-STREAMING APPS VIOLATE
NET NEUTRALITY †

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PREFACE

I began researching this Note during the fall of 2014—an exciting, yet unsettled, time to write about net neutrality.¹ Just as I had begun to grasp the lay of the net-neutrality-land, President Barack Obama published his November 10, 2014 statement advocating for net neutrality,² the issue became a hot topic in Congress,³ and personalities such as John Oliver put the matter on the national agenda.⁴ During this time, the Federal Communications Commission’s (FCC) 2010 Open Internet Order⁵ did not mention the concept of zero-rating, which hardly existed in 2010.⁶ It was only in 2015 that the FCC issued a new Open Internet Order⁷ that explicitly prescribed a method for analyzing zero-rated plans.

As this is all so new, it is also without precedent. Some of the strongest sources for this Note came from websites such as Wired.com and Engadget.com—not the traditional seminal sources for legal notes, and there are not any FCC cases on which to base the analysis of zero-rated plans. At times, the reader may find that arguments seem a bit speculative. However, net neutrality, itself, is technologically new and legally unprecedented. It will be exciting to see how this next chapter of the Open Internet unfolds.

INTRODUCTION

1. See *infra* pp. 209–211.

2. Statement on Internet Neutrality, 2014 DAILY COMP. PRES. DOC. 841 (Nov. 10, 2014), <https://www.whitehouse.gov/the-press-office/2014/11/10/statement-president-net-neutrality>.

3. See, e.g., Jonathan Weisman, *F.C.C. Net Neutrality Rules Clear Hurdle as Republicans Concede to Obama*, N.Y. TIMES (Feb. 24, 2015), <http://www.nytimes.com/2015/02/25/technology/path-clears-for-net-neutrality-ahead-of-fcc-vote.html>; Edward Wyatt, *Pressure Mounts on F.C.C. Chief Over Net Neutrality Rules*, N.Y. TIMES (Nov. 12, 2014), <http://www.nytimes.com/2014/11/13/technology/pressure-mounts-on-fcc-head-over-open-internet-rules.html>.

4. See *Last Week Tonight with John Oliver: Net Neutrality*, (HBO June 1, 2014), <https://youtu.be/fpbOEoRrHyU>; Ben Brody, *How John Oliver Transformed the Neutrality Debate Once and for All*, BLOOMBERG POLITICS (Feb. 26, 2015, 10:00 AM), <http://www.bloomberg.com/politics/articles/2015-02-26/how-john-oliver-transformed-the-net-neutrality-debate-once-and-for-all>.

5. Preserving the Open Internet, Broadband Indus Practices, 25 FCC Rcd. 17905 (2010) [hereinafter 2010 Open Internet Order].

6. See *infra* pp. 221–223.

7. Protecting and Promoting the Open Internet, 80 Fed. Reg. 19,738, 19,758–59 (Apr. 13, 2015) (codified at 47 C.F.R. pts. 1, 8, 20) [hereinafter 2015 Open Internet Order].

Consumers are constantly haunted by that toward-the-end-of-the-month Verizon email: DATA USAGE OVERAGE ALERT.

For avid iMessage-ers, Facebook-ers, music-streamers, and general smartphone application (“app”) users, six gigabytes of data per month simply is not enough. And so, consumers⁸ pay for more—they pay to search, to communicate, to stream, to listen.

However, over the past year, mobile service providers⁹ have begun to offer some solace. These providers, also known as mobile network operators (MNOs), have launched plans that offer ‘zero-rated’ services. Under these zero-rated plans, MNOs exempt consumers from charges for a defined volume of data used by specific applications or Internet services. Now, a user can open an account with Sprint and listen to Spotify¹⁰ for hours on end without worrying about depleting his monthly provision of data.¹¹

The problem, of course, is that a consumer may be a Songza¹² enthusiast, as opposed to a Spotify user. He may prefer Songza’s features, playlists, and curating. But are these preferences worth paying for? Or will Sprint’s partnership with Spotify influence a change in this consumer’s consumption?

The proliferation of partnerships between mobile network operators and music streaming applications that has occurred internationally over the past four years has given rise to a number of questions: notably, who are these partnerships benefitting—are they advantageous to consumers, to MNOs, to music app developers?¹³ Do these partnerships promote innovation? And regardless of the perceived benefits of these partnerships, do they violate network neutrality (“net neutrality”)?

This Note investigates whether partnerships between mobile network operators and music apps violate network neutrality. Throughout this Note, it is important to consider the prevailing

8. Throughout this Note, “consumer” and “end user” will be used interchangeably.

9. Throughout this Note, “mobile service provider” and “operator” (“MNO”) will be used interchangeably.

10. Spotify is a music streaming service that gives consumers access to licensed music. Sprint is a mobile service provider.

11. See *Stream All the Music You Want with Unlimited Data from Sprint*, SPRINT: SPRINT NEWSROOM (June 20, 2014), <http://newsroom.sprint.com/blogs/devices-apps-and-services/stream-all-the-music-you-want-with-unlimited-data-from-sprint.htm>.

12. Songza is a music streaming service that offers playlists based on the time of day or a user’s mood, activity, etc.

13. Throughout this Note, “app developers” and “content developers” will be used interchangeably.

permutations of net neutrality. First, there is the principle of pure net neutrality, championed by scholars such as Professors Tim Wu¹⁴ and Barbara van Schewick.¹⁵ Second, there is the case-by-case framework of net neutrality espoused by the FCC, which codified significant portions of the net neutrality principles in the 2015 Open Internet Order.¹⁶ This Note analyzes whether zero-rated mobile network operator-music app partnerships (“MNO-MA partnerships”) violate net neutrality, both in its pure form and as implemented in the current U.S. regulations.

This Note argues that zero-rated MNO-MA partnerships violate net neutrality under both pure net neutrality principles and the 2015 Open Internet Order’s case-by-case analytical framework. Accordingly, MNO-MA partnerships should be governed under the 2015 Order’s general rules and explicitly prohibited. Through MNO-MA partnerships, MNOs become gatekeepers. Specific apps that forge deals with providers—regardless of the apps’ merits—have better access to consumers. If permitted to continue, these zero-rated partnerships likely will distort the market for music apps, thwart consumer choice, discourage technological innovation, and lock-in inferior products. In spite of these impending issues, the FCC assesses zero-rating under a noncommittal case-by-case analysis, which can be costly, haphazard, and biased—that is, if the process is initiated at all.¹⁷ Therefore, this Note supports the amendment of the FCC’s present rules on zero-rating in order to better align with pure net neutrality principles. Finally, this Note proposes requiring MNO-MA partnership plans to become application-agnostic—to offer zero-rated data for any one music app at a time.¹⁸ This plan could enable MNOs and music apps to capture the short-term access and marketing-related benefits of MNO-MA partnerships while avoiding the long-term system-wide distortions in competition among music apps that such partnerships ultimately cause.

Part I of this Note surveys the origins of net neutrality. It discusses the debate surrounding the regulatory model and its legal

14. Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. ON TELECOMM. & HIGH TECH. LAW 141, 141 (2003).

15. BARBARA VAN SCHEWICK, *INTERNET ARCHITECTURE AND INNOVATION* (The MIT Press 2010).

16. See 2015 Open Internet Order, *supra* note 7.

17. 2015 Open Internet Order, *supra* note 7, at 19, 758–59; see also Letter from Barbara van Schewick, Stanford Law Professor, to Marlene Dortch Sec’y, Fed. Commc’ns Comm’n note (Feb. 18, 2015) (Analysis of Proposed Network Neutrality Rules) (on file with the Fed. Commc’ns Comm’n), <http://apps.fcc.gov/ecfs/document/view?id=60001031259>.

18. See *infra* pp. 236–237.

manifestations and policy disputes in the United States. Part II introduces examples of MNO-MA partnerships, and examines the advantages, disadvantages, and legality of these plans under both pure net neutrality principles¹⁹ and within the current U.S. analytical framework.²⁰ Part III proposes legal changes in the United States that could provide a bright-line rule under which current MNO-MA partnerships would be found illegal. It also recommends an MNO-MA partnership structure that captures the short-term benefits of zero-rating for consumers, service providers, and app developers, while fulfilling the principles of net neutrality.

I. PART I

A. *Net Neutrality*

1. What is net neutrality?

Net neutrality is the principle that Internet service providers (ISPs) and governments should treat all data on the Internet equally. According to the principles of net neutrality, ISPs should not discriminate against or charge differently by user, website, platform, application, or mode of communication.²¹ Wu coined the term “network neutrality” in 2003, in his article entitled *Network Neutrality, Broadband Discrimination*.²² Van Schewick explains that net neutrality rules are based on the view that fostering application innovation is critical for economic growth. She goes on to state that in order to maximize the Internet’s value, it is important to enable Internet consumers to choose which applications they want to use.²³

An understanding of the Internet’s architecture provides insight into the net neutrality philosophy. The Internet is indifferent to the communications that take place across it and the applications that run upon it.²⁴ Since there is no gatekeeper or hierarchy in an end-

19. “Pure net neutrality” refers to the concept as conceived by Tim Wu, Lawrence Lessig, and other champions of the regulatory concept—that is, that Internet service providers should provide access to all content and applications equally, regardless of consumer or source, without blocking or inhibiting the flow of certain content.

20. *See infra* pp. 217–219.

21. *See* Wu, *supra* note 14, at 142, 168.

22. *Id.* at 141.

23. BARBARA VAN SCHEWICK, NETWORK NEUTRALITY AND QUALITY OF SERVICE: WHAT A NON-DISCRIMINATION RULE SHOULD LOOK LIKE (The Ctr. for Internet and Soc’y 2012).

24. Wu, *supra* note 14, at 146.

to-end network, the cost of innovation and market entry is low.²⁵ The Internet's neutral platform allows for a myriad of players to develop strategies and innovations. This diversification among innovators and strategies encourages investment in Internet content, because investors tend to be more confident in a diverse package of strategies rather than in the approach of one dominant player.²⁶

If the Internet were governed at the center—by the service provider—instead of from the edges—by content developers and consumers—the control of innovation would shift from consumers and developers to service providers. ISPs could prioritize certain applications and specific data, distorting the market for content and taking away the power from the application developers and end users.²⁷ This, according to Wu and Lawrence Lessig, would replace a system based on “survival-of-the-fittest” with a system based on “survival-of-the-favored.”²⁸ Furthermore, if service providers charged application developers for faster delivery (a concept known as “paid prioritization”), this would raise the cost of Internet innovation: developers would have to pay more for their products to reach consumers. The option for priority delivery would empower large, wealthy, corporate developers and disadvantage newer, smaller developers.²⁹

Why do we want net neutrality? As Wu explains, the Internet has evolved into a meritocracy, where “Email, the web, and streaming applications are in a battle for the attention and interest of end users.”³⁰ Net neutrality has fostered a platform where the users, rather than corporations, ISPs, mobile operators, or the government, decide what succeeds. The Internet platform must remain neutral so that this competition remains based on merit and fair competition, as opposed to a system based on favoritism.³¹

Since the service provider delivers applications to the end user, the service provider is the gatekeeper for quality of service.³² Wu concedes that the emergence of new technologies may require some

25. Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925, 931–32 (2001).

26. *See id.* at 933.

27. *Id.* at 943; *See also* Daniel A. Lyons, *Net Neutrality and Nondiscrimination Norms in Telecommunications*, 54 ARIZ. L. REV. 1029, 1035 (2012).

28. Lyons, *supra* note 27, at 1035.

29. *Id.*

30. Wu, *supra* note 14, at 146.

31. *Id.*

32. *Id.* at 148–49.

broadband management so that providers can maintain bandwidth and quality of service amidst high demands for Internet service and data. Ultimately, however, discrimination should be limited to a narrow set of issues, none of which stem from payment by an app developer or the service provider's desire to favor some content over other content.³³

2. Opponents of Net Neutrality

There are a number of arguments against the implementation of net neutrality, which focus on consumers, app developers, and service providers.

First, opponents of net neutrality argue that consumers are harmed by net neutrality. Some opponents even posit that consumers pay higher prices for Internet access under a net neutrality regime than they would in the absence of regulations.³⁴ They maintain that the only clear beneficiaries of net neutrality regulation are content (app) developers whose barriers to entry are low as a result of such regulations.³⁵ In fact, opponents go so far as to say that consumers may actually benefit from some discrimination on the Internet on the assertion that that a restricted market can lead to faster technological development on an innovating network, quality control and security, and lower consumer search costs.³⁶ Additionally, some net neutrality opponents are of the view that allowing a provider to discriminate between applications enables that provider to focus on building its network platform to work extremely well with a certain type of application. This, in turn, could spur innovation for that specific type of application, which could benefit consumers by providing network speed and content improvement.³⁷

33. Wu further writes, "Overall, there is a need to strike a balance between legitimate interests in discriminating against certain uses, and reasons that are suspect either due to irrationality or because of costs not internalized by the broadband operator." *Id.* at 150–151.

34. See Kevin W. Caves, *Modeling the Welfare Effects of Net Neutrality Regulation: A Comment on Economides and Tåg*, 24 INFO. ECON. & POL'Y 288–92 (2012) (discussing Economides and Tåg's view on how net neutrality harms consumers).

35. *Id.*

36. See Jeffrey Jarosch, *Novel "Neutrality" Claims Against Internet Platforms: A Reasonable Framework for Initial Scrutiny*, 59 CLEV. ST. L. REV. 537, 543 (2011).

37. See Joseph Farrell & Philip J. Weiser, *Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH 85, 98–99 (2003).

Opponents of net neutrality also highlight the potential benefits of an unregulated Internet for Internet service providers. Some have argued that large firms, notably service providers, have led innovation in telecommunications.³⁸ Exclusivity between operators and apps can lead to differentiation between operators, which in turn can increase the number of network operators that survive.³⁹ Additionally, net neutrality challengers point to the reality of technological constraints upon providers. For example, there are capacity limitations on wireless networks, which initially were designed only to carry voice signals.⁴⁰ Some argue that there is “simply insufficient capacity on providers’ networks to allow such freedom”⁴¹ to consumers to use many types of apps and at unrestricted volumes.

Net neutrality opponents also look to the relationship between service providers and content developers. Opponents argue that exclusive content can be efficient because a provider can build an app that harmonizes effectively with its network (as examples, the authors cite ringtones and music libraries).⁴² In fact, challengers claim that, based on empirical evidence, vertical contracts have been good for competition, and have led to the creation of complementary products that are better in quality, effectively-marketed, more widely available, and lower in cost.⁴³ To illustrate this trend, one opponent referenced the AT&T-iPhone partnership, and the resulting success of AT&T in the wireless marketplace, as well as the Droid-Verizon partnership, which “jumpstart[ed] a sleepy

38. See Tim Wu & Christopher S. Yoo, *Keeping the Internet Neutral?: Tim Wu and Christopher Yoo Debate*, 59 FED. COMM. L.J. 575, 581 (2007).

39. Yoo argues that if different operators evolve to host different apps, then they will not be competing for the same customers who are seeking the same services. Instead, different operators can focus on different strengths, ultimately providing consumers with a diverse range of options for various services. On the other side, Wu argues that economic growth is driven by market entry. Regulation, he says, can keep the cost of market entry as low as possible. In refuting Yoo, Wu says that large Internet providers in monopoly positions have incentives to block market entry and technologies that threaten their preexisting business models. Wu points to historical trends in blocking, where operators have inhibited the use of applications such as WiFi devices or Virtual Private Networks, and in turn have distorted innovation and the market. Wu & Yoo, *supra* note 38, at 580.

40. See Robert W. Hahn, Robert E. Litan & Hal J. Singer, *The Economics of “Wireless Net Neutrality,”* 3 J. COMPETITION L. & ECON. 399, 440–41 (2007).

41. *Id.* at 444.

42. *Id.*

43. See Thomas W. Hazlett & Joshua D. Wright, *The Law and Economics of Network Neutrality* 6, 37 (George Mason University Law and Economics Research Paper Series, 11-36, 2011); Jarosch, *supra* note 36, at 550.

smartphone market” and led to competition in the mobile device market.⁴⁴

Finally, net neutrality opponents assert that general market competition and antitrust laws are sufficient to regulate the Internet. Pointing to market forces, some opponents insist that service providers will not unduly discriminate against apps because providers fear the loss of subscribers, which may result from restricting their offerings.⁴⁵ Providers further maintain that if the ISP industry does evolve into a state of overly centralized control, antitrust oversight will serve as adequate regulation.⁴⁶ The theory that antitrust regulation negates the need for net neutrality is a major reason why U.S. Internet regulations do not reflect pure net neutrality principles. Net neutrality opponents argue that if issues do arise, *ex post* case-by-case antitrust regulation is sufficient; governments need not implement preemptive net neutrality regulations that may inhibit technological innovation and price reductions stimulated by partnerships.

Yet to rely exclusively on antitrust regulation would ignore the size of the Internet and the spectrum of players involved; antitrust regulation may scrutinize the big players, but it may not work to promote the small actors. It is on this score that net neutrality proponents believe that the preemptive approach of net neutrality is superior to an *ex post*, haphazard, piecemeal antitrust enforcement approach.⁴⁷ In fact, former FCC Chairman Julius Genachowski expressed the need for net neutrality in order to protect the small players—the “entrepreneurs that haven’t yet started work in their dorm rooms or garages.”⁴⁸ Furthermore, net neutrality supporters believe that monopoly and competition laws alone are not sufficient for Internet regulation because the traditional triggers of antitrust regulation, such as price, usually are absent on the Internet.⁴⁹ Finally,

44. See Lyons, *supra* note 27, at 1063.

45. See Jarosch, *supra* note 36, at 550.

46. See Daniel A. Lyons, *Defining Broadband Competition*, TECH POL’Y DAILY (Dec. 6, 2013, 6:00 AM), <http://www.techpolicydaily.com/communications/defining-broadband-competition/>.

47. See Tom Risen, *Antitrust Rules or Net Neutrality: Which Should Rule the Web?*, U.S. NEWS & WORLD REP. (June 20, 2014, 4:34 PM), <http://www.usnews.com/news/articles/2014/06/20/antitrust-rules-or-net-neutrality-which-should-rule-the-web>.

48. Brian Stelter, *F.C.C. is Set to Regulate Net Access*, N.Y. TIMES (Dec. 20, 2010), http://www.nytimes.com/2010/12/21/business/media/21fcc.html?_r=3&ref=juliusgenachowski&.

49. Daithi Mac Sithigh, *App Law Within: Rights and Regulation in the Smartphone Age*, 21 INT’L. J. L. & INFO. TECH. 154, 159 (2013).

net neutrality proponents explain that antitrust regulation would not adequately protect against the non-economic goals of net neutrality, such as the protection of free speech and political debate.⁵⁰

3. Net Neutrality in the United States

The tension over Internet regulation resembles a number of historical examples of government regulation of privately owned industries—notably railroads and wired phone services such as AT&T. In these cases, the government enacted common carriage regulations that aimed to restrain the short-term interests of service providers and to ensure that the best products and applications were available to consumers.⁵¹ Without these government regulations, communication networks may be subject to more centralized control from service providers⁵²—similar to the old AT&T monopoly of the early 20th century.⁵³

Before 2015, common carriage principles did not apply to cable and broadband Internet companies. In *National Cable & Telecommunications Association v. Brand X Internet Services*, 545 U.S. 967 (2005), the Supreme Court upheld the FCC’s classification of cable broadband as an “information service” (a Telecommunications Act (TCA) Title I category) instead of as a “telecommunications service”⁵⁴ (a TCA Title II category), thereby exempting cable and Internet services from FCC oversight and common carriage regulation. The Federal Trade Commission (FTC) had power to regulate information services, and therefore fixed and mobile broadband services.⁵⁵ However, under *Brand X*, the FCC maintained jurisdiction to “impose additional regulatory obligations

50. Risen, *supra* note 47.

51. Wu, *supra* note 14, at 142.

52. Lemley & Lessig, *supra* note 25, at 936.

53. In the United States, the government typically has regulated the telecommunications industry under the principle of “common carriage,” which treats infrastructure as a utility. Originally codified in the Telecommunications Act of 1934 and amended by the Telecommunications Act of 1996, common carriage regulations force telecommunications companies to allow competing carriers to use their lines, which prevents discriminatory service. Under common carriage regulations, a common carrier must treat content received from its own customers and other carriers’ customers equally. Shane Wagman, *I Want My MP3: Legal and Policy Barriers to a Legitimate Digital Music Marketplace*, 17 J. INTELL. PROP. L. 95, 112 (2009).

54. See *Nat’l Cable & Telecomm. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967 (2005).

55. FED. TRADE COMM’N, BROADBAND CONNECTIVITY COMPETITION POLICY 38 (2007).

under its Title I ancillary jurisdiction to regulate interstate and foreign communications.”⁵⁶ As a result, the FCC argued, it had the jurisdiction to ensure that Internet providers operated in a neutral manner.⁵⁷

Accordingly, the FCC defined net neutrality in its 2005 Internet Policy Statement Regarding Network Neutrality,⁵⁸ seeking to “foster creation, adoption and use of Internet broadband content, applications, services and attachments, and to ensure consumers benefit from the innovation that comes from competition.”⁵⁹ To achieve these goals, the FCC adopted four principles:

Consumers deserve to access the lawful Internet content of their choice.

Consumers should be allowed to run applications and use services of their choice, subject to the needs of law enforcement.

Consumers should be able to connect their choice of legal devices that do not harm the network.

Consumers deserve to choose their network providers, application, and service providers, and content providers of choice.⁶⁰

In *Comcast Corporation v. Federal Communications Commission*, 600 F.3d 642 (D.C. Cir. 2010), Comcast challenged the FCC’s ancillary jurisdiction over its Internet service. The Court of Appeals for the D.C. Circuit found in favor of Comcast, holding that the FCC did not have Title I ancillary jurisdiction over Comcast’s Internet service under the language of the TCA.⁶¹ The *Comcast* decision provoked the FCC to amend its Internet regulations. The FCC claimed authority through Section 706 of the TCA (the responsibility to “remove barriers to infrastructure investment”⁶²), as

56. *Brand X*, 545 U.S. at 976.

57. FED. COMM’NS COMM’N, 20 FCC Rcd. 14986, POLICY STATEMENT REGARDING NETWORK NEUTRALITY 2 [hereinafter 2005 Internet Policy Statement].

58. *Id.*

59. *Id.*

60. *Id.*

61. *Comcast*, 600 F.3d 642.

62. 47 U.S.C. § 1302(a) (1996).

well as ancillary jurisdiction through Title II (common carrier regulations) and Title VI (cable regulations) of the TCA.⁶³

The FCC approved the new Open Internet Order on December 21, 2010.⁶⁴ The regulations are based on the following rules:

Transparency.

No blocking.

No unreasonable discrimination.⁶⁵

While operating in accordance with these rules, providers were permitted to use “reasonable network management” as long as it was “tailored to achieving a legitimate network management purpose.”⁶⁶ Thus, providers were given some room to diverge from strict net neutrality standards.⁶⁷

The 2010 Open Internet Order created two levels of regulatory standards: one for fixed-line providers and a lower one for wireless providers. The 2010 Open Internet Order explained that “mobile broadband presents special considerations that suggest differences in how and when protections should apply.”⁶⁸ In particular, the No Discrimination rule, which prohibited broadband providers from unreasonably differentiating between different lawful network traffic, did not apply to wireless providers. This concession was part of a compromise to gain approval for the Order.⁶⁹ To justify the two

63. Michael C. Sloane, *Net Neutrality at the FCC: A Critique of the Legal Reasoning of its Net Neutrality Order*, DAVIS WRIGHT TREMAINE LLP (Jan. 10, 2011), http://www.dwt.com/advisories/Net_Neutrality_at_the_FCC_A_Critique_of_the_Legal_Reasoning_of_its_Net_Neutrality_Order_01_10_2011/.

64. See 2010 Open Internet Order, *supra* note 5, at 17905.

65. *Id.*

66. *Id.* at 17906.

67. For example, a provider’s decision to limit a customer’s use of high-bandwidth applications could have been permissible under “reasonable network management” efforts. On the other hand, it would not have been permissible for a broadband provider to slow down a specific website’s content—perhaps as a result of a disagreement with the website’s developer—under the pretext of “reasonable network management,” when it would be possible for the provider to treat equally all of the congestion created by the traffic on its network. Larry Downes, *Unscrambling the FCC’s Net Neutrality Order: Preserving the Open Internet – But Which One?*, 20 COMMLAW CONSPECTUS 83, 94–95 (2011); 2010 Open Internet Order, *supra* note 5, at 17943.

68. See 2010 Open Internet Order, *supra* note 5, at 17956.

69. Sam Gustin, *FCC Passes Compromise Net Neutrality Rules*, WIRED (Dec. 21, 2010, 1:58 PM), <http://www.wired.com/2010/12/fcc-order/>; 2010 Open

standards, former FCC Chairman Genachowski delineated a number of differences between mobile and fixed broadband, among them the unique technical issues involving spectrum and mobile networks, market structure, and the advent and auctioning of the 4G service spectrum.⁷⁰

In January 2011 Verizon sued the FCC, arguing that the FCC was exceeding its authority by imposing the rules of the 2010 Open Internet Order. On January 14, 2014, the Court of Appeals for the D.C. Circuit vacated two parts of the 2010 Open Internet Order—the rule against “no blocking” and the rule against “unreasonable discrimination”—finding that both rules fell outside of the FCC’s regulatory authority.⁷¹ Since the FCC previously had categorized broadband networks as “information services” instead of “common carriers,” the TCA prohibited the FCC from imposing common carriage obligations on broadband providers.⁷²

From mid- to late-2014, the FCC worked on creating new Open Internet rules, soliciting opinions from U.S. citizens and policy groups. The FCC received about 780,000 comments on its rules.⁷³ On November 10, 2014, President Barack Obama released a statement advocating for the reclassification of broadband as a telecommunications service (falling under Title II of the TCA) so that the Internet would fall within the purview of the FCC, as well as for strong net neutrality rules.⁷⁴ Following this statement, FCC Chairman Wheeler endorsed President Obama’s proposal and during February 2015, unveiled his proposal for treating Internet service as a public utility.⁷⁵ On February 27, 2015, the FCC voted 3-2 to regulate broadband Internet as a public utility.⁷⁶

In spite of initial opposition from Republicans and major service providers,⁷⁷ the FCC adopted a new draft of the Open Internet

Internet Order, *supra* note 5, at 17905 (Clyburn, Comm’r, approving and concurring).

70. See 2010 Open Internet Order, *supra* note 5, at 17905.

71. *Verizon Commc’ns Inc. v. Fed. Commc’ns Comm’n*, 740 F.3d 623 (D.C. Cir. 2014).

72. Daniel A. Lyons, *Innovations in Mobile Broadband Pricing* 11 (Mar. 31, 2014) (unpublished manuscript), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2418563.

73. *Net Neutrality—Chronology of Coverage*, N.Y. TIMES, http://topics.nytimes.com/top/reference/timestopics/subjects/n/net_neutrality/index.html (last visited Nov. 15, 2015).

74. See Statement on Internet Neutrality, *supra* note 2.

75. *Net Neutrality—Chronology of Coverage*, *supra* note 73.

76. *Id.*

77. Jonathan Weisman, *F.C.C. Net Neutrality Rules Clear Hurdle as Republicans Concede to Obama*, N.Y. TIMES (Feb. 24, 2015),

Order on March 12, 2015. The 2015 Open Internet Order has three rules—no blocking, no throttling, no paid prioritization—in addition to a no-unreasonable interference/disadvantage standard and transparency requirements.⁷⁸

Unlike the 2010 rules, the 2015 rules apply equally to both broadband and mobile service providers.⁷⁹ Under the “no blocking” rule, a provider must transmit any lawful content. Under the “no throttling” rule, a provider may not slow down the transmission of data as it connects to a user’s laptop, smartphone, tablet, or other device. The “no throttling” rule contains an exception for “traffic management.” The provider must be transparent with the FCC about its reasons for management and in most cases, the reason must be technological.⁸⁰ Under the “no paid prioritization” rule, providers may not charge content companies for preferential treatment. The transparency requirements adopt and enhance the 2010 requirements.⁸¹

The 2015 Open Internet Order leaves a number of areas unresolved. For example, the 2015 Order does not explain how it will handle the possibility of providers forcing companies to pay for “interconnections” in order to deliver their videos at satisfactory speeds.⁸² Additionally, the 2015 Order does not take a hardline stance on zero-rating. The FCC says that it will not regulate zero-rating under the general 2015 Order rules. Instead, the Order indicates that it will assess zero-rated plans on a case-by-case basis, using the “no-unreasonable interference/disadvantage standard, based on the facts of each individual case.”⁸³

Using this “no-unreasonable interference/disadvantage” standard, the FCC aims to “protect free expression” and to “permit

<http://www.nytimes.com/2015/02/25/>

[technology/path-clears-for-net-neutrality-ahead-of-fcc-vote.html](http://www.nytimes.com/2015/02/25/technology/path-clears-for-net-neutrality-ahead-of-fcc-vote.html).

78. See generally 2015 Open Internet Order, *supra* note 7.

79. The rules outlined in this paragraph are the “general 2015 Order rules,” to be applied to the majority of Internet services. 2015 Open Internet Order, *supra* note 7, para. 34.

80. For example, under this exception a provider can slow the transfer of content in order to reduce congestion on its network. Aaron Souppouris, *The Fight for the Open Internet Isn’t Over*, ENGADGET (Mar. 17, 2015, 2:00 PM), <http://www.engadget.com/2015/03/17/fcc-open-internet-order-analysis/>.

81. 2015 Open Internet Order, *supra* note 7, para. 109.

82. An “interconnection” is where two networks exchange traffic with one another. *Id.* paras. 28–30, 139–145; see also Jeremy Gillula & Kit Walsh, *The FCC is Keeping an Eye on Interconnection, But More Clarity is Needed*, ELEC. FRONTIER FOUND. (Apr. 13, 2015), <https://www.eff.org/en-gb/deeplinks/2015/04/fcc-keeping-eye-interconnection-more-clarity-needed>.

83. 2015 Open Internet Order, *supra* note 7, at para. 152.

considerations of asserted benefits of innovation as well as threatened harm to end users and edge providers.”⁸⁴ Additionally, the FCC intends to “prohibit practices that unreasonably interfere with the ability of consumers or edge providers to select, access, and use broadband Internet access service to reach one another, thus causing harm to the open Internet.”⁸⁵

The Order provides a number of factors to guide this “no-unreasonable interference/disadvantage” analysis. When applying these factors, an arbiter is to consider flexibility in business versus the encouragement of innovation.⁸⁶ Then, using a “totality of the circumstances” approach the arbiter is to weigh the following factors: end-user control; competitive effects; consumer protection; effect on innovation, investment, or broadband deployment; free expression; application-agnosticism; and standard practices.⁸⁷

Commentators have expressed concern that these case-by-case analyses will favor large providers rather than new market entrants such as startups. Large ISPs will be more familiar with the adjudication process that the “case-by-case” approach proposes, leaving smaller, newer companies at a disadvantage.⁸⁸

B. Mobile Phone and Mobile App Markets

1. Mobile Phones

For the purposes of this Note, it is important to understand the composition of the U.S. mobile market. Due to the concentration of this market, an app developer that partners with a provider is capable of accessing the provider’s vast network of customers.

In the United States, four large service providers dominate the mobile market: AT&T, Verizon, Sprint, and T-Mobile.⁸⁹ These mobile service providers compete in the areas of contracting, ownership, and platform development.⁹⁰

2. Mobile Apps

84. *Id.* para. 22.

85. *Id.* para. 108.

86. *Id.* para. 138.

87. *Id.* paras. 139–145.

88. *See, e.g.*, Souppouris, *supra* note 80; VAN SCHEWICK, *supra* note 15.

89. *Grading the Top 8 U.S. Wireless Carriers in the Third Quarter of 2014*, FIERCEWIRELESS (Nov. 10, 2014), <http://www.fiercewireless.com/special-reports/grading-top-8-us-wireless-carriers-third-quarter-2014?confirmation=123>.

90. Thomas W. Hazlett, *Rivalrous Telecommunications Networks With and Without Mandatory Sharing*, 58 FED. COMM. L.J. 477, 500 (2006).

The app economy⁹¹ is maintained by the interplay between platform designers, MNOs, and third party software (app) developers.⁹² Platform designers create mobile operating systems and sometimes the phones on which the systems operate. MNOs interact with consumers to forge mobile data contracts, which enable consumers to use their phones on providers' networks. Third party developers create apps, which expand the functionality of the platforms and the devices on which the platforms operate.⁹³

Today, 85% of MNOs are leveraging apps in order to attract customers. MNOs who offer 'app-centric' platforms tend to have higher average revenues per user and lower customer turnover.⁹⁴ However, platform designers and MNOs also are in positions to act as gatekeepers between content developers and consumers.⁹⁵ Platform designers can refuse to host certain apps on their platforms, while providers are capable of blocking certain apps from transferring data over their networks. This is where regulators come in: regulators can ensure that providers and platforms *do not* block their gates, but instead host all apps, thereby promoting innovation and ensuring low costs of entry.⁹⁶

C. Zero-Rating

Through the practice of zero-rating, mobile service providers exempt consumers from charges for the volume of data expended by specific applications or Internet services. Zero-rating enables customers to use specific apps without worrying about exceeding data volume caps on their mobile plans.

Recently, unlimited data plans have become less common. As of August 2014, 15% of MNOs offered unlimited data plans, whereas 35% of MNOs offered unlimited plans in 2012. As a result, zero-

91. Michael Mandel, scholar at the Progressive Policy Institute, believes that the App Economy was born in 2007, alongside the introduction of the iPhone and the launch of Android. Michael Mandel, *What the App Economy Can Teach the Whole Economy*, THE ATLANTIC (Feb. 22, 2012), <http://www.theatlantic.com/business/archive/2012/02/what-the-app-economy-can-teach-the-whole-economy/253459/>.

92. Matthew Tonner, *Tethering Applications and Open Internet Rules for the Mobile Broadband: Lessons from the FCC-Verizon Settlement*, 35 HASTINGS COMM. & ENT. L.J. 471, 480 (2013).

93. *Id.*

94. *App-Centric Operators on the Rise*, ALLOT COMM'NS, <http://www.allot.com/resource-library/mobiletrends-charging-report-h1-2014/> (last visited Nov. 15, 2015).

95. Tonner, *supra* note 92, at 481.

96. *Id.*

rating is becoming increasingly attractive to consumers.⁹⁷ Consulting group Disruptive Analysis projects that by 2019, over 1.5 billion people will have access to zero-rated applications or content.⁹⁸

In the zero-rated MNO-MA relationship, it is clear that the user does not pay for data consumption. However, it is not clear who *does* pay: does the app developer pay the MNO to facilitate this exclusive zero-rated deal? Does the MNO, in exchange for the marketing benefits derived from featuring the app, cover the cost of the app's consumed data? Or do the partnership members share the cost? MNOs and MAs do not tend to disclose their internal payment structures.⁹⁹ Initially, "carrier pays" was the most common structure (for example, Wikimedia, the parent of Wikipedia Zero, did not pay the mobile carriers for its inclusion in their partnerships), however more recently this structure has evolved toward "content developer pays" or "partnership pays" models.¹⁰⁰

97. Nancy Scola, *Will Apps that Don't Burn Through Your Data Plan Destroy the Internet or Save It?*, WASH. POST (Aug. 15, 2014), <http://www.washingtonpost.com/blogs/the-switch/wp/2014/08/15/will-apps-that-dont-burn-through-your-data-plan-destroy-the-internet-or-save-it/>.

98. Dean Bublely, *Mobile Data Zero-Rating: Adhering to Letter of the Law on Net Neutrality, or the Spirit?*, DISRUPTIVE ANALYSIS (June 5, 2014, 3:34 PM), <http://disruptivewireless.blogspot.com/2014/06/mobile-data-zero-rating-adhering-to.html>.

99. Pedro Henrique Soares Ramos, *Towards a Developmental Framework for Net Neutrality: The Rise of Sponsored Data Plans in Developing Countries 9* (March 31, 2014) (unpublished manuscript), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2418307. Attempts to contact numerous journalists (at the *New York Times*, *FierceWireless*, etc.), mobile service providers (Sprint, T-Mobile, etc.), and mobile apps (Spotify, Beats, etc.), did not result in any responses.

100. That being said, T-Mobile claims that it does not charge app developers for inclusion in its Music Freedom plan, *infra* p. 225. In contrast, in AT&T's Sponsored Data Program (not assessed in this Note), app developers pay for the data that customers use through their zero-rated apps. In her analysis of the 2015 Order, Barbara van Schewick focuses predominantly on the need to ban zero-rating in exchange for edge-provider payment, which may suggest that she sees "content developer pays" models as the most common today. Karl Bode, *T-Mobile Still Doesn't Understand (Or Simply Doesn't Care) That Their 'Music Freedom' Plan Tramples Net Neutrality*, TECHDIRT (Nov. 25, 2014, 12:38 PM), <https://www.techdirt.com/blog/netneutrality/articles/20141124/07505529235/t-mobile-still-doesnt-understand-simply-doesnt-care-that-their-music-freedom-plan-tramples-net-neutrality.shtml>; Mike Cannon, *T-Mobile Music Freedom Plan Offers Free Data for Music Streaming Services But Defies Net Neutrality*, TECH TIMES (June 22, 2014, 2:26 AM), <http://www.techtimes.com/articles/8865/20140622/t-mobile-music-freedom-plan-offer-free-data-for-music-streaming-services-but-defies-net-neutrality.htm>; 9TH INTERNET GOVERNANCE FORUM, *Session Report: WS 208: Net Neutrality, Zero-Rating, and Development*, (Sept. 3,

Zero-rating presents a complex tradeoff for MNOs. On the one hand, zero-rating is advantageous for MNOs. MNOs hope that the zero-rated content will come with marketing benefits—the promotion of prominent companies such as Spotify—and thereby induce users to initiate more profitable plans. Additionally, MNOs can use zero-rating to provide free content, which makes their networks more attractive to consumers. On the other hand, when MNOs offer zero-rated apps, they forgo revenue opportunities such as data consumption charges. This is especially true in a “carrier pays” model. Nevertheless, even in a “content developer pays” or “partnership pays” model, the provider relinquishes charges such as overage fees. Additionally, the wireless network requires use of the spectrum, which is a scarce resource. Enabling some apps to make unlimited use of the spectrum could foreclose other uses of the mobile network.¹⁰¹ Thus, when assessing whether to zero-rate an app, an MNO must determine whether the marketing benefits and consumer appeal are worth the potential losses in revenue and spectrum consumption.

Zero-rating also presents a tradeoff for app developers. On the one hand, the arrangement benefits app developers who are able to forge partnerships with MNOs. As a result, these app developers are able to infiltrate their brands into developing markets and access the large customer bases of MNOs.¹⁰² However, if an app developer is unable to forge a partnership with an MNO, that app developer will likely be subject to considerable hurdles. Without the marketing exposure and customer bases provided by MNO-MA partnerships, an app developer will have to gain popularity independently. Inasmuch as many zero-rated partnerships are exclusive, some app developers may be frozen out from mobile networks. The recognition of this possibility could have a chilling effect among app

2014, 9:00 AM), http://www.intgovforum.org/cms/wks2014/uploads/proposal_attachments/IGF_WS_208_Net_Neutrality_Zero-Rating_and_Development_session_report.pdf; Anne Morris, *For Zero-Rated Deals, OTT Providers Can No Longer Assume the Carrier Will Pay*, FIERCEWIRELESSEUROPE (Feb. 11, 2014), <http://www.fiercewireless.com/europe/story/zero-rated-deals-ott-providers-can-no-longer-assume-carrier-will-pay/2014-02-11>; van Schewick, *supra* note 17, at 8.

101. Anthony Drossos, *Forget Fast Lanes. The Real Threat for Net-Neutrality is Zero-Rated Content*, GIGAOM (Apr. 26, 2014, 10:30 AM), <https://gigaom.com/2014/04/26/forget-fast-lanes-the-real-threat-for-net-neutrality-is-zero-rated-mobile-traffic/>.

102. Lyons, *supra* note 72, at 22.

developers, who may be less inclined to innovate if they do not think that MNOs will host or charge for the use of their apps.¹⁰³

Arguably, there is also a tradeoff for consumers—but unfortunately, consumers are not able to make direct decisions regarding the proliferation of these MNO-MA partnerships. Through zero-rated partnerships, consumers gain access to data for free.¹⁰⁴ However, these partnerships “corral” consumers into a limited view of the Internet, wherein MNOs act as gatekeepers, deciding what consumers can access for free. This, in turn, will likely influence consumer choice and behavior.¹⁰⁵

II. PART II

Globally, 55% of MNOs offer app-centric plans.¹⁰⁶ Data generated by Allot Communications shows that app-centric plans are more successful than non-app-centric plans, and that specifically, plans featuring zero-rated partnerships are becoming more common. In 2013, 37% of mobile operators had at least one partnership with a content developer, up from just over 10% in 2012 and 9% in 2013.¹⁰⁷ Plans featuring zero-rated apps have been common in Europe since 2011. However, more recently they emerged in the U.S. in 2014.¹⁰⁸

103. Marcus Wohlsen, *Free Mobile Data Plans are Going to Crush the Startup Economy*, WIRED (Aug. 1, 2014, 6:30 AM), <http://www.wired.com/2014/08/free-mobile-data-plans-are-going-to-crush-the-startup-economy/>.

104. A potential caveat to this point is worth considering. It is possible that consumers do not actually obtain access to a zero-rated app’s data for free because an MNO featuring a zero-rated app may charge the consumer more money for the entire plan. However, it would be difficult to discern this empirically because it is not possible to know which aspects of a specific plan contribute to an increased overall cost—in this case, it is not possible to discern whether the featuring of a zero-rated app is the reason for a more expensive plan.

105. Scola, *supra* note 97; Jason Abbruzzese, *The Internet’s Nightmare Scenario Could Be Playing Out on Your Smartphone*, MASHABLE (Aug. 4, 2014), <http://mashable.com/2014/08/04/wireless-dystopian-future-of-the-internet/>.

106. App-centric plans offer subscribers access to different applications (social media, VOIP, etc.). *See* ALLOT COMM’NS, *supra* note 94.

107. *Id.*

108. Glenn Peoples, *Mobile’s Holy Grail: How Wireless Carrier Music Biz Partnerships Have Worked in Europe*, BILLBOARD (Sept. 27, 2013, 10:01 AM), <http://www.billboard.com/biz/articles/news/5740574/mobiles-holy-grail-how-wireless-carriers-music-biz-partnerships-have>.

MNO-MA partnership plans offer MNOs a marketable music service,¹⁰⁹ which has been shown to reduce customer turnover.¹¹⁰ For music apps, the partnership arrangements facilitate exposure to large customer bases and to preexisting customer-service provider payment relationships, which in turn help the apps to achieve scale and profits.¹¹¹ As such, MNOs and app developers have begun to collaborate more and more.

A. *The Plans: Some Examples*

1. Sprint & Spotify¹¹²

During April 2014, Sprint and Spotify announced a zero-rated deal, through which Sprint begs consumers to “Rock your world with Spotify Premium. Free.”¹¹³ On an individual Sprint plan, a consumer can access Spotify for three months free (outside of this zero-rated plan, Spotify usually costs \$9.99 per month). If the consumer purchases certain family or premium plans, that consumer can access Spotify for six months at no charge. At the end of the three or six month trial, Sprint will begin to charge customers on their monthly bills for using Spotify’s services.¹¹⁴ Sprint also offers Spotify’s free service, which includes commercial advertisements between songs, for no charge.¹¹⁵

Technology journalist Brad Hill explains that Sprint intends for its plan to encourage existing users to join its Family plan—the larger the “family” (the more members on the plan), the greater the Spotify benefit the consumer receives.¹¹⁶ After the six-month trial, Families

109. Brad Hill, *Is Streaming Music Just a Phone Service? ROK Mobile and Telecom Bundling*, RAIN NEWS (June 9, 2014), <http://rainnews.com/is-streaming-music-just-a-phone-service-rok-mobile-and-telecom-bundling/>.

110. Yinka Adegoke, *Spotify, Sprint Plan Music Bundle to be Unveiled this Month*, BILLBOARD (April 12, 2014, 1:13 AM), <http://www.billboard.com/biz/articles/news/digital-and-mobile/6049903/spotify-sprint-plan-music-bundle-to-be-unveiled-this>.

111. Hill, *supra* note 109; Adegoke, *supra* note 110.

112. See SPRINT, *supra* note 11.

113. Ben Sisario, *Spotify Teams with Sprint on a Mobile Music Plan*, N.Y. TIMES (April 29, 2014), <http://www.nytimes.com/2014/04/30/business/media/spotify-teams-with-sprint-on-a-mobile-music-plan.html>.

114. See SPRINT, *supra* note 112.

115. Andy Fixmer, *Beats Music Said to Sign 1,000 Subscribers a Day in Month*, BLOOMBERG (March 20, 2014, 12:01 AM), <http://www.bloomberg.com/news/2014-03-20/beats-music-said-to-sign-1-000-subscribers-a-day-in-month.html>.

116. Brad Hill, *Sprint and Spotify Tie the Knot; Daniel Ek Hopes to “Hit Mainstream America,”* RAIN NEWS (April 30, 2014), <http://rainnews.com/sprint-and-spotify-tie-the-knot-daniel-ek-hopes-to-hit-mainstream-america/>.

with more than five members receive an additional 50% discount on their monthly Spotify charge; they can pay \$5 per month for the next twelve months rather than \$9.99 per month. Also, Sprint hopes that offering three months of free Spotify services for non-Family members will attract new users to Sprint.¹¹⁷

Spotify, the world leader in music streaming, originated in Sweden in 2008 and is now available in over fifty countries.¹¹⁸ However, its growth in the mainstream market has been slow.¹¹⁹ As Spotify CEO Daniel Ek explained in an interview, “In the U.S., Spotify is really strong on the coasts, but we’ve got to hit mainstream America. With Sprint we feel we really have the opportunity to do that.”¹²⁰ One journalist explained that Spotify’s partnership with Sprint initially allowed Spotify to compete with Beats Music, which had partnered with AT&T in a similar deal. The AT&T/Beats deal was suspended when Apple acquired Beats in October 2014.¹²¹

2. T-Mobile Music Freedom¹²²

On June 18, 2014, T-Mobile made a surprise announcement indicating that subscribers to its Simple Choice plan would be able to stream unlimited music from “all the most popular streaming services, including Pandora, Rhapsody, iHeartRadio, iTunes Radio, Slacker, and Spotify—without ever hitting their high-speed 4G LTE data service.”¹²³ Currently, these music apps do not pay T-Mobile for inclusion in this plan.¹²⁴

B. Do these plans violate net neutrality?

1. Pure Net Neutrality

a. MNO-MA zero-rated partnerships violate pure net neutrality

117. *Id.*

118. Sisario, *supra* note 113.

119. *Id.*

120. *Id.*

121. Mikey Campbell, *AT&T Stops Selling Beats Music Subscriptions to Wireless Customers*, APPLE INSIDER (Oct. 15, 2014 5:28 PM), <http://appleinsider.com/articles/14/10/15/att-stops-selling-beats-music-subscriptions-to-wireless-customers>.

122. See *T-Mobile is Setting Music Free*, T-MOBILE, <http://www.t-mobile.com/offer/free-music-streaming.html> (last visited Nov. 15, 2015).

123. *T-Mobile Sets your Music Free*, T-MOBILE (June 18, 2014), <http://newsroom.t-mobile.com/news/t-mobile-sets-your-music-free.htm>.

124. Bode, *supra* note 100.

In the face of arguments claiming that net neutrality regulation inhibits development, net neutrality proponents such as Wu explain that the fixed Internet evolved, from its earliest stages, *because* of net neutrality.¹²⁵ Similarly, competitive superiority among apps in the mobile sphere has not been a result of incumbency in the telecommunications network. Instead, since the advent of smartphones, the app developers who have been most successful are the ones who create the best mobile solutions.¹²⁶ But amidst the constricted market of MNOs, zero-rating is threatening this net neutrality-promulgated meritocracy, raising barriers to entry, and distorting the market for music apps. Zero-rating is a type of data discrimination and, as explained below, this violates pure net neutrality.

Specifically, zero-rating distorts competition by discriminating among music apps. Since zero-rated apps are free to the consumer, zero-rated partnerships enable MNOs to influence which services and applications consumers are more likely to use. In this way, MNOs are favoring certain services. Consequently, all of the remaining non-zero-rated apps, for which consumers must pay, are disfavored. For example, App A may be superior to App B, but App B may have a zero-rated deal with a large MNO. As a result, many more consumers may use App B than App A because App B is free to the consumer.

Even if there is healthy competition among mobile app developers, the market for MNOs is concentrated. When apps partner with these MNOs, it follows that the market for apps may become similarly restricted. According to FCC Chairman Thomas Wheeler, “Mobile operators have claimed they don’t need the same degree of net neutrality regulation as wired broadband providers because the wireless industry is more competitive.”¹²⁷ And yet, just four major MNOs dominate the U.S. mobile market, and three of them have already forged partnerships with music apps. AT&T formed a now-terminated partnership with Beats during early 2014, and Sprint maintains a partnership with Spotify. T-Mobile offers to zero-rate a number of different music apps, a maneuver that it hopes

125. Wu & Yoo, *supra* note 38, at 582.

126. Hazlett, *supra* note 90, at 24.

127. Chuck Bednar, *FCC Chairman Discusses Spectrum Auction, Net Neutrality at Mobile Industry Trade Show*, REDORBIT (Sept. 10, 2014), <http://www.redorbit.com/news/technology/1113230550/fcc-tom-wheeler-spectrum-auction-and-net-neutrality-091014/>.

the public will perceive as altruistic and pro-competition.¹²⁸ However, all of these apps were prominent brands with large customer appeal before T-Mobile began hosting them. As technology analysts at The Diffusion Group explain, “[t]here are only a limited number of seats available in any of these bundling discussions.”¹²⁹

Since there are a limited number of service providers with which to partner, there is a risk that zero-rated partnerships will distort the natural dynamic of technological competition that net neutrality seeks to protect. If MNOs can choose which apps receive preferential treatment, then the top apps may not be the better products—the better technologies that consumers prefer. Instead, the top applications may be the ones that collude most successfully with MNOs.¹³⁰ The Electronic Frontier Foundation (EFF) contends that zero-rating allows MNOs to pick winning applications, rather than leaving that determination to the market.¹³¹ A startup app first must have enough consumer appeal to offset the pre-established reputation of the zero-rated app, and then must be sufficiently desirable to overcome the fact that consuming data from the zero-rated app is free.

Furthermore, zero-rated partnerships allow providers to threaten app developers by refusing to feature their products. In order to access the customers on providers’ networks, startups may feel pressure to negotiate zero-rated plans with MNOs before launching.¹³² Also, MNOs could refuse to zero-rate certain apps that do not comply with their demands. This would create high barriers to entry—including costs for negotiation and the fulfillment of MNO demands—for apps that do not have preexisting relationships with MNOs. Net neutrality proponents, such as van Schewick, insist that innovators should not have to “seek permission” from service

128. Chris Ziegler, *T-Mobile’s ‘Music Freedom’ is a Great Feature – and a Huge Problem*, THE VERGE (June 18, 2014, 9:42 PM), <http://www.theverge.com/2014/6/18/5822996/t-mobile-music-freedom-net-neutrality>.

129. Joel Espelien, *All’s Fair in Love and War: T-Mobile, Amazon, and the Future of Net Neutrality*, THE DIFFUSION GROUP RESEARCH (June 26, 2014), <http://tdgresearch.com/all-s-fair-in-love-and-war-t-mobile-amazon-and-the-future-of-net-neutrality/>.

130. Ramos, *supra* note 99, at 15.

131. In fact, EFF contends that zero-rating may lead to the establishment of a mobile Internet that is more similar to cable television than to the open, fixed Internet. Elec. Frontier Found’n, *Comments Regarding Proposed Rulemaking in the Matter of Protecting and Promoting the Open Internet* (July 15, 2014), <https://www.eff.org/files/2014/07/15/effcccomments7152014.pdf>.

132. Ramos, *supra* note 99, at 15.

providers in order to create new apps.¹³³ However, as a result of these preexisting and impending hurdles, it is possible that startup developers will be dissuaded from innovating or from attempting to enter the app market at all.¹³⁴

b. Arguments That Zero-Rating Plans Do Not Violate Pure Net Neutrality

Some argue that zero-rated partnerships do not violate net neutrality. First, technology consultant Dean Bublely claims that the debates over these plans rest on semantics. To illustrate his point, Bublely frames a zero-rated partnership in two different ways. First, he says, an MNO can say: “Free data for Spotify use.” This deal likely would lead consumers to use Spotify over any other music app, and this discrimination and favoritism would violate net neutrality. Alternatively, an MNO can write: “Buy Spotify and get 200MB a month extra data allowance as a bonus.”¹³⁵ According to Bublely, the deal in the second phrasing, which employs a standard marketing technique, would not violate net neutrality. Bublely assumes that users would consume an average of 200MB of Spotify data per month, and on this basis he argues that the plans are identical. Meanwhile, competing music app developers, according to Bublely, are disadvantaged either way because Spotify forged a deal with the MNO first.¹³⁶

However, Bublely’s argument is flawed and the distinction is more than a matter of semantics. Bublely’s position relies on the assumption that under the second phrasing, consumers would use the 200MB of extra data allowance toward Spotify. However, this assumption underlying his example is unsound because the consumer is not bound to use this extra data toward Spotify. In fact, if purchasing the Spotify app costs less than the cost of 200MB of extra data, then the consumer would be incentivized to purchase Spotify in exchange for this extra data that the consumer can use toward anything. In the first plan, a zero-rated plan, the consumer is enticed, and even rationally constrained, to use Spotify over any other music app because using Spotify is free. In Bublely’s second plan, the consumer can elect to purchase Spotify in order to receive

133. Letter from Barbara van Schewick, to Marlene Dortch Sec’y, Fed. Commc’ns Comm’n note (Dec. 9, 2010) (on file with the Fed. Commc’ns Comm’n), <http://apps.fcc.gov/ecfs/comment/view?id=6016063456>.

134. Ramos, *supra* note 99, at 16.

135. Bublely, *supra* note 98.

136. *Id.*

free, unrestricted data. Thus the distinction between the plans is not a question of semantics, but one of consumer constraint versus consumer choice.

Others argue that zero-rating streamlines access to new applications, and that this is in the spirit of net neutrality. Consumers are reluctant to obtain new music subscriptions because they are averse to paying a new monthly expense. Zero-rating, some contend, can help consumers to overcome this consumer reluctance.¹³⁷ Partnerships lead to exposure, price discounting, and ease-of-payment, and all three of these factors streamline the process of connecting consumers with new applications.¹³⁸

However, this argument is incorrect because it ignores a fundamental value of net neutrality. Certainly, one goal of net neutrality is to empower new app developers to access large consumer bases. However, zero-rated partnerships enable MNOs to choose which apps to streamline to consumers—and this is against the spirit of net neutrality, where the consumer is supposed to be able to choose which technologies to use.¹³⁹

Other zero-rating proponents maintain that zero-rating does not violate net neutrality, but in fact helps to achieve the foremost goal of net neutrality—that is, an open Internet that people can afford to access.¹⁴⁰ Under the existing regime, prohibitively expensive data costs prevent consumers from accessing the Internet and its apps, but zero-rated partnerships make content accessible to consumers who could not otherwise afford it.¹⁴¹

Admittedly, in the short-term, the benefits of zero-rated partnerships appear to be beneficial and may even appear to align with the spirit of net neutrality. Through partnerships between MNOs and content developers such as Facebook and Wikipedia, zero-rating has helped users in developing countries to access the Internet.¹⁴² Additionally, zero-rating may help MNOs to obtain the

137. Hill, *supra* note 109.

138. *Id.*

139. VAN SCHEWICK, *supra* note 15, at 6.

140. Scola, *supra* note 97.

141. Russell Brandon, *Sponsored Data: AT&T Will Now Let Companies Buy Out Your Data Charges for Specific Videos and Apps*, THE VERGE (Jan. 6, 2014, 12:00 PM), <http://www.theverge.com/2014/1/6/5279894/at-t-announces-net-neutrality-baiting-sponsored-data-mobile-plans>.

142. Olga Cavalli, Ministry of Foreign Affairs in Argentina and Professor at the University of Mont Cyrus, Istanbul 9th Annual Internet Governance Forum: Connecting Continents for Enhanced Multi-Stakeholder Internet Governance (Sept. 3, 2014), <http://intgovforum.org/cms/174-igf-2014/transcripts/1969-2014-09->

scale of users that they need in order to justify funding provision of service in developing areas.¹⁴³ However, the “free” Internet that is accessible to people in developing countries is limited; they do not access the entire Internet for free, but instead just zero-rated apps such as Facebook or Wikipedia.¹⁴⁴ In the long-term, discriminatory zero-rating will lead to warped development in mobile broadband—a landscape fraught with walled gardens, provider-selected content, and minimal consumer choice. Referring to T-Mobile’s Music Freedom Plan, technology reporter Chris Ziegler warns that zero-rating should be seen “as a domino, a seemingly innocuous tile that’s rocking back and forth. At the end of that long domino line lies a weird, broken, disjoint[ed] place that looks nothing like the internet we know today.”¹⁴⁵

2. MNO-MA zero-rated partnerships violate net neutrality under the 2015 Open Internet Order.

The 2010 Open Internet Order does not mention zero-rating.¹⁴⁶ Thus, it was unclear whether zero-rating violated net neutrality under the “Transparency rule” or the watered-down mobile “No Blocking rule,” or whether zero-rating could survive under the Reasonable Network Management exception.¹⁴⁷ In comparison, the 2015 Open Internet Order explicitly addresses zero-rating—albeit in a non-conclusive way.¹⁴⁸ Given the uncertain costs and benefits of innovative zero-rated plans,¹⁴⁹ the 2015 Open Internet Order indicates that zero-rated plans should be evaluated on a case-by-case

03-ws208-net-neutrality-zero-rating-and-development-room-5 [hereinafter Internet Governance Forum].

143. TECH FREEDOM, <http://techfreedom.org/> (last visited Jan. 4, 2016).

144. *Id.*

145. Ziegler, *supra* note 128.

146. The 2010 Order mentioned “sponsored data,” which is similar, but only with reference to fixed broadband. The term “zero-rating” did not exist in the 2010 Order. *See* 2010 Open Internet Order, *supra* note 5, at para. 76.

147. *See generally* 2010 Open Internet Order, *supra* note 5.

148. *See* 2015 Open Internet Order, *supra* note 7, para. 152.

149. The 2015 Order indicates that there exist “mixed reviews” over the plans. Advocates of the plans claim that the plans increase choice, lower costs to consumers, increase investment in infrastructure, and enable the tailoring of content to consumer preferences. Opponents argue that the plans inhibit innovation and also lead to the distortion of competition and the favoring of companies with more money. *See* 2015 Open Internet Order, *supra* note 7, paras. 151–153.

basis under the no-unreasonable interference/disadvantage standard.¹⁵⁰

As previously explained, when assessing a plan under the no-unreasonable interference/disadvantage standard, an arbiter must balance flexibility in business and the encouragement of innovation.¹⁵¹ Then, using a “totality of the circumstances” approach, the arbiter must weigh the following factors: end-user control; competitive effects; consumer protection; effect on innovation, investment, or broadband deployment; free expression; application-agnosticism; and standard practices.¹⁵² To date, there are not any public records that indicate that the FCC or any other tribunal has performed this analysis.¹⁵³ Moreover, the 2015 Open Internet Order does not provide any explanations about how to weigh specific factors.¹⁵⁴ Therefore, there is not any direct precedent on which to base this analysis. Nevertheless, by applying the no-unreasonable interference/disadvantage analysis to partnerships between mobile network providers and music apps, this Note seeks to demonstrate that MNO-MA zero-rated partnerships violate net neutrality.

a. End-User Control¹⁵⁵

Under this factor, an arbiter is to consider the extent to which a practice maintains end-user control. In the 2015 Order, the description of this factor explains that when the “end-user,” the consumer, chooses the app that he wants to use, then there is less likely to be interference with “the end user’s ability to use the Internet as he or she sees fit.”¹⁵⁶ The description also notes that “user control and network control are not mutually exclusive,” but that network control measures must be “fully transparent” to the end user and “effectively reflect end users’ choices.”¹⁵⁷ MNO-MA partnerships distort consumer choice with cost considerations, and it is unlikely that there is a necessity for network control. As such, this factor weighs against the legality of MNO-MA partnerships.

150. See 2015 Open Internet Order, *supra* note 7, para. 151.

151. *Id.* para. 138.

152. *Id.* paras. 139–145.

153. As of September 9, 2015, a search of FCC records and the media did not reveal that any case-by-case analyses had been performed and publicized.

154. See 2015 Open Internet Order, *supra* note 7, para. 139–145.

155. See 2015 Open Internet Order, *supra* note 7, at para. 139.

156. *Id.*

157. *Id.*

MNO-MA partnerships do not “promote consumer choice.”¹⁵⁸ Instead, the partnerships provide consumers with one specified free option, which consumers must weigh against all other options that do consume data. Proponents of zero-rating may contend that a consumer still has a choice—a consumer may choose whether to pay additional fees for a service of his choice. However, this factor also specifies that consumer choices, rather than the choices of service providers, must remain the “driving force behind the development of the Internet.”¹⁵⁹ But in the case of zero-rated partnerships, MNOs are the driving forces behind these plans.

Notably, this factor leaves room for a balance between “consumer control” and “network control.”¹⁶⁰ As such, MNOs may attempt to find some wiggle room under the “network control” allowance—a term that is undefined in the 2015 Order. Using a common argument of net neutrality opponents, MNOs may argue that there is a limited amount of mobile broadband and that these MNO-MA plans enable the provider to exercise “network control” over this limited resource.¹⁶¹ The MNO may postulate that to allow a consumer to run multiple music apps would lead to congestion and may threaten the MNO’s ability to service all of its consumers. In fact, in 2013 T-Mobile put forth this type of argument when it claimed that T-Mobile would throttle service only if one subscriber were inhibiting other subscribers’ experiences.¹⁶²

However, this potential “network control” argument is likely to fail. Giving consumers a choice of many music apps does not mean that the consumers will run many music apps at once. Therefore, it is unlikely that any one consumer would be using an excessive amount of broadband. Michael Weinberg, of net neutrality interest group Public Knowledge, refers to T-Mobile’s network constraint argument as “bullshit” that is fostering the delusion of “artificial scarcity,” especially in light of its new Music Freedom plan.¹⁶³ If there were truly data or network constraints that merited network control, Weinberg argues, then T-Mobile would not offer to zero-rate multiple music apps at all.¹⁶⁴

158. *Id.*

159. *Id.*

160. *Id.*

161. Hahn, Litan & Singer, *supra* note 40, at 444.

162. Michael Weinberg, *T-Mobile Uses Data Caps to Manipulate Competition Online, Undermine Net Neutrality*, PUBLIC KNOWLEDGE (July 19, 2014), <https://www.publicknowledge.org/news-blog/blogs/t-mobile-uses-data-caps-to-manipulate-competition-online-undermine-net-neut>.

163. *Id.*

164. *Id.*

b. Competitive Effects¹⁶⁵

The FCC included this factor to ensure that providers do not engage in practices that would “likely unreasonably interfere with or unreasonably disadvantage edge providers’ ability to reach consumers in a way that would have a dampening effect on innovation.”¹⁶⁶ The factor’s description indicates that an arbiter should look into an entity’s vertical integration and its relationships with affiliated entities as well.¹⁶⁷ MNO-MA zero-rated partnerships constrict competition and vertical integration is unlikely to impart benefits in the long-term. Therefore, this factor weighs against the legality of MNO-MA partnerships.

To be sure, MNO-MA partnerships inhibit competition. As indicated above, there are only four major MNOs in the United States, and since 2013, three of these MNOs have forged relationships with specific music apps.¹⁶⁸ With such a significant portion of the market influenced to use the specific zero-rated apps, app developers who have not established partnerships are disadvantaged. Furthermore, entrepreneurs may be deterred from developing new apps at all, hesitant about a scarcity of potential customers because most consumers already will be using free zero-rated apps that come with their MNOs’ plans.¹⁶⁹

Still, MNOs may argue that vertical integration with only one app is advantageous. Putting forth a common argument of net neutrality opponents, an MNO may assert that allowing zero-rating-based discrimination between apps will enable the MNO to focus on building its network to work seamlessly and efficiently with one specific app.¹⁷⁰ This MNO may further claim that this is preferable for a consumer, because it is better to have one app that works perfectly than to have access to a number of apps that are only partially compatible with, and therefore slow down, the MNO’s technology.¹⁷¹

165. See 2015 Open Internet Order, *supra* note 7, at para. 140.

166. *Id.*

167. *Id.*

168. See Espelien, *supra* note 129.

169. Wohlsen, *supra* note 103.

170. Farrell & Weiser, *supra* note 37, at 98–99; Wu & Yoo, *supra* note 38, at 581.

171. In support of their argument for “interdependent” development, Farrell and Weiser cite the gaming system Sega, which became very successful when it began to develop its major games, such as Sonic the Hedgehog, in-house. Under the MNO-MA plans, MA development would not take place in-house. However,

This vertical integration argument is unlikely to prevail. While one app may be slightly more compatible with a given MNO than another, different music apps are unlikely to demand drastically different technologies. Furthermore, sophisticated app developers can make each music app compatible with any MNO's network over time. Enduring some minor incompatibilities and slight delays while correcting glitches between apps and MNOs is better than sacrificing consumer choice, innovation, and net neutrality.¹⁷²

c. Consumer Protection¹⁷³

Under this factor, the FCC prohibits any “deceptive or unfair practice that will unreasonably interfere with or disadvantage end-user consumers’ ability to select, access, or use broadband applications.”¹⁷⁴ The factor’s description provides examples of unfair practices, including the unlawful release of proprietary information and dishonest billing practices.¹⁷⁵ Zero-rating is not deceptive and it does not resemble the unfair practices offered as examples. Thus the consumer protection factor does not weigh against the legality of MNO-MA partnerships.

Zero-rating is not particularly “deceptive.”¹⁷⁶ The MNOs do not mislead consumers to induce them to use the zero-rated app. Instead, the MNOs openly introduce a free option. Additionally, though the effects of zero-rating may be considered “unfair,” the practice of zero-rating itself is not closely analogous to the examples provided.¹⁷⁷

d. Effect on Innovation, Investment, or Broadband Deployment¹⁷⁸

Under this factor, an arbiter is to assess whether practices stifle innovation or investment. The description of the factor explains that “Internet openness” drives a “virtuous cycle” in which innovations

the concept of interdependent development still is applicable. Farrell & Weiser, *supra* note 37, at 98.

172. See Knowledge@Wharton, *How Apple Made ‘Vertical Integration’ Hot Again—Too Hot Maybe*, TIME (Mar. 16, 2012), <http://business.time.com/2012/03/16/how-apple-made-vertical-integration-hot-again-too-hot-maybe/2/> (indicating that too much vertical integration can lead to stagnation in innovation and difficulties in management of disparate conglomerates).

173. 2015 Open Internet Order, *supra* note 7, at para. 140.

174. *Id.* para. 141.

175. *Id.*

176. *Id.*

177. *Id.*

178. *Id.* para. 142.

at the edges of the network enhance consumer demand.¹⁷⁹ In turn, consumer demand leads to expanded investments in broadband infrastructure that “spark new innovations at the edge.”¹⁸⁰ MNO-MA partnerships are likely to stifle innovation and investment, and therefore this factor weighs against the legality of MNO-MA partnerships.

As mentioned above, new app developers, hesitant about their abilities to forge partnerships within the concentrated MNO market, are likely to be deterred from beginning new projects.¹⁸¹ Additionally, new app developers may not have the financial resources to engage in zero-rated partnerships, particularly as “carrier pays” models are emerging.¹⁸² Meanwhile, apps such as Spotify, which are already involved in partnerships and thus already have large customer bases, may be less aggressive about improving their products to attract new customers.¹⁸³ Together, these paths could stifle innovation from both existing developers and rising developers.

e. Free Expression¹⁸⁴

This factor prohibits practices that “would unreasonably interfere with or unreasonably disadvantage consumers’ and edge providers’ ability to use [the Internet] to communicate with each other.”¹⁸⁵ As the footnote to this factor suggests, it is intended primarily to protect First Amendment rights.¹⁸⁶ However, the factor protects the Internet as a forum for “diversity of political discourse” and “cultural development” as well.¹⁸⁷ Thus this factor may weigh slightly against MNO-MA partnerships.

Music is a vehicle for “cultural development,” and MNO-MA partnerships limit the unhindered proliferation of music across the Internet.¹⁸⁸ Though musical expression itself may not be limited by the partnerships, zero-rating may lead to a decrease in demand for the music available only on non-zero-rated music apps.¹⁸⁹

179. See 2015 Open Internet Order, *supra* note 7, at para. 142.

180. *Id.*

181. See *supra* Section II.B.1.b.2.b; Wohlsen, *supra* note 103.

182. Lemley & Lessig, *supra* note 25.

183. Elec. Frontier Found’n, *supra* note 131.

184. See 2015 Open Internet Order, *supra* note 7, at para. 143.

185. *Id.*

186. See 2015 Open Internet Order, *supra* note 7, at para. 142. n.343.

187. *Id.* para. 143.

188. *Id.*

189. Ramos, *supra* note 99.

f. Application-agnostic¹⁹⁰

Under this factor, an arbiter is to assess whether a practice is application-agnostic. A practice is application-agnostic if it does not differentiate “in treatment of traffic, or if it differentiates in treatment of traffic without reference to the content, app, or device.”¹⁹¹ Application-agnostic practices do not interfere with users’ choices about which apps and content to use.¹⁹² Additionally, application-agnostic practices do not distort competition or unreasonably disadvantage edge providers.¹⁹³ If a practice is not application-agnostic, then it is application-specific.¹⁹⁴ Because MNO-MA partnerships are not application-agnostic, this factor weighs against the legality of MNO-MA partnerships.

Zero-rated partnerships are, by their nature, application-specific.¹⁹⁵ By partnering with one specific music app, Spotify, Sprint gave preference to “an application that belongs to a particular class of applications.”¹⁹⁶ While T-Mobile may argue that its partnership is application-agnostic because it features a number of music apps on its plan, T-Mobile still prioritizes some content over other content because it does not feature the entire class of music apps on its plan. The prioritization of certain apps—by making some of the apps free to the consumer—over other apps “distort[s] competition” and “disadvantage[s] edge providers” that are not involved in the partnerships.¹⁹⁷

g. Standard Practices¹⁹⁸

Based on this factor, an arbiter must consider whether a practice is in line with best practices and technical standards across the Internet industry. These standards are to be determined by broadly representative and independent Internet engineering and governance initiatives, organizations that set standards, and/or policymakers.¹⁹⁹ As the FCC has yet to assess an MNO-MA

190. 2015 Open Internet Order, *supra* note 7, at para. 144.

191. *Id.* para. 144, n.344.

192. *Id.* para. 144.

193. *Id.*

194. *Id.* para. 144, n.344.

195. *Id.*

196. 2015 Open Internet Order, *supra* note 7, at para. 144, n.344.

197. *Id.* at para. 144; Lemley & Lessig, *supra* note 25.

198. *See* 2015 Open Internet Order, *supra* note 7, at para. 145; Elec. Frontier Found’n, *supra* note 131.

199. *See* 2015 Open Internet Order, *supra* note 7, at para. 145.

partnership, publicly-available standard practices are presently non-existent. Thus it is unclear how this factor will fall in this analysis on MNO-MA partnerships.

In any case, the debate over zero-rating has focused on its benefits in the short-term and the likely inhibition of technological innovation in the long-term.²⁰⁰ It is likely that both of these views will be part of the dialogue when establishing a set of standard practices for zero-rating.

h. Under the No-Unreasonable Interference/Disadvantage Analysis, MNO-MA Partnerships Violate Net Neutrality

Taking all of the factors into account, it seems that the analysis weighs heavily against the legality of MNO-MA partnerships. Of course, the FCC has elected to pursue a case-by-case approach to zero-rated partnerships because the FCC does not deem these arrangements to be generalizable.²⁰¹ However, currently, partnerships between MNOs and specific music apps resemble one another (see Sprint and T-Mobile). Given the above analysis, it seems that existing MNO-MA partnerships will be found to violate net neutrality in every case.

MNO-MA partnerships inhibit end-user control, decrease competition within the music app industry, limit free expression, may curb innovation and investment, and are application-specific. The consumer protection factor does not seem to apply to the analysis and standard practices have yet to emerge. In addition to weighing the factors, an arbiter is supposed to balance flexibility in business versus the encouragement of innovation.²⁰² Certainly, prohibiting exclusive MNO-MA partnerships would restrict MNOs and app developers from making business decisions that may confer marketing benefits and provide one another with large customer bases. However, such a prohibition also would ensure that innovation continues²⁰³—which has always been a top priority of net neutrality.

III. PART III

This section proposes two spheres of changes. First, it proposes a legislative change that would close the gap between pure net

200. See *supra* Section II.B.1.b.2.e.

201. 2015 Open Internet Order, *supra* note 7, at para. 151.

202. *Id.* para. 138.

203. Wohlsen, *supra* note 103.

neutrality principles and the U.S.'s current rules on net neutrality. If these changes are implemented, MNO-MA zero-rated partnerships will definitively violate net neutrality in the U.S. Second, this section proposes that MNOs amend their plans so that they can capture the benefits of zero-rating for themselves, for app developers, and for consumers, while obeying the principles of net neutrality.

A. Legislative Change: Zero-rating should be regulated under the general 2015 Open Internet Order rules.

MNO-MA partnerships violate pure net neutrality. And yet, under the 2015 Open Internet Order, it is unclear whether the partnerships violate the rules because the plans are to be assessed on a case-by-case basis.²⁰⁴ The no-unreasonable interference/disadvantage standard analysis above indicates that an arbiter would likely find current MNO-MA partnership plans contrary to net neutrality principles.²⁰⁵ However, performing this case-by-case analysis—if content developers or consumers initiate this analysis at all—is likely to be costly, time-consuming, and potentially biased. Therefore, from a practical standpoint, the FCC should regulate zero-rating partnerships under the No Paid Prioritization rule.

As the 2015 Open Internet Order explains, the FCC is regulating zero-rating less stringently than the rest of the Internet because the practice is in its early stage of development and the concept seems to have both benefits and downsides.²⁰⁶ However, given the rapidly-developing state of mobile technology, including plans featuring zero-rating, zero-rated plans should be treated in the same way as any other content.²⁰⁷ As such, the FCC should remove the exception for zero-rating and apply the general 2015 Order rules to zero-rated plans. Under the general rules of the 2015 Open Internet Order, MNO-MA partnerships will most likely violate the No Paid Prioritization rule. Zero-rating compels consumers to use the zero-rated content over other content, and this preferential treatment violates net neutrality.²⁰⁸

The rule against Paid Prioritization aims to ensure that broadband providers do not accept payment—either monetary or otherwise—to manage their networks in ways that benefit particular

204. See 2015 Open Internet Order, *supra* note 7, at para. 138.

205. See *supra* Section II.B.2.

206. See 2015 Open Internet Order, *supra* note 7, at para. 151.

207. See Tech Freedom, *supra* note 143.

208. *Id.*

content, application, services, or devices.²⁰⁹ This rule covers both the “direct and indirect” favoring of some traffic over other traffic.²¹⁰ The rule provides some examples of techniques that may give way to paid prioritization, including traffic shaping, resource reservation, and preferential traffic management.²¹¹ Providers that violate the rule will be subject to enforcement action, which may include forfeitures and other penalties.²¹²

If the FCC regulated zero-rated partnerships under the Order’s general rules instead of under the case-by-case No-Unreasonable Interference/Disadvantage regime, then the FCC likely would find that these partnerships violate net neutrality. Because there is a lack of transparency surrounding the MNO-MA partnerships, it is not clear whether the apps are paying the MNOs, the MNOs are paying the apps, or if the MNOs and apps are sharing the costs.²¹³ Therefore, it is not possible to discern whether the apps are paying for their prioritization with money. Still, however, the Paid Prioritization rule indicates that an MNO may not “favor” an app in exchange for consideration—monetary or not—and in these cases the MNOs receive marketing benefits as consideration.²¹⁴ Thus these partnerships would violate the No Paid Prioritization rule.

The 2015 Order expresses that the No Paid Prioritization rule stems from concerns over inhibiting “unfunded early startups” from developing and disadvantaging “user-generated” content.²¹⁵ Certainly, small, developing music apps fit with this genre of concerns. Furthermore, as the Order expresses, “the future openness of the Internet should not turn on the decision of a particular company.”²¹⁶ But in MNO-MA partnerships, the MNOs make the decisions when they feature just one or a few music apps on their zero-rated plans.

209. See 2015 Open Internet Order, *supra* note 7, at para. 18.

210. *Id.*

211. *Id.*

212. *Id.* para. 125.

213. Bode, *supra* note 100.

214. 2015 Open Internet Order, *supra* note 7, at para. 125. See, e.g., Andy Malt, *Napster Partners With SFR Mobile Network in France*, COMPLETE MUSIC UPDATE (Sept. 26, 2013, 11:28 AM), <http://www.completemusicupdate.com/article/napster-partners-with-sfr-mobile-network-in-france/> (statement of the Napster Senior Vice President Thorsten Schliesche) (“Carrier deals are very important for our business in order to reach a broader audience and enable people to experience the benefits of music streaming. In general this type of deals (*sic*) do support our brand awareness in the market.”).

215. See 2015 Open Internet Order, *supra* note 7, at para. 126.

216. *Id.* para. 128.

If the above No-Unreasonable Interference/Disadvantage analysis shows that MNO-MA partnerships are always likely to violate net neutrality anyway, why bring zero-rated partnerships under the purview of the No Paid Prioritization rule at all? First, finding arbiters to perform case-by-case analyses is time-consuming and expensive. Second, a preemptive, per se rule would be more effective in deterring anticompetitive behavior by MNOs and encouraging innovation by smaller app developers.²¹⁷

As the 2015 Order itself explains, “case-by-case enforcement can be cumbersome for individual consumers or edge providers.”²¹⁸ Small companies have expressed that their small legal teams could not handle the burden of filing an administrative suit to combat an unreasonable situation.²¹⁹ A case-by-case approach to the regulation of zero-rating will not be effective if the losers, such as startup developers, do not have the resources to initiate the analysis. Even if a developer were able to file an administrative complaint, MNOs and established apps may have more money with which to influence a decision. Additionally, larger companies are likely to be better connected within the FCC.²²⁰

Furthermore, permitting MNO-MA zero-rated partnerships is likely to have a chilling effect upon innovation in the music app industry.²²¹ Without a bright-line rule, some entrepreneurs may find the state of zero-rating regulation too uncertain for them to invest time and money into developing new concepts.²²² When drafting the Paid Prioritization rule, the FCC was under pressure to allow some flexibility in the area.²²³ However, unwilling to risk any amount of innovation chilling, the FCC drafted and applied the Paid

217. See generally van Schewick, *supra* note 17.

218. 2015 Open Internet Order, *supra* note 7, at para. 18.

219. 2015 Open Internet Order, *supra* note 7, at para. 129, n.311. Netflix, for example, explained to the FCC that, “Weighing the cost of an administrative proceeding and the uncertainty of success, many edge providers likely will choose to forego engagement with the FCC.”

220. For example, current FCC Chairman Tom Wheeler used to lobby on behalf of the cable and wireless industries. Sam Gustin, *Tom Wheeler, Former Lobbyist and Obama Loyalist, Seen as FCC Frontrunner*, TIME (April 16, 2013), <http://business.time.com/2013/04/16/tom-wheeler-former-lobbyist-and-obama-loyalist-seen-as-fcc-frontrunner/>.

221. Wohlsen, *supra* note 103.

222. van Schewick, *supra* note 17.

223. Notably, providers wanted to experiment with various delivery mechanisms, such as fast and slow lanes. See 2015 Open Internet Order, *supra* note 7, at para. 19.

Prioritization rule as a flat prohibition.²²⁴ Certainly, any amount of zero-rating is likely to lead to a chilling effect, and thus should be subject to the same bright-line rule.²²⁵

B. Mobile app companies should amend their plans to be application-agnostic.

MNO-MA partnerships violate net neutrality because, among a specific class of apps, mobile service providers pick specific winners and consequentially render the other apps losers. These plans erect high barriers of entry for new apps and abandon the end-to-end structure through which the Internet evolved.²²⁶ However, there are merits to these plans. In the short-term, these plans benefit all parties involved in the partnerships.²²⁷ The MNOs launch strong marketing campaigns centered on the zero-rated music apps, which in turn attract subscribers and improve revenues. The apps gain loyal mobile users, preexisting payment arrangements, and consistent provider service.²²⁸ Consumers can access free music without exceeding their data caps. If MNOs amend their zero-rated plans based upon van Schewick's application-agnostic discrimination rule, then they can capture a large portion of these short-term benefits of zero-rating while maintaining net neutrality. Using the application-agnostic rule as a foundation, MNOs should create plans wherein they offer to zero-rate one music app for a given period of time.²²⁹

In her proposal for an ideal non-discrimination net neutrality law, van Schewick recommends a rule that bans application-specific discrimination, but allows application-agnostic discrimination.²³⁰ Application-agnostic discrimination does not allow an MNO to distinguish between specific uses of the network.²³¹ This rule balances net neutrality principles with the interests of MNOs. The rule prevents MNOs from interfering with consumer choice and from skewing competition among apps, but also allows MNOs

224. See 2015 Open Internet Order, *supra* note 7, at para. 19 (“the record demonstrates the need for strong action . . . the threat of harm is overwhelming”). As the rule's description explains, there are not any “practical means to measure the extent that edge innovation and investment would be chilled.”

225. See *supra* pp. 222–223, 235.

226. Lemley & Lessig, *supra* note 25.

227. ALLOT COMM'NS, *supra* note 94.

228. See *supra* p. 229.

229. For example, rather than zero-rate Spotify, Sprint can offer to zero-rate one music app—any music app—per month. See SPRINT, *supra* note 11.

230. VAN SCHEWICK, *supra* note 23.

231. Brad Burnham, *Internet Access Should be Application-Agnostic*, UNION SQUARE VENTURES (Dec. 8, 2010), <https://www.usv.com/blog/internet-access-should-be-application-agnostic>.

flexibility to differentiate pricing and manage their networks.²³² For example, if an MNO's system is overwhelmed, the MNO can slow all apps, equally, for a brief period. Also, the rule gives certainty to app developers, as they will be assured that they will have equal chances to reach consumers and compete with other applications based on the merits of their apps.²³³ Meanwhile, this rule allows consumers to choose which apps they want to use. This, in turn, spurs innovation, as applications compete to achieve consumer preference.²³⁴

MNOs that adopt this proposed application-agnostic plan must offer consumers an opportunity to zero-rate any one music app at a time. MNOs may be concerned that consumers will select an app that uses a disproportionately large amount of data. However, as long as the limit applies equally to all music apps, MNOs can place a constraint on the average amount of data per day that can be consumed by a given app. Based on an app's propensity to use more data than others, consumers can decide whether they want to use that app. An MNO featuring the plan would maintain an app store for music apps. An app developer could upload his app to the MNO's store autonomously, and would not have to pay the MNO for inclusion in the MNO's music app store.

The developers who elect to feature their apps in the app stores could specify their own terms. For example, as an adaptation of the Sprint-Spotify plan, Spotify could make its app available to a consumer for three months in zero-rated form. If the consumer chooses to keep using Spotify, Spotify could charge a subscription fee (as it does in the Sprint-Spotify plan).²³⁵ Rationally, unless the consumer heavily prefers Spotify, after three months that consumer will choose to select an alternative music app—still available as zero-rated—from the MNO's app store. Meanwhile, an MNO could choose to wed a consumer to his selection for any amount of time—whether a day, a week, or a month. By tying consumers to a specific app only for a limited time, consumers may opt to try new apps. This would be good for “garage entrepreneurs,” and for the preservation of net neutrality more generally.²³⁶

This proposed plan resembles T-Mobile's Music Freedom plan. And yet it is distinguishable in a couple of ways. First, in order to be included in T-Mobile's plan, an app must essentially contract with

232. VAN SCHEWICK, *supra* note 23.

233. *Id.*

234. *Id.* at 6.

235. SPRINT, *supra* note 11.

236. *See* 2010 Open Internet Order, *supra* note 5, at 17920.

T-Mobile. On the other hand, in the proposed plan, any app developer could upload his app to the MNO's app store without contracting with the MNO, as long as the app is legal. T-Mobile claims that it is open to "any lawful and licensed streaming music service," and yet an app developer who seeks inclusion in T-Mobile's plan must go through a "process" before it is included.²³⁷ It is unclear what this process entails, and T-Mobile is not transparent about its qualifications for inclusion. Additionally, there is little keeping T-Mobile from deciding to exclude an app from its zero-rated app list—simply because T-Mobile is not on good terms with the app's developer.²³⁸ Second, currently T-Mobile provides users with a limited list of already-prominent apps. On the other hand, the proposed plan would allow a consumer to choose any music app from the app store as his zero-rated selection. Under the proposed plan, MNOs would not curate their lists of music apps nor would MNOs limit the number of eligible apps.

Initially, this proposed plan may strip MNOs of some of the marketing benefits that exist through their current partnerships. For example, consider France's SFR-Rhapsody zero-rated partnership. SFR hopes to attract subscribers by offering free Rhapsody services specifically, because Rhapsody already has an established reputation.²³⁹ Ultimately, however, an MNO may actually benefit *more* from the proposed plan. All MNOs that use the proposed plan can tout "music freedom"²⁴⁰—and, unlike T-Mobile, actually mean it. MNOs can continue to market that they feature Spotify, Deezer, and/or Rhapsody as zero-rated options in addition to lesser-known apps.²⁴¹ To be sure, consumers will be wooed by the presence of

237. On its website, T-Mobile urges developers who want to include their app in its plan to send an email to MusicFreedom@T-Mobile.com to "begin the process." T-MOBILE, *supra* note 122.

238. Ziegler, *supra* note 128.

239. Malt, *supra* note 214.

240. T-MOBILE, *supra* note 122.

241. It is important to address a potential shortcoming of this proposed plan. As mentioned above, *supra* pp. 222–223, the MNO-MA business relationships are opaque insofar as it is unclear whether the MNO, the app developer, or the partnership is covering the cost of the zero-rated data. If an MNO-MA partnership is currently operating under either a "content developer pays" or "partnership pays" model, then the app developer is currently covering the costs of at least some of the zero-rated data. As such, an MNO may not want to adopt an application-agnostic plan in which app developers are no longer covering some of the costs. All of this said, this proposed application-agnostic plan still could benefit MNOs. Given the high costs of data to consumers and the appeal of featuring prominent music apps, consumers may be attracted to an MNO that

familiar music app logos, regardless of whether there exists an exclusive partnership between an MNO and a given app or not. After all, “anything usage” is more marketable than “as much of the service that your provider selected for you usage.”²⁴²

Perhaps the biggest losers in this proposed plan are the apps that have obtained the zero-rated partnerships already. Through aligning themselves with major MNOs, apps such as Spotify, Rhapsody, iHeartMusic, and Deezer have tapped into major customer bases. Therefore, the largest obstacle to this proposed plan is ensuring that major music apps opt to feature themselves in MNOs’ music app stores. Ultimately, however, it will be advantageous for these apps to do so. Faced with a selection of one hundred or more music apps, customers still are likely to select Spotify or Rhapsody as their zero-rated apps of choice based upon the preexisting reputations of these apps. If these apps truly are the best apps on their merits, then they will be amongst consumers’ top choices regardless of whether they have exclusive partnerships with MNOs.

This plan would systematically ensure that the developers of top incumbent apps do not become stagnant simply because they already have access to large customer bases through exclusive partnerships. Faced with competition from any music app developer who elects to participate in these plans, developers of all apps—whether pre-established or new—will be pressured to innovate and to provide customers with new and desirable features. This systemic openness to innovation is consistent with the spirit of net neutrality.

Many champions of net neutrality insist that zero-rating is antithetical to the open Internet—that it will stagnate app development, create high barriers to entry, and inhibit consumer choice. However, others contend that the use of zero-rating is forward-looking. Zero-rating can provide users with services that they could not otherwise afford, offer MNOs marketing benefits, and expose app developers to large customer bases. Unlike the current MNO-MA partnerships, this proposed application-agnostic plan would not distort the market for music apps. Instead, it would nurture meritocracy and choice, where a consumer could choose to try any music app for a given period of time. Furthermore, this proposed plan would comply with net neutrality—in its pure form and under the 2015 Order’s no-unreasonable interference/disadvantage standard—while capturing the benefits of zero-rating.

offers this application-agnostic plan over an MNO that does not offer it. The procurement of additional customers would benefit the MNO.

242. Buble, *supra* note 98.

CONCLUSION

Zero-rated partnerships between MNOs and music apps violate the principles of net neutrality. Though there are short-term benefits for the parties involved in the partnerships, ultimately zero-rated partnerships instill MNOs with too much control. Zero-rated partnerships lead to the distortion of the music app market, which in turn stifles innovation among app developers and eliminates consumer choice.

In order to ensure that these partnerships cannot proliferate, the U.S. should amend its net neutrality rules to place zero-rating under the purview of the general 2015 Order rules, rather than under the case-by-case No-Unreasonable Interference/Disadvantage analytical scheme. Under the general rules, MNO-MA partnerships would be found to violate net neutrality under the No Paid Prioritization rule. This preemptive rule would be more effective than the case-by-case analysis, which will likely be fraught with uncertainty, costs, delays, and inequality between parties.

Meanwhile, MNOs should alter their specific zero-rating plans to be application-agnostic. Rather than form exclusive zero-rated partnerships with music apps, MNOs should allow consumers to choose any music app to use, zero-rated, for a predetermined period of time. These plans will capture the short-term benefits of zero-rated partnerships while obeying the principles of net neutrality.