

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

In the Matter of)	
)	
Protecting and Promoting the Open Internet)	GN Docket No. 14-28
)	
Petition for Rulemaking)	GN Docket No. 10-127
)	
Framework for Broadband Internet Service)	

COMMENTS



Matthew M. Polka
President and Chief Executive Officer
American Cable Association
One Parkway Center
Suite 212
Pittsburgh, Pennsylvania 15220
(412) 922-8300

Barbara S. Esbin
Scott C. Friedman
Cinnamon Mueller
1875 Eye Street, NW
Suite 700
Washington, DC 20006
(202) 872-6811

Ross J. Lieberman
Senior Vice President of Government Affairs
American Cable Association
2415 39th Place, NW
Washington, DC 20007
(202) 494-5661

Thomas W. Cohen
Edward A. Yorkgitis, Jr.
Kelley Drye & Warren LLP
3050 K Street NW
Suite 400
Washington, D.C. 20007
Telephone: (202) 342-8400
Facsimile: (202) 342-8451

Attorneys for the American Cable
Association

July 17, 2014

TABLE OF CONTENTS

I.	INTRODUCTION AND BACKGROUND	1
II.	EXCLUSION OF INTERNET EDGE PROVIDERS FROM THE SCOPE OF THE OPEN INTERNET RULES WILL UNDERMINE THEIR EFFECTIVENESS AND CAUSE DISTORTIONS IN THE MULTI-SIDED INTERNET MARKETPLACE	6
	A. If Protecting and Preserving Internet Openness Are the Goals, the Proposed Rules Are Too Narrow Because They Do Not Address the Threats Posed by Internet Edge Providers.....	8
	B. Internet Edge Providers Have Engaged in Blocking and Discrimination That Is Contrary to the Commission’s Open Internet Principles.....	15
	C. Any Open Internet Rules Should Apply to Both Broadband Internet Service Providers and Internet Content Providers with Similar Incentives and Abilities to Inhibit Internet Openness and Broadband Deployment.....	22
III.	THE COMMISSION SHOULD NOT ADOPT ADDITIONAL DISCLOSURE REQUIREMENTS FOR BROADBAND INTERNET SERVICE PROVIDERS	26
	A. The Current Transparency Rule Has Worked.	27
	B. There Is No Evidence That “Enhancements” to the Transparency Rules Would Be Beneficial Relative to the Burden.	31
	C. If the Commission Were to Adopt Enhanced Transparency Rules, It Should Not Adopt a One-Size Fits All Approach; Smaller and Medium-Sized Broadband Internet Access Providers Should Be Exempt.....	37
	D. If Any Disclosure Requirements Regarding Congestion Are Applied to Broadband Internet Service Providers, They Should also Apply to All Other Entities in the Transmission Path Since They Too Can Be the Source of Network Congestion.	39
IV.	THE COMMISSION HAS AUTHORITY TO REGULATE BROADBAND INTERNET SERVICE AND EDGE PROVIDERS UNDER SECTION 706 OF THE ACT AND SHOULD CONTINUE ITS LIGHT TOUCH REGULATORY APPROACH BY REFRAINING FROM REGULATION OF BROADBAND INTERNET SERVICE PROVIDERS UNDER TITLE II	41
	A. The Commission has Adequate Authority under Section 706 as Interpreted by the Verizon Court to Adopt Rules to Protect and Promote the Open Internet Applicable to Broadband Internet Access and Edge Providers.....	44
	1. The Commission May Rely upon Section 706, as Interpreted by the Verizon Court, to Regulate Practices of Broadband Internet Access Service Providers that Threaten Internet Openness.....	45

2.	Section 706 as Interpreted by the Verizon Court Also Permits the Commission to Regulate the Practices of Internet Edge Providers That Threaten Internet Openness.....	47
B.	The Commission Should Not Reclassify Broadband Internet Access Service as a Title II Common Carrier Service.	53
1.	The Commission Should Not Revisit the Classification of Broadband Internet Access Service.	54
a.	There is no basis for reclassifying broadband Internet access service as a common carrier offering.	54
b.	The Commission’s “light touch” approach to broadband Internet Regulation has been highly successful, and there is no demonstrable need to alter this approach.	60
2.	Reclassification Under Title II Would Significantly Increase Regulatory Obligations and Compliance Costs for Small Providers.	62
a.	The direct economic costs of Title II regulation will be substantial.	62
b.	The economic burdens of reclassification will adversely impact broadband prices and deployment.	65
3.	The Commission Should Refrain from Identifying and Applying Title II to a Putative “Service” Broadband ISPs are Providing Internet Edge Providers.	66
V.	CONCLUSION	69
	EXHIBIT AWilliam Lehr, The Mistake of One-Sided Open Internet Policy	
	EXHIBIT BConnecting Hometown America, How Small Operators of ACA Are Having a Big Impact, A paper by American Cable Association, Research and Analysis by Cartesian	
	EXHIBIT CDeclaration of Edward McKay	
	EXHIBIT DDeclaration of Christian Hilliard	

Executive Summary

The American Cable Association (“ACA”) submits these comments in response to the Commission’s Notice of Proposed Rulemaking (“NPRM”) in the above-captioned Open Internet rulemaking and in response to the Wireline Competition Bureau’s request for parties to refresh the record in the Commission’s Broadband Industry Practices inquiry proceeding. ACA and its member companies have been and remain fully committed to protecting and promoting an open Internet and welcome this opportunity to comment upon the right public policy to ensure that the Internet remains open.

For over a decade, the Commission has created a highly successful “light touch” regulatory environment for broadband Internet service providers (“ISPs”). The ISP businesses of ACA member companies, which total over 800 and represent a diverse mix of cable operators, rural telecommunications companies and municipalities, have thrived in this environment. While many ACA members are small, privately held companies, these companies have invested significantly in infrastructure over the last decade to provide a suite of advanced communications services to homes, businesses and community institutions. ACA members’ investments have brought competition to incumbent broadband providers in urban areas, and new and/or improved services in rural regions of the country.

Today, ACA members offer advanced communications services to nearly 19 million homes (14% of total homes) in the nation. Based on data from the National Cable Television Cooperative, the National Broadband Map, and SNL Kagan, ACA members pass 18.2 million homes with broadband plant, and collectively serve 6.3 million subscribers. Nearly 7 million of these homes subscribe to ACA members’ multichannel video programming distributor (“MVPD”) services and nearly 2.75 million subscribe to ACA members’ residential voice service. The median number of homes served by an ACA member is about 1,000. Thus, ACA members are significantly smaller than the largest broadband ISPs. They are also smaller than the popular Internet content, applications and services (“edge”) providers who utilize their networks.

ACA members have been following the four policy principles set forth in the Commission’s 2005 Internet Policy Statement as well as the Commission’s 2010 codification of the transparency principle, and will continue to do so regardless of the outcome of these proceedings. They do so not only because the policy principles strike an appropriate balance between service provider and consumer needs, but because they make good business sense and are broadly accepted across the Internet ecosystem. Available evidence supports this assertion. Nearly all broadband ISPs accused of or found to be violating the Open Internet policies have been larger providers. Moreover, while some larger broadband ISPs have extracted fees from edge providers to optimize the delivery of their content to the consumer, ACA is not aware of any of its members having a relationship with any Internet edge provider for priority delivery that in any way degrades the quality of their mass market broadband Internet access service.

In its *Verizon* decision, the D.C. Circuit accepted the Commission’s premise that an open Internet enables a “virtuous circle” or cycle of innovation at the edge of the Internet, leading to consumer demand for broadband services, leading to investment and deployment of broadband. The court further accepted the Commission’s justification that it may regulate the economic relationship between broadband ISPs and Internet edge providers pursuant to Section 706 to ensure that broadband ISPs do not themselves constitute “barriers” to broadband infrastructure deployment by inhibiting that openness. The NPRM proposes to base revised no-blocking and new commercial reasonableness rules on the Commission’s Section

706 authority, as interpreted by the *Verizon* court, and again justifies the rules as necessary to preserve Internet openness, and thus the virtuous circle of innovation and consumer demand.

ACA focuses its initial comments on three primary concerns. The first and most important is that if protecting and promoting Internet openness are the goals, the rules proposed in the NPRM will fail to ensure that the Internet remains open and, in turn, will cause distortions in the multi-sided Internet marketplace if their scope, and the scope of the current transparency rule, remains limited to broadband ISPs alone. Second, the enhancements to the transparency rules for broadband ISPs proposed in the NPRM are not required, but if adopted, should not be applied to smaller and medium-sized providers. Finally, the Commission should resist calls to regulate broadband Internet access services under Title II of the Communications Act, which would be excessively costly, disruptive and unnecessary, when it can better accomplish its goals of protecting and preserving Internet openness under Section 706.

Scope. The Commission once again proposes to use its authority under Section 706 to impose one-sided regulation on broadband ISPs while leaving other Internet actors free to block or discriminate in harmful ways, despite its explicit recognition that other Internet actors can similarly interfere with open consumer access to Internet content, applications, services and devices. This is a mistake. To the extent the Commission determines open Internet rules are required, the exclusion of Internet edge providers from them, will undermine the rules' goals and effectiveness, and in turn, cause distortions in the multi-sided Internet marketplace.

The Commission and the *Verizon* court have accepted that actions by broadband ISPs to block or degrade consumer access to Internet content, applications and services would break the "virtuous circle." If Internet edge providers engage in similar actions of blocking or service degradations, it follows that they too would break the circle by limiting the value of the Internet for end users, and that too would suppress demand for broadband access services, in which case broadband ISPs would be less likely to invest in deploying broadband infrastructure and improving their service offerings.

Edge providers that offer sufficiently important content to end users of the Internet, such as popular search engines, social networks, online retailers, and online video providers, can severely threaten the overall value of broadband access services and the Internet by limiting access to their content in a commercially unreasonable manner. These concerns are not merely hypothetical. The past five years have witnessed a number of examples where Internet edge providers who are online video distributors, like Disney (which owns ESPN and ABC), CBS, Fox, and Viacom, have selectively blocked or threatened to block access to content otherwise made freely available on the Internet to users served by broadband ISPs. We have also seen Internet edge providers purposely degrading end user experiences, such as Neocities, for the purpose of sending a message to select Internet users. While proponents of open Internet rules have highlighted examples of large broadband ISPs engaging in practices that might threaten the openness of the Internet, the experience of smaller ISPs has been the reverse: blocked and degraded access for their customers at the hands of large Internet edge providers.

The ability of broadband ISPs to attract and retain subscribers depends on their ability to offer customers a valuable broadband service, and perforce, that means being able to enable customers to access and use the popular content and applications that have become well-recognized parts of the Internet experience. This will not be possible if access to popular content, applications, and services is not available to the customer due to blocking by broadband ISPs or anyone else. In recognition of the fact, as Chairman Wheeler has noted,

that “[t]here is ONE Internet,” and to breathe life into this notion, the Commission must ensure that any rules it adopts reach the behavior of all Internet players capable of engaging in harmful blocking or degradations that would fragment the consumer experience based on the identity of that consumer’s broadband ISP, particularly edge providers delivering popular Internet content. It must also apply transparency rules, which the Commission has also found to promote Openness on the Internet, to these edge providers that are comparable to those that are and may be applied to broadband ISPs. Given the reality that threats to Internet openness can come from many sources, the Commission must avoid the mistake of imposing one-sided rules that target potential blocking or commercially unreasonable practices by broadband ISPs while leaving Internet content providers free to block or act in commercially unreasonable ways.

Not only would failure to apply open Internet rules on all Internet actors that have the ability to block or degrade fail to achieve the primary open Internet goals of the Commission, asymmetric regulation that constrain the business behavior of a single class of platform providers (i.e., fixed broadband ISPs that are also MVPDs) would distort market incentives and accentuate content providers’ abilities and incentives to threaten actors more constrained in their behaviors due to regulation, particularly ISPs subject to open Internet rules. In this way, asymmetrical rules that are intended to promote an open Internet in some cases can themselves be a threat.

Transparency. The Commission should not adopt additional disclosure requirements for broadband ISPs. The current transparency rule strikes an appropriate balance between the need for disclosure and the burdens placed on broadband Internet access providers. More importantly, it has proven effective and workable. The NPRM’s tentative conclusions that the proposed enhancements should be adopted are not supported by a body of evidence that would justify the additional burdens on broadband Internet access providers, and especially on smaller providers. Given that consumers and edge providers rarely, if ever, inquire, complain, or otherwise raise concerns about current disclosures – and where they do, in ACA’s experience, broadband Internet access providers have been responsive – the Commission should, rather than adopt enhancements, continue to rely upon its complaint and enforcement procedures to address any material concerns about individual providers’ disclosures that may arise. In the event the Commission ultimately concludes to adopt any enhancements to the current unitary disclosure transparency rule, it should exempt “small providers,” which should remain subject to the current transparency regulations, and apply comparable rules to Internet edge providers.

Regulatory Authority. The Commission should continue to rely on Section 706 as the source of authority for any open Internet rules adopted in this proceeding. By following the “roadmap” laid out by the D.C. Circuit in the *Verizon* decision, the Commission can target behaviors by all information service providers, edge and access alike that demonstrably pose a threat to the “virtuous circle” engendered by the openness of the Internet under Title I of the Act, without subjecting broadband ISPs to extensive and unnecessary economic regulation under Title II.

For broadband ISPs, particularly ACA members, maintaining the Commission’s “light touch” regulatory environment by providing adequate flexibility to respond to demand for broadband Internet service without undue or disproportionate regulatory burdens is key to their ability to continue to invest in their plant and in their communities. The Commission must take care not to interfere with the extensive broadband investment and deployment its light touch regulation has engendered. With this in mind, should the Commission adopt new open Internet rules for information service providers such as broadband ISPs, it should do so under its Section 706 authority, as interpreted by the *Verizon* court.

To the extent Section 706 provides the Commission authority to regulate the behavior of information service providers (*i.e.*, broadband ISPs) to protect the virtuous circle of Internet innovation by preventing harmful blocking and commercially unreasonable behavior, it provides the Commission the same authority over such behavior on the part of other information service providers, such as Internet edge providers, that equally have the potential of inhibiting the openness of the Internet. Moreover, to the extent the available evidence is sufficient to support regulation of the practices of broadband ISPs, then the available evidence showing Internet edge providers selectively blocking and degrading consumer access to their content is sufficient as well.

Finally, the Commission should resist taking any of the steps being urged upon it to reclassify all or part of broadband Internet access service and regulate it under Title II of the Act. Nothing has changed in the nature of the service provided to warrant re-examination of the Commission's decisions to classify broadband Internet access service providers, regardless of platform, as information service providers under Title I of the Act. Subjecting broadband ISPs to regulation as telecommunications common carriers would impose immediate, significant direct and indirect economic costs through increased federal and state regulation and taxation, divert attention and financial resources from deploying and improving broadband Internet services, lead to years of regulatory uncertainty, and disproportionately burden smaller providers. No market failure or social policy justifies such a radical action, no good can come of it, and the Commission would be wise not to walk this path.

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

In the Matter of)	
)	
Protecting and Promoting the Open Internet)	GN Docket No. 14-28
)	
Petition for Rulemaking)	GN Docket No. 10-127
)	
Framework for Broadband Internet Service)	

COMMENTS



I. INTRODUCTION AND BACKGROUND

The American Cable Association (“ACA”) submits these comments in response to the Commission’s Notice of Proposed Rulemaking (“NPRM”) in the above-captioned Open Internet rulemaking and in response to the Wireline Competition Bureau’s request for parties to refresh the record in the Commission’s Broadband Industry Practices inquiry proceeding.¹ ACA and its member companies have been and remain fully committed to protecting and promoting an open Internet and welcome this opportunity to comment upon the right public policy to ensure that the Internet remains open.²

¹ *Protecting and Promoting the Open Internet*, Notice of Proposed Rulemaking, GN Docket No. 14-28 (FCC 14-61) (rel. May 15, 2014) (“Notice” or “NPRM”); See Wireline Competition Bureau Seeks to Refresh the Record in the 2010 Proceeding on Title II and Other Potential Legal Frameworks, Public Notice, DA 14-748, GN Docket No. 10-127 (rel. May 30, 2014) (requesting commenters to refresh the record and establishing a pleading cycle to run concurrent with the Open Internet rulemaking).

² The over 800 member companies of ACA are a diverse mix of cable operators, rural telecommunications companies and municipalities. Many ACA members are small, privately held companies with deep roots in their communities. No ACA member has more than one million video subscribers and the median number of video subscribers per member is 1,060. See Connecting

For over a decade, the Commission has created a highly successful “light touch” regulatory environment for broadband Internet services. The ISP businesses of ACA member companies, totaling over 800 and representing a diverse mix of cable operators, rural telecommunications companies and municipalities, have thrived in this environment. While many ACA members are small, privately held companies, these operators have invested significantly in infrastructure over the last decade to provide a suite of advanced communications services to homes, businesses and community institutions. ACA members’ investments have brought competition to incumbent broadband providers in urban areas, and new and/or improved services in rural regions of the country

Today, ACA members, offer advanced communications services to nearly 19 million homes (14% of total homes) in the nation. Based on data from National Cable Television Cooperative, the National Broadband Map, and SNL Kagan, ACA members pass 18.2 million homes with broadband plant, and collectively serve 6.3 million subscribers. Nearly 7 million of these homes subscribe to ACA members’ multichannel video programming distributor (“MVPD”) services and nearly 2.75 million subscribe to ACA members’ residential voice service. The median number of homes served by an ACA member is about 1,000.³ Thus, ACA member are significantly smaller than the largest broadband ISPs. They are also smaller than the popular Internet content, applications and services (“edge”) providers who utilize their networks.

ACA members have been following the four policy principles set forth in the Commission’s 2005 Internet Policy Statement as well as complying with the Commission’s 2010 codification of the transparency principle, and will continue to do so regardless of the outcome of these proceedings.⁴ They do so not only because the policy principles strike an appropriate

Hometown America, How Small Operators of ACA are Having a Big Impact, A paper by American Cable Association, Research and Analysis by Cartesian, at 1-3 (attached as Exhibit B) (“Cartesian Report”).

³ No ACA member has more than one million video subscribers. See Cartesian Report at 1-3.

⁴ *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III*

balance between service provider and consumer needs, but because they make good business sense and are broadly accepted across the Internet ecosystem. Available evidence supports this assertion. Nearly all broadband Internet service providers (“ISPs”) accused of or found to be violating the Commission’s open Internet policies have been larger providers. Moreover, while some larger broadband ISPs have extracted fees from edge providers to optimize the delivery of their content to the consumer, ACA is not aware of any of its members having a relationship with any Internet edge provider for priority delivery that in any way degrades the quality of their mass market broadband Internet access service

In its *Verizon* decision, the D.C. Circuit Court of Appeals accepted the Commission’s premise that an open Internet enables a “virtuous circle” or cycle of innovation at the edge of the Internet, leading to consumer demand for broadband services, investment and deployment of broadband infrastructure, and the Commission’s justification that it may regulate the economic relationship between broadband ISPs and Internet edge providers pursuant to Section 706 to ensure that broadband ISPs do not themselves constitute “barriers” to broadband infrastructure deployment by inhibiting that openness.⁵ The NPRM proposes to base revised no-blocking and new commercial reasonableness rules on the Commission’s Section 706 authority, as interpreted by the *Verizon* court, and again justifies the rules as necessary to preserve Internet openness, and thus the virtuous circle of innovation and consumer demand.

ACA focuses its initial comments on three primary concerns. The first and most important is that if protecting and promoting Internet openness are the goals, the existing transparency rule and the new rules proposed in the NPRM will fail to ensure that the Internet

Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review-Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities, Policy Statement, 20 FCC Rcd 14986, ¶ 4 (2005) (“Internet Policy Statement”); Preserving the Open Internet, Report and Order, 25 FCC Rcd 17905 (2010) (“2010 Order”), aff’d in part, vacated and remanded in part sub nom. Verizon v. FCC, 740 F.3d 623 (D.C. Cir. 2014) (“Verizon”).

⁵ See *Verizon*.

remains open and, in turn, will cause distortions in the multi-sided Internet marketplace if their scope remains limited to broadband ISPs alone. Open Internet rules applied to broadband ISPs should comparably apply to other Internet actors, particularly Internet edge providers. Second, enhancements to the transparency rules are not required, but if adopted, should not be applied to smaller and medium-sized providers. Finally, the Commission should resist calls to regulate broadband Internet access services under Title II of the Communications Act, which would be excessively costly, disruptive and unnecessary, especially when the Commission can better accomplish its goals of protecting and preserving Internet openness under Section 706.⁶

The ability of broadband ISPs to attract and retain subscribers depends on their ability to offer customers a valuable broadband service, and perforce, that means being able to enable customers to access and use the popular content and applications that have become well-recognized parts of the Internet experience. This will not be possible if access to popular Internet content, applications, and services is blocked by broadband ISPs or anyone else. In recognition of the fact, as Chairman Wheeler has noted, that “[t]here is ONE Internet,⁷” and to breathe life into this notion, it is critical that all existing and any new open Internet rules adopted reach the behavior of all Internet players capable of engaging in harmful blocking or degradations that would fragment the consumer Internet experience.

ACA is skeptical that the record will support the imposition of the proposed new open Internet rules on broadband ISPs. However, if the evidence before the Commission is deemed sufficient to adopt new rules to govern the practices of broadband ISPs, it is equally sufficient to extend the open Internet rules to all Internet actors capable of inhibiting the openness of the Internet and therefore imposing barriers to broadband deployment, particularly edge providers. Any rules adopted to protect and preserve the openness of the Internet, including transparency

⁶ As demonstrated within, ACA would oppose the application of Title II to broadband Internet access services regardless of whether Section 706 is sufficient or not.

⁷ NPRM, Statement of Chairman Thomas Wheeler at 1.

rules, must be applied even-handedly to all Internet actors with the incentive and ability to obstruct this public policy objective.

Moreover, enhancements to the current transparency rule are not necessary. The current rule strikes an appropriate balance between the need for disclosure and the burdens placed on broadband ISPs. More importantly, it has proven effective and workable, with relatively few inquiries or complaints logged. The Commission should, rather than adopt enhancements to broadband ISP disclosures, continue to rely upon its complaint and enforcement procedures to address any material concerns about individual providers' disclosures that may arise. As with any open Internet rules adopted in this proceeding, the Commission should impose its transparency rules bilaterally, on broadband ISPs and Internet edge providers alike.

Finally, ACA agrees with the Commission's conclusion that it may rest its open Internet rules on its Section 706 authority to accelerate broadband deployment and promote competition in telecommunications markets. For broadband ISPs, maintaining the Commission's "light touch" regulatory environment is key to their ability to continue to invest in their plant and in their communities. To the extent the Commission has authority to impose rules prohibiting harmful blocking and commercially unreasonable behavior on broadband ISPs to ensure that they do not constitute "barriers" to broadband deployment under Section 706 by inhibiting the "virtuous circle" engendered by Internet openness, it provides the Commission with equal authority over other harmful blocking and commercially unreasonable behavior on the part of other information service providers, such as edge providers.

In contrast, there is no legal justification or sound public policy for the imposition of Title II regulation on all or part of the broadband Internet access service. The broadband Internet access service offered today is not factually different than when the Commission last examined this question, rejected the common carrier classification and classified the service instead as an "information service." Nor can imposing common carrier status be reasonably related to the

goal of encouraging broadband deployment, which is a key policy objective in this proceeding, in Section 706, and more generally in the Commission's overall policy agenda. Title II "reclassification" or partial "classification" of broadband Internet access service would have immediate and disastrous economic consequences for small and medium-sized ISPs and cannot be justified. No amount of forbearance could undo the harm of imposing Title II regulation on broadband ISPs, and the Commission should refrain from pursuing this unnecessary and destructive route. In view of the lack of legal support, thirty years of Commission precedent in treating information service providers to the contrary, the enormous costs, and correspondingly few gains, the imposition of utility-style regulation on broadband ISPs would simply be bad public policy.

II. EXCLUSION OF INTERNET EDGE PROVIDERS FROM THE SCOPE OF THE OPEN INTERNET RULES WILL UNDERMINE THEIR EFFECTIVENESS AND CAUSE DISTORTIONS IN THE MULTI-SIDED INTERNET MARKETPLACE

The Commission proposes once again to use its Section 706 authority to impose one-sided regulation on broadband ISPs while leaving other Internet actors free to block or discriminate,⁸ despite its explicit recognition that other Internet actors can similarly interfere with open consumer access to Internet content, applications, services and devices.⁹ This is a mistake. To the extent the Commission determines open Internet rules are required, the exclusion of Internet edge providers from them will undermine the rules' goals and effectiveness, and, in turn, cause distortions in the multi-sided Internet marketplace.

⁸ See, generally, NPRM, ¶¶ 54-60 (proposing to maintain 2010 Order's approach to limiting the scope of the rules "only so far as the limits of a broadband provider's control over the transmission of data to or from its broadband customers" and excluding edge providers from the rules while acknowledging that other undesirable forms of discrimination may exist on the Internet beside ISP traffic congestion management; noting that 2010 rules "did not apply to edge provider activities, such as the provision of content on the Internet").

⁹ *Id.*, ¶¶ 52 n.118, 58 (acknowledging that other undesirable forms of discrimination may exist in the Internet ecosystem beside ISP traffic congestion management, but stating that "such conduct is beyond the scope of this proceeding;" noting that 2010 rules "did not apply to edge provider activities, such as the provision of content on the Internet," proposing to maintain this approach and seeking comment on this proposal). Nonetheless, the Commission also asks whether it should continue to exclude edge providers from the scope of its open Internet rules. *Id.*, ¶ 58.

To protect the functioning of the “virtuous circle” against anticompetitive and discriminatory blockages and degradations, the Commission proposes to retain the definitions and scope of the 2010 rules and to take three primary actions with respect to broadband Internet access service providers: (i) enhance its 2010 transparency rule requiring broadband providers to publicly disclose accurate information regarding network management practices, performance and commercial terms of their broadband Internet access service with additions aimed primarily at the needs of Internet edge providers; (ii) reinstate its 2010 prohibition on blocking with a revised rationale in order to assure that all end users and edge providers can enjoy use of robust, fast and dynamic Internet access; and (iii) adopt a requirement that broadband providers adhere to a standard of “commercial reasonableness” in their handling of Internet traffic where conduct would otherwise be permissible under the no-blocking rule.¹⁰

Like the 2010 rules, these actions are based on the premise, accepted by the D.C. Circuit in the *Verizon* decision, that an open Internet enables a “virtuous circle” or cycle of innovation, investment and broadband development and that regulation pursuant to Section 706 is appropriate to ensure that broadband ISPs do not themselves constitute “barriers” to broadband infrastructure deployment by threatening that openness.¹¹ Under this view, the freedom to develop and implement innovative content and services at the edge of the network drives consumer use of the network and demand for Internet content, which in turn drives demand for more broadband Internet services, which drives innovation and investment in

¹⁰*Id.*, ¶ 10. The Commission tentatively concluded “that the revived no-blocking rule should be interpreted as requiring broadband providers to furnish edge providers with a minimum level of access to their end-user subscribers.” *Id.*, ¶ 97. For service over and above this threshold, which the NPRM analogizes to “best efforts” delivery, providers may negotiate terms with edge providers for enhanced delivery, provided they do not degrade the performance of standard traffic delivery or otherwise threaten Internet openness. *Id.*, ¶¶ 102, 111. In addition, the NPRM proposes to retain the same three means by which the Commission addressed alleged open Internet violations under the 2010 rules, self-initiated investigation, informal complaints, and formal complaints. *Id.*, ¶ 172.

¹¹ *Id.*, ¶¶ 1, 23, 26-28; *Verizon*, 740 F.3d at 643.

broadband infrastructure and deployment, which drives more innovation at the edges of the network, and so on in an endless cycle.

The NPRM notes that the *Verizon* court upheld the Commission's authority to regulate broadband Internet access service under Section 706, concluding that "the Commission had adequately justified the adoption of open Internet rules by finding that such rules would preserve and facilitate the 'virtuous circle' of innovation, demand for Internet services, and deployment of broadband infrastructure and that, absent such rules, broadband providers would have the incentive and ability to inhibit that deployment."¹² This legal theory, economic evidence, and the harmful blocking practices of multiple Internet edge providers over the last five years, adequately supports the extension of open Internet rules to other actors with similar incentive and ability to inhibit broadband deployment by threatening Internet openness by selectively blocking or degrading access to their online content.

A. If Protecting and Preserving Internet Openness Are the Goals, the Proposed Rules Are Too Narrow Because They Do Not Address the Threats Posed by Internet Edge Providers.

To protect the functioning of the "virtuous circle" against anticompetitive and discriminatory blockages and degradations, the Commission once again begins with the unduly narrow view that it need take action solely with respect to broadband Internet ISPs. However, the instant rulemaking, initiated to codify the Commission's 2005 Internet Policy Statement into legally supportable and enforceable rules, presents the Commission with the opportunity to take a more comprehensive approach that includes Internet edge providers, some of whom have blocked or degraded consumer access to content. By targeting all Internet actors capable of disrupting this virtuous circle and thereby adversely impacting broadband deployment, the Commission can better ensure consumer ability to obtain and use the content, applications, services and devices they want on the Internet.

¹² NPRM, ¶ 23.

It bears mention that the policy principles contained in the Commission's 2005 Internet Policy Statement reflect this more comprehensive approach. The Statement describes a set of four consumer entitlements focused on enabling end user choice of Internet content, applications, services and devices by ensuring "that providers of telecommunications for Internet access or Internet Protocol-enabled (IP-enabled) services are operated in a neutral manner."¹³ These principles were based on four consumer "freedoms" first articulated in 2004 by former FCC Chairman Michael Powell who, as the NPRM notes, stressed that "ensuring that consumers can obtain and use the content, applications and devices they want . . . is critical to unlocking the vast potential of the broadband Internet."¹⁴ At the time of their issuance, the Commission did not expect only broadband Internet access providers to follow this open Internet policy, but all Internet actors.

This broader concern with non-neutral behavior on the part of both broadband ISPs and IP-enabled service providers interrupting the "virtuous circle" has been lost in the shuffle of the Commission's serial attempts to codify the principles into rules applied only to broadband Internet ISPs, to the detriment of consumers and the market. The instant rulemaking presents the Commission with an opportunity to restore it. Doing so will better ensure open consumer access to all the lawful content without interference by parties stationed at either the on-ramps

¹³ Internet Policy Statement, ¶ 4. The principles provided that, subject to reasonable network management, consumers are entitled to: (i) access the lawful Internet content of their choice; (ii) run applications and use services of their choice, subject to the needs of law enforcement; (iii) connect their choice of legal devices that do not harm the network; and (iv) competition among network providers, application and service providers, and content providers.

¹⁴ NPRM, ¶ 12; Remarks of Michael K. Powell, *Preserving Internet Freedom: Guiding Principles for Industry*, prepared for Silicon Flatirons Symposium, Boulder CO, Feb. 8, 2004, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-243556A1.pdf. Former Chairman Powell's first "Internet Freedom," the "Freedom to Access Content," is instructive, as Powell challenged "all facets of the industry to commit to allowing consumers to reach the content of their choice." The former Chairman understood that the "Freedom to Access Content" would protect consumer expectations that they would "be able to go where they want on high-speed connections, and those who have migrated from dial-up would presumably object to paying a premium for broadband if certain content were blocked." He also advocated that any restraints should be "clearly spelled out" and as minimal as possible. *Id.* at 5.

or the off-ramps. It will also avoid the unintended consequences of asymmetrical rules that only apply to certain parties engaged in complex relationships.

The Commission and the *Verizon* court have accepted that actions by broadband ISPs to block or degrade consumer access to Internet content, applications and services would inhibit the openness of the Internet, which in turn would suppress innovation and investment by edge providers, which in turn would depress demand for broadband Internet access, thus depressing incentives for broadband ISPs to invest in infrastructure and improve their broadband offerings.¹⁵ If Internet edge providers engage in similar blocking or service degradations, thus limiting the value of their broadband Internet subscriptions for end users, that too would suppress demand for these services, in which case broadband ISPs would be less likely to invest in deploying broadband infrastructure and improving their service offerings.

Thus, edge providers have the ability to break the “virtuous circle” and inhibit broadband deployment as much as broadband ISPs. Any attempt to segment the cycle with arbitrary regulatory borders applicable to only one set of players will not only fail to protect the open Internet, it will cause undesirable distortions in the Internet market. Moreover, from the consumer’s standpoint, whether discriminatory or competitively-motivated blocking or service degradation is engaged in by a broadband ISP or by an Internet edge provider, the result is the same – the consumer’s expectations are not met and the goal of promoting investment in Internet infrastructure and technologies will be adversely affected. Consequently a more comprehensive set of rules that includes classes of actors other than broadband ISPs that have, and have acted upon, economic incentives and abilities that contravene the open Internet policy principles is warranted. Failure to broaden the scope of the Commission’s rules will threaten the success of the undertaking.

¹⁵ NPRM, ¶¶ 23, 26-28; *Verizon*, 740 F.3d at 644-645.

As former Commissioner Copps sagely observed, “we need to recognize that the gatekeepers of today may not be the gatekeepers of tomorrow. Our job is not so much to mediate among giants as it is to protect consumers.”¹⁶ It is unrealistic to continue to posit that broadband ISPs are the only “gatekeepers” able to threaten the ability of consumers to access all lawful content made freely available on the Internet in the face of evidence, discussed below, that they are not.¹⁷ To the extent the Commission adopts new open Internet rules governing the behavior of broadband ISPs, it must also extend these behavioral constraints to other Internet actors with similar incentive and ability to block access to Internet content, applications and services.

In the NPRM, too much focus is given to potential threats to Internet openness associated with the actions of broadband ISPs, and not enough on the threats to Internet openness coming from other directions.¹⁸ According to Dr. William Lehr, MIT, “data throttling may occur at any point along the end-to-end path, and is neither limited to nor fully under the control of broadband access ISPs.”¹⁹ Dr. Lehr cites as an example a protest staged by Neocities to express its displeasure with the Commission’s proposed open Internet rules that

¹⁶ *Preserving the Open Internet; Broadband Industry Practices*, Notice of Proposed Rulemaking, 24 FCC Rcd 13064, Statement of Commissioner Michael J. Copps (2009) (“2009 Open Internet NPRM”).

¹⁷ See William Lehr, MIT, *The Mistake of One-Sided Open Internet Policy*, Section 5, Addressing Edge Provider Threats is Important to Protect Internet Openness, at 19-26 (attached as Exhibit A) (“Lehr Paper”).

¹⁸ See, e.g., NPRM ¶¶ 25-53, Appendix A, § 8.11(b-f)) (key definitions for application of open Internet rules are fixed and mobile broadband Internet access service, edge provider and end user); Open Internet Order, ¶ 20 (“For purposes of our analysis, we consider three types of Internet activities: providing broadband Internet access service; providing content, applications, services and devices accessed over or connected to broadband Internet access service (“edge” products and services); and subscribing to a broadband Internet access service that allows access to edge products and services. These activities are mutually exclusive.”). While the NPRM proposes to limit the scope of the open Internet rules to broadband Internet access service providers, ACA believes that sufficient notice has been provided for the Commission to adopt open Internet rules that comparably apply to other Internet actors, particularly Internet edge providers that pose similar threats to Internet openness as those described in the NPRM. See NPRM, ¶¶ 52 n.118; 58 (excluding edge provider activities as beyond the scope of its inquiry).

¹⁹ Lehr Paper at 12.

involved throttling access to the content from their websites for FCC staffers to induce enough delay to simulate dial-up speeds.²⁰ Clearly, outright blocking is not the only practice of Internet edge providers that can impair end user access to Internet content. The practices of each Internet actor, access and content provider alike, can have significant impact on the quality of the end user's Internet experience.

One of the reasons why the Commission may have found itself fixated on broadband ISP behavior alone is because of an over-reliance on a two-sided market model.²¹ Dr. Lehr explains that the NPRM relies on an overly simplistic two-sided market model and fails to recognize the inherent complexity of the Internet ecosystem and interdependencies among its diverse participants, leading to the mistake of proposing uni-focused rules in what is more properly characterized as a multi-sided market that includes end user subscribers, broadband ISPs, CDNs, and various categories of edge providers. Dr. Lehr notes also how edge providers offer content and applications that are sufficiently important to end users of the Internet that limited access would severely threaten the overall value of broadband Internet access services and the Internet.²²

The foregoing leads to the conclusion that the interdependencies among the key elements of the consumer Internet experience (access, content, applications, services and devices) mean that threats to Internet openness may target multiple elements and come from multiple directions. For this reason, Dr. Lehr counsels that “[r]ules focused solely on broadband Internet access providers have the potential to misidentify the source of the threat (e.g., when

²⁰ *Id.* at 12-13.

²¹ The two-sided market model posits the broadband Internet access platform as linking Internet edge providers to Internet access end users.

²² Dr. Lehr notes, for example that “most users would likely regard broadband service that denied them or limited their access to Facebook.com, Google.com, Amazon.com, eBay.com, ESPN.com, YouTube, Netflix, or a number of other well-known popular content sites as not providing open or acceptable access to the Internet. Similarly, most users would not regard broadband access that limited users to a single vendor's devices or a single OS (Apple, Windows or Android) as providing open Internet access.” Lehr Paper at 20.

the threat is due to limited choice in devices, applications or content access) and/or mis-target potential remedies (e.g. target the wrong agent responsible). Such misidentification of problems and mis-targeting of remedies would distort market incentives and accentuate the potential risk of harms from agents not constrained by the rules, while perversely weakening the potential for access ISPs to mitigate those harms.”²³ Specifically, Dr. Lehr warns that:

In this context, singling out a solitary class of agents for asymmetric regulations is bad policy. It risks misidentifying the locus of a threat to Internet openness and mis-targeting the agent responsible. In both cases, the proposed regulations could accentuate the very harm they are intended to address. As already noted, even if the problem is initially associated with Internet access service, the access ISP may not be the party that is responsible, and the ISP's ability to alleviate the harm (i.e., be part of a solution) may be adversely impacted by the regulations. Furthermore, regulation of the access ISP may aggravate the actual cause of the harm. A more comprehensive approach would allow for a contextually nuanced approach to identifying the nature of the harm and the source of that harm. A more comprehensive approach would recognize that threats to Internet openness are continuously evolving, and thus the locus of potential threats to Internet openness are likely to change over time. Focusing on a single class of agents, when the facts undergirding the classification framework are changing and the interdependencies among classes of agents are changing, bakes an unnecessary and undesirable rigidity and false specificity into the regulatory structure.²⁴

As Dr. Lehr correctly observes, Internet edge providers also operate platforms capable of selectively blocking consumer access to Internet content on the basis of the identity of the consumer's ISP that is otherwise freely made available to other end users.²⁵ They may have equal or greater incentive and ability to engage in practices (blocking, discrimination or commercial un-reasonableness) that are contrary to the open Internet policy principles and harmful to consumers than the broadband Internet service providers for whom the Commission seeks to reinstate its rules. In effect, Internet edge providers *too* can act as “gatekeepers.”

ACA, along with many others, previously urged the Commission to recognize that other members of the Internet ecosystem would have the same theoretical abilities and incentives to

²³ *Id.* at 2.

²⁴ *Id.* at 18.

²⁵ *Id.* at 24-25.

engage anticompetitive behavior as broadband Internet access providers.²⁶ Today, there is a growing consensus “that Internet openness depends on all actors in the Internet ecosystem” and that any rules designed to protect Internet openness cannot and should not be limited to one set of participants.²⁷

²⁶ See *Preserving the Open Internet, Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Comments of the American Cable Association, at 3, 4-8 (filed Jan. 14, 2010) (“ACA 2010 Open Internet Comments”) (to preserve an open Internet, the regulations must extend to all providers of broadband Internet content, applications and services); see also *Broadband Industry Practices*, WC Docket No. 07-52, Comments of AT&T, Inc., at 85-91 (filed June 15, 2007) (although the Commission should not adopt a nondiscrimination principle for the broadband industry, if it does, logical consistency dictates that principle would have to extend to all providers of IP-based services, applications, content and networks); *Preserving the Open Internet, Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Reply Comments of AT&T, Inc., at 121-126 (filed Apr. 26, 2010) (the Commission should clarify that all Internet gatekeepers with market power are subject to any net neutrality regime); *Preserving the Open Internet, Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Comments of Reply Comments of Verizon and Verizon Wireless, at 36-38 (filed Apr. 26, 2010) (“Verizon 2010 Open Internet Reply Comments”) (“If the Commission moves forward with rules notwithstanding the absence of any evidence of a problem, it cannot ignore that other members of the Internet ecosystem would have the same theoretical abilities and incentives to engage anticompetitive behavior as broadband Internet access providers,” explaining that given the converging roles among members of the Internet ecosystem, “the obligation to avoid behaviors that might threaten the health, openness or competitiveness of the Internet should include all key stakeholders and [should] not [be] limited to the ISPs.”); *Preserving the Open Internet, Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Comments of the National Cable & Telecommunications Association at 45-49 (filed Jan. 14, 2010) (any prophylactic rules adopted to protect the openness of the Internet should apply to all competing providers of Internet access as well as to other gateways that have the ability to thwart the accessibility of Internet content and applications); *Open Internet Remand*, GN Docket No. 14-28, Comments of the National Cable & Telecommunications Association, at 10-12 (filed Mar. 26, 2014) (“NCTA Remand PN Comments”) (the Commission should holistically examine the relationship between ISPs and edge providers when considering any new no-blocking rule).

²⁷ See, e.g., Letter from Samuel L. Feder, Jenner & Block LLP, Attorney for Cablevision, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 10-71, GN Docket No. 14-28, at 1 (filed Jul. 1, 2014); Letter from Jonathan D. Levy, Deputy Chief Economist, Federal Communications Commission, to Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 10-71, GN Docket No. 14-28 (filed June 30, 2014); *Applications of Comcast Corp. and Time Warner Cable, Inc., For Consent to Assign or Transfer Control of Licenses and Authorizations*, MB Docket No. 14-57, at 2 (filed Jun. 30, 2014) (discussing ex parte presentation of paper by Professor Rob Frieden at the Experts’ Workshop on The Future of Broadband Regulation co-hosted by the FCC and the Institute for Information Policy at the Pennsylvania State University and remarks of discussants Prof. Matthew Hindman and Mr. Ryland Sherman on the issue of Internet video content providers’ strategic blocking of access to broadband ISP subscribers of ISPs who are also MVPDs during or in connection with negotiation disputes over licensing fees); Richard Greenfield, *Dear Internet: The Most Confused We Have Ever Been – Should the Internet Be Regulated?*, BTIG RESEARCH BLOG, May 9, 2014, available at <http://www.btigresearch.com/2014/05/09/dear-internet-the-most-confused-we-have-ever-been-should-the-internet-be-regulated/> (“[I]f the federal government decides regulation is necessary, simply regulating Net Neutrality in one-direction (meaning between ISPs and their subscribers) makes little sense. The reality is, if the government determines it must regulate Net Neutrality, it must also regulate Peering and Interconnection, as well as the Internet blocking capabilities of content owners (also called “reverse blocking”). Picking and choosing certain parts [of the Internet ecosystem] appears dangerous, especially

ACA Comments
GN Docket Nos. 14-28; 10-127
July 17, 2014

B. Internet Edge Providers Have Engaged in Blocking and Discrimination That Is Contrary to the Commission’s Open Internet Principles.

The NPRM recognizes that while broadband ISPs have the ability to limit openness through management of traffic on their own networks and limitations imposed on their end users, other forms of discrimination on the Internet “may also exist.”²⁸ Not only *may* edge provider incentives and ability to engage in discriminatory conduct potentially exist, they *do exist in fact*. Edge providers have acted on these incentives to the detriment of broadband Internet consumers and Internet openness in several cases. The Commission must take cognizance of the fact that broadband ISPs are not the only Internet players that can or have threatened Internet openness and incorporate it into its rulemaking through a comprehensive set of rules.

As Dr. Lehr states, edge providers offer content, applications, and services that are sufficiently important to end users of the Internet that limited access would severely threaten the overall value of broadband access and services.²⁹ NCTA has noted, “two edge providers account for over 50 percent of all Internet traffic, and Netflix ‘accounts for up to a third of the data flowing over U.S. broadband access networks in evening hours.’”³⁰ Google reportedly has a 65 percent market search share in the United States, while other American “Web Titans”

as leverage can change sides.”) ; Richard Greenfield, *Fast Lanes Do Not Have to Affect Internet Speeds & Why Reverse Blocking Should End the Net Neutrality Debate*, BTIG RESEARCH BLOG, May 13, 2014, available at <http://www.btigresearch.com/2014/05/13/fast-lanes-do-not-have-to-affect-internet-speeds-why-reverse-blocking-should-end-the-net-neutrality-debate/> (“Content owners have the ability to block any ISP from accessing their content unless the ISP pays them a fee. In turn, why is it okay for a website to demand payment from an ISP (as we see in Viacom CableOne dispute), but it is against open Internet principles for an ISP to seek payment from a website to reach an ISPs consumers (such as Comcast did with Netflix)?”).

²⁸ NPRM, ¶ 52 n.118.

²⁹ Lehr Paper at 19; NCTA Remand PN Comments at 10-12 (“In recent years, several economists and industry analysts have expressed deepening concerns over the growing power of so-called ‘hyper-giants’ – edge providers such as Google, Netflix, Microsoft, Apple, Amazon, and Facebook, along with their numerous affiliated entities – over the hosting and distribution of content on the Internet.”)

³⁰ NCTA Remand PN Comments at 11.

Facebook, Twitter, and Amazon have also come to dominant their respective spheres abroad as they do domestically.³¹ According to Dr. Lehr:

The popular content and access devices account for a disproportionate share of Internet network usage and resources. For example, real-time entertainment accounts for over 63% of peak period traffic, with Netflix accounting for over 34% by itself. Preliminary evidence suggests CDNs are accounting for just over 50% of US consumer backbone traffic and 50% of the traffic is coming from the top 35 sites. All of the sites noted above are among the top sites, with each attracting in excess of 20 million unique visitors per month. The largest share of user time is spent on social networking and entertainment, with Facebook and Google being among the most important. Google alone accounts for 67% of web searches. In the desktop market, Microsoft windows still has 91% share with Apple at about 7%; while in the mobile market, Apple's iOS has 46% share and Android has 44% share.³²

Significantly, Dr. Lehr notes that in December 2012, comScore data identified the top 10 Web properties where users spend most of their time, with 10.8% of their time at Facebook and 10% of their time at Google sites (which include YouTube).³³

Moreover, edge providers like Viacom, Disney (which owns ESPN and ABC), Fox and CBS are large, often dominant, media enterprises in the United States that distribute media via multiple platforms, including via legacy broadcast and satellite distribution, via MVPD platforms, “over-the-top” on the Internet, and by means of other off-line channels (e.g., via CDs distributed

³¹ See David Streitfeld, *Hachette and Amazon Dig In for a Long Fight Over Contract Terms*, NEW YORK TIMES, May 28, 2014, available at <http://www.nytimes.com/2014/05/29/technology/amazon-hachette-book-publisher-dispute.html> (describing Amazon's “life and death” hold over traditional book publisher Hachette in their clash over the prices, terms, and conditions of distribution of information in the digital age); Diana Marszalek, *Facebook No Friend To Weathercasters*, TVNEWSCHECK, Jul. 14, 2014, available at <http://www.tvnewscheck.com/article/77719/facebook-no-friend-to-weathercasters> (describing how Facebook, a platform used by broadcast meteorologists to get the word out about severe weather quickly to their local followers, begin filtering which “friends” of the meteorologists’ professional Facebook pages would automatically receive posts through a new and complex algorithm that essentially shut most people out, depriving them of vital information posted to the pages; quoting Brad Panovich, chief meteorologist, NBC affiliate WCNC Charlotte: “As a news organization, you hope you can get vital information out that is not filtered or going through some sort of algorithm. . . .”); Mark Scott, *Principles Are No Match for Europe's Love of U.S. Web Titans*, NEW YORK TIMES, July 6, 2014, available at <http://www.nytimes.com/2014/07/07/technology/principles-are-no-match-for-europes-love-of-us-tech-titans-like-amazon-and-facebook.html?ref=technology&r=0> .

³² Lehr Paper at 20-21 (footnotes omitted).

³³ Lehr Paper at 21 n.39; see Samuel Weigley, *10 web sites where surfers spend the most time*, USA TODAY, Mar. 9, 2013, available at <http://www.usatoday.com/story/money/business/2013/03/09/10-web-sites-most-visited/1970835/>).

through the mail and with tie-ins to other platforms like entertainment parks and consumer products).³⁴ These Internet content providers and others like them have significant market power in the MVPD marketplace, and that market power carries over to the Internet in their negotiations. Accordingly, their market power and incentive to disadvantage select broadband ISPs as standalone Internet access providers is heightened by their incentives in the traditional video programming distribution market. They can limit Internet choice when they block consumers', served by particular broadband ISPs, access to otherwise freely available content.

It is increasingly clear that Internet content providers with this scale have both the incentive and ability to engage in practices that block or degrade a consumer's ability to access lawful content over the Internet.³⁵ Such actions threaten Internet openness by breaking the same "virtuous circle" of innovation and deployment the Commission identified in the NPRM as the basis for its proposed regulation of broadband ISP practices.

These concerns are not merely hypothetical. The Commission has only found a handful of instances of broadband ISP conduct sufficient to undergird its open Internet rules.³⁶ There are at least as many instances of verified Internet content provider "reverse blocking" or threats of reverse blocking as there are of verified broadband ISP violations of the open Internet principles, and almost certainly more.³⁷ For example, Internet edge providers who are also distributors of MVPD programming, have opted to selectively block access to otherwise freely accessible Internet content to all broadband Internet subscribers of an MVPDs to extract higher

³⁴ Lehr Paper at 22 ("Large video programmers do not depend solely or even principally on the Internet to reach their target audience, and with respect to their Internet audience, are not solely dependent on particular ISPs (although as with edge-providers, not all ISPs are created equal and some due to their sheer scale and extent of relationships with ISPs matter more than others).").

³⁵ ACA does have concerns about certain business models that edge providers utilize to extract payment from consumers, like ESPN, its primary concern is whether they discriminate in the way they make their content available on the Internet.

³⁶ NPRM, ¶ 39; 2010 Open Internet Order, ¶¶ 20-37.

³⁷ See NPRM, ¶ 39; 2010 Open Internet Order, ¶¶ 35-36 (cataloging 4 verified instances of violations of open Internet principles and 3 alleged other instances).

fees for its MVPD programming from the MVPD. Such selective blocking was not limited only to those broadband subscribers who also subscribe to the MVPDs' video programming services, but included broadband customers that subscribed only to the ISP's broadband access service.

In the past five years, as Dr. Lehr notes, there have been several examples of Internet video programming providers blocking or threatening to block access to content otherwise made freely available to Internet users to those Internet users served by select broadband ISPs where the programmers were simultaneously engaged in carriage disputes with the same providers in their capacity as MVPDs.³⁸ In 2009, Viacom threatened to block access to Time Warner Cable broadband subscribers from accessing its web-based content, including such popular sites as MTV.com and Nick.com.³⁹ In 2010, News Corp. threatened to block access to Cablevision Internet users from accessing Fox websites, including Hulu.com, which News Corp. partially owned, as part of Fox's on-going retransmission dispute with Cablevision.⁴⁰ This led to Rep. Edward Markey raising concerns with former Chairman Genachowski that Fox's blocking was "contrary to the Commission's Broadband Internet Policy Statement of 2005, which states, in part, that '... consumers are entitled to access the lawful Internet content of their choice.'"⁴¹ Similarly, in 2013, CBS elected to block Time Warner Cable and Bright House Network broadband subscribers in New York as part of their dispute over retransmission rights, prompting now Senator Markey again to write to the Commission advocating intervention to

³⁸ Lehr Paper at 24-25.

³⁹ See *Cutting the (Video) Cord Part 3: the growing relevance of Internet TV*, The Progress & Freedom Foundation Blog, Jan. 8, 2009, available at <http://blog.pff.org/archives/2009/01/print/005419.html>.

⁴⁰ See Sara Jerome, *TV Blackout raises net-neutrality concerns*, THE HILL, Oct. 17, 2010, available at <http://thehill.com/policy/technology/124567-tv-blackout-dispute-raises-net-neutrality-concerns> ("The dispute made a foray into net-neutrality questions on Saturday amid reports that News Corporation had blocked Cablevision Internet users from accessing Fox websites, including Hulu.com, which News Corporation partially owns. The development prompted concern from net-neutrality advocates, who believe any Internet user should be able to access any free Internet site regardless of who provides them Internet service. Usually net-neutrality advocates are concerned about Internet service providers blocking content, rather than content providers doing so, but advocates still saw the circumstances as violating net-neutrality policies.").

⁴¹ *Id.*

protect Internet users from this obvious threat to openness.⁴² Chairman Wheeler has more recently expressed concern about such online strategic blocking in a recent hearing before the House Communications and Technology Subcommittee.⁴³ Most recently, in 2014, following unsuccessful cable programming carriage negotiations, Viacom retaliated with the punitive action of denying access to content otherwise made freely available on its websites to those broadband Internet subscribers served by dozens of smaller cable and broadband providers who refused to sign onto renewal contracts seeking exorbitant price increases for Viacom cable programming networks with low ratings and minimal viewer interest. Viacom moved to block a select group of broadband Internet subscribers regardless of whether they subscribed to the operator's video offerings or not.⁴⁴

⁴² See Adi Robertson, *Is CBS's web blocking of Time Warner Cable customers illegal? Senator wants FCC to investigate*, THE VERGE, Aug. 7, 2013, available at <http://www.theverge.com/2013/8/7/4598328/senator-ed-markey-wants-fcc-to-investigate-cbs-blocking-time-warner-cable>. Senator Edward Markey wrote: "A consumer's choice of cable television provider should not be tied to her ability to access Internet content that is freely available to other consumers. In such instances, consumers lose their freedom to access the Internet content of their choice."

⁴³ John Eggerton, *Wheeler Concerned About Online Retrans Blackouts; Says program provider blocking all IP addresses should be worry for everyone*, BROADCASTING & CABLE, May 20, 2014, available at <http://broadcastingcable.com/news/washington/wheeler-concerned-about-online-retrans-blackouts/131292> ("During questioning by Rep. Peter Welch (D-Vt.) in a House Communications Subcommittee FCC oversight hearing Tuesday, FCC chairman Tom Wheeler said he was concerned, and everyone else should be too, about instances where subscriber access to online content was blocked as part of a programming dispute. Welch noted that the blackouts seemed to be migrating to online and asked if it was the beginning of the 'cable-ization' of the Internet. Wheeler responded that it was the right question to ask. He said the FCC's authority was based in enforcement of good faith negotiations and said that he had 'reason to be concerned because I have subscribed to a certain ISP who is in a dispute with a program provider, that the program provider blocks all access from all IP addresses coming from that ISP. I think that is something that is of concern and that we all should worry about.'").

⁴⁴ See, e.g., Shalini Ramachandran, *Viacom, 60 Cable Firms Part Ways in Rural U.S.*, WALL STREET JOURNAL, Jun. 17, 2014, available at <http://online.wsj.com/articles/viacom-60-cable-firms-part-ways-in-rural-u-s-1403048557>; John Eggerton, *Viacom Blocks Online Access to CableOne Subs*, BROADCASTING & CABLE, Apr. 30, 2104, available at <http://www.multichannel.com/news/news-articles/viacom-blocks-online-access-cableone-subs/374283?nopaging=1> ("While Viacom did not offer specifics, Cable One broadband customers are basically blocked from accessing free content on Viacom websites that are available to all other broadband subscribers. . . . "Cable One has chosen to no longer carry Viacom programming and, as a result, it is no longer available to Cable One customers in any form," Viacom said in a brief statement. Cable One declined to comment."); John Battelle, *Viacom v. Cable One: A Foreshadowing of Things To Come in The Battle for the Open Web?*, SEARCHBLOG., May 7, 2014, available at <http://battellemedia.com/archives/2014/05/viacom-v-cable-one-a-foreshadowing-of-things-to-come-in-the-battle-for-the-open-web.php> (describing Viacom's disingenuous consumer-facing webpage blaming CableOne for pulling Viacom programming after Viacom retaliated by blocking paying subscribers of Cable One's Internet services from using Viacom websites despite Viacom's willingness to

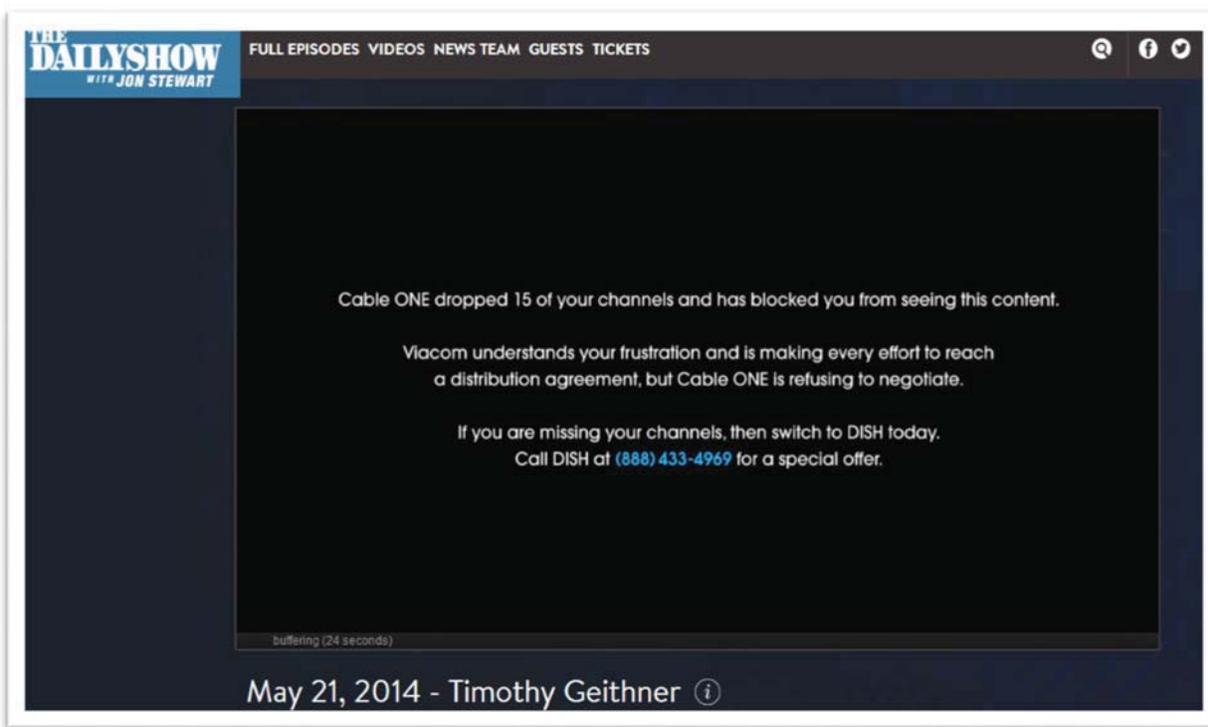
All of the foregoing are examples of the incentives and ability of programmers to act in a non-neutral manner with respect to the ability of select broadband ISP customers to access content the programmers otherwise make freely available on the Internet.⁴⁵ This behavior stands to threaten Internet openness and decrease the value of the broadband Internet service to consumers in much the same way as broadband ISP blocking or degradation of Internet content providers is said to do and, in reality, may be even more frequent and serious. Each form of blocking would therefore threaten to depress demand for broadband Internet services and, in turn, investment and deployment in broadband infrastructure in contravention of the goals of Section 706 and this rulemaking. To the extent the Commission finds the similar number of violations of net neutrality precepts on the part of broadband ISPs to sufficient to warrant the imposition of open Internet rules, it must find these instances a sufficient predicate as well.

Viacom's behavior with respect to ACA members CableOne, Liberty Cablevision of Puerto Rico, Vyve Broadband, ImOn Communications, and others, however, warrants additional mention. Not only did Viacom block access to content it otherwise makes freely available on the Internet to all edge Internet users to customers of these smaller cable operators who declined to renew their MVPD carriage agreements with Viacom on rates, terms and conditions the operators deemed onerous and unjustified, it placed a completely disingenuous consumer-facing message on its website placing the blame on the cable operators for removing this online

stream those same shows to anyone else in the US with Internet access). A video of the blackout from ImOn is *available* at https://www.youtube.com/watch?v=KTPXP_hG7Is&feature=youtu.be.

⁴⁵ Significantly, smaller ISPs have not been the ISPs accused of non-neutral behavior against Internet ISPs, whereas they have been the ones who have experienced blocking and degraded access at the hands of larger Internet edge providers.

programming from their broadband subscribers. What follows is a screen shot of Viacom's consumer-facing message, as reported on Gigaom:⁴⁶



The NPRM quotes with approval from Justice Brandeis' dictum that "Sunlight is said to be the best of disinfectants," and explains that "designed correctly, disclosure policies are among the most effective and least intrusive regulatory measures at the Commission's disposal."⁴⁷ Further, that such disclosures by broadband ISPs play an important role in perpetuating the "virtuous circle" of Internet competition, innovation, consumer demand and broadband deployment.⁴⁸ ACA could not agree more: appropriately tailored disclosures can be

⁴⁶ Janko Roettgers, *Viacom blocks online video in retrans fight, wakes up regulators*, GIGAOM, May 23, 2014, available at <http://gigaom.com/2014/05/23/comedy-central-mtv-blocked-cable-one-voacom-retrans-fight/>.

⁴⁷ NPRM, ¶ 66, citing L. Brandeis, *Other People's Money*, Chapter 5 (National Home Library Foundation ed. 1933), available at <http://www.law.louisville.edu/library/collections/brandeis/node/196>.

⁴⁸ NPRM, ¶ 66.

the most effective and least intrusive regulatory measures at the Commission's disposal.⁴⁹ However, they should not be mandated for broadband ISPs alone. Clearly, there would be a value not only in subjecting edge providers to "no-blocking" and commercial reasonableness rules, but also in requiring edge providers to be more transparent in their business practices so that consumers are not misled regarding the reasons they are unable to access otherwise freely available, lawful content on the Internet.

C. Any Open Internet Rules Should Apply to Both Broadband Internet Service Providers and Internet Content Providers with Similar Incentives and Abilities to Inhibit Internet Openness and Broadband Deployment.

As Chairman Wheeler has said, everyone should be concerned about instances where broadband Internet subscriber access to freely available online content was selectively blocked as part of a programming dispute.⁵⁰ There cannot be "ONE Internet" for subscribers of Comcast, for example, another "ONE Internet" for subscribers of CableOne. All content made freely available to all those with Internet access must remain freely and neutrally available regardless of the identity of the end user's broadband ISP. Permitting such strategic fragmentation of the Internet experience by Internet edge providers would threaten to "slow or even break the virtuous circle" no less than the actions of broadband ISPs.

Dr. Lehr has demonstrated how edge providers that offer sufficiently important content to end users of the Internet can severely threaten the overall value of broadband access services and the Internet by selectively limiting access to their content.⁵¹ The incentive to harm in this way is further heightened when such Internet content providers engage in Internet blocking to

⁴⁹ ACA's complaint with the proposed enhancements to the current transparency rule for broadband ISPs, discussed *infra*, is that it is not designed correctly and if imposed, would likely not be effective and would certainly be tremendously intrusive and burdensome, particularly for smaller providers.

⁵⁰ John Eggerton, *Wheeler Concerned About Online Retrans Blackouts; Says program provider blocking all IP addresses should be worry for everyone*, BROADCASTING & CABLE, May 20, 2014.

⁵¹ Lehr Paper at 24-25.

increase their leverage to extract higher prices in other markets, such as traditional video distribution markets.

Large video programmers do not depend solely or even principally on the Internet to reach their target audience, and with respect to their Internet audience, are not solely dependent on particular ISPs. Moreover, for edge providers, not all ISPs are created equal and some due to their sheer scale and extent of relationships with edge providers matter more than others. Programmers, accordingly, are able to choose among multiple competing video distribution platforms (e.g., mobile v. fixed; cable v. telephone company provided broadband; cable v. over-the-air v. DBS; or CDs v. DVRs v. real-time streaming media). Many of their target audience customers are “multi-homed” with more than one option for accessing programming.⁵²

Dr. Lehr’s critical conclusion from the foregoing is that:

In this environment, asymmetric regulatory rules that constrain the business behavior of a single class of platform providers (i.e., fixed broadband ISPs that are also MVPDs) would distort market incentives and accentuate content-providers’ abilities and incentives to threaten actors more constrained in their behaviors due to regulation, particularly ISPs subject to Open Internet rules. In this way, asymmetrical Open Internet rules that are intended to promote an Open Internet in some cases can themselves be the threat. For example, providers of valuable content might seek to abuse their control of such content to extract excess profits via their negotiations with access ISPs that would find their ability to respond to such threats via market-based mechanisms restricted due to the asymmetric application of the Open Internet rules.⁵³

To be clear, ACA is not advocating that any Internet participant necessarily need be subjected to sector-specific *ex ante* Open Internet rules. Federal and state antitrust authorities are well positioned to protect competition and consumers from anticompetitive, unfair or deceptive trade practices by any participants in the Internet ecosystem.⁵⁴ ACA believes the

⁵² *Id.* at 21. Video subscribers may be single- or multi-homed. That is, they may have broadband Internet and/or legacy multichannel video or broadcast television services from the same or different providers. For example, a subscriber may have DBS and wired broadband, cable service and broadband Internet, only broadband, only over-the-air TV, or some other combination of services. *Id.* at 17 n.30.

⁵³ *Id.* at 21-22.

⁵⁴ It is noteworthy that in the past, federal antitrust authorities have cautioned against such *ex ante* regulation. In 2007 the Federal Trade Commission not only concluded that the broadband market was competitive, but it also warned that regulators should be “wary” of network management rules because o

Internet and broadband deployment have flourished because information services were kept “unfettered” by federal and state regulation since the beginning.⁵⁵ Edge providers that offer sufficiently important content to end users of the Internet, such as popular search engines, social networks, online retailers, and online video providers, can severely threaten the overall value of broadband Internet access services by limiting access to their content in a commercially unreasonable manner. However, the Commission cannot responsibly impose transparency, no-blocking and commercial reasonableness requirements on broadband ISPs but not on popular search engines, social networks, online retailers, and online video providers, or the many others that exert equivalent, or indeed more likely greater, influence on the consumer Internet experience. This is especially true with respect to imposing asymmetric rules on broadband ISPs that are also MVPDs, and find themselves being disadvantaged by programmers leveraging their power in the Internet market to extract higher fees in the traditional video distribution market.

The Commission has previously recognized that broadcasters already enjoy significant market power in such negotiations with MVPDs.⁵⁶ As Dr. Lehr notes, “constraining access ISPs while leaving programmers free of any [open Internet] obligations risks further distorting regulatory-mandated negotiations between MVPDs and programmers, strengthening still further

of the unknown “net effects ... on consumers.” Federal Trade Commission, Internet Access Task Force, Broadband Connectivity Competition Policy FTC Staff Report, at 157 (rel. June 27, 2007). The Department of Justice’s Antitrust Division reached a similar conclusion in 2010, filing comments that warned against the temptation to regulate “to avoid stifling the infrastructure investments needed to expand broadband access.” See *Economic Issues in Broadband Competition, A National Broadband Plan for Our Future*, Ex Parte Submission of the U.S. Dept. of Justice, GN Docket No. 09-51, at 28 (filed Jan. 4, 2010).

⁵⁵ See 47 U.S.C. § 230(b)(2) (“It is the policy of the United States . . . to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive services, unfettered by Federal or State regulation”). The NPRM seeks comment on how the Commission should read Section 230(b) in exercising its Section 706 authority. NPRM, ¶ 146.

⁵⁶ *In the Matter of General Motors Corporation and Hughes Electronics Corporation, Transferors and The News Corporation Limited, Transferee, For Authority to Transfer Control*, Memorandum Opinion and Order, 19 FCC Rcd 473, ¶ 201 (2004) (“We find that News Corp. currently possesses significant market power in the DMAs in which it has the ability to negotiate retransmission consent agreements on behalf of local broadcast television stations.”).

the bargaining position of programmers, precisely when a number of analysts are concerned those programmers are already too strong. Applying no-blocking and commercial reasonableness obligations only to broadband providers is likely to result in higher prices for programming content and consequently, reduce demand for and investment in Internet and broadband infrastructure and services.”⁵⁷

Similar principles dictate that transparency rules should be imposed bilaterally as well. Edge provider practices can impact the consumer Internet experience in much the same way as broadband ISP network management practices.⁵⁸ The Commission has again affirmed its view that “access to accurate information about broadband provider practices encourages the competition, innovation, and high-quality services that drive consumer demand and broadband investment and deployment.”⁵⁹ The NPRM recites how such disclosures are aimed at helping end users make informed choices and increase their confidence, ensure edge providers have access to information they need about broadband ISP networks necessary to develop new applications and services, and inform the Internet community and the Commission about conduct that could impact Internet openness.⁶⁰ The NPRM posits that enhancements to the current transparency rules are required to meet the needs of different classes of edge providers, and particularly start-ups.⁶¹ It should be equally clear that imposing open Internet disclosures on edge providers could help consumers make informed choices, increase end user confidence in edge provider commercial practices, and be informative to broadband ISPs in anticipating the needs of these edge providers.

⁵⁷ Lehr Paper at 25.

⁵⁸ *Id.* at 12-13.

⁵⁹ NPRM, ¶ 66.

⁶⁰ *Id.*

⁶¹ *Id.*, ¶¶ 68, 75-76. We respond to requests for comment on the proposed enhancements to the transparency rule for broadband ISPs *infra*, Section II.

It is evident that adopting a regulatory framework that focuses narrowly on a single category of actor in a complex ecosystem of interdependent categories of actors will distort market incentives for efficient organization, may misidentify the party responsible for the threat to broadband deployment and the openness of the Internet, may perversely accentuate the responsible party's ability to cause harm, and may leave consumers in the dark about the cause of their inability to access certain Internet content. Accordingly, the Commission should adopt a balanced approach to Internet policy capable of addressing threats to the openness of the Internet from whatever source those threats arise, and eschew the one-sided approach to the multi-sided Internet market outlined in the NPRM.

Thus, if the Commission determines that rules are necessary to protect and preserve the open Internet, it must apply them even-handedly to all categories of Internet actors capable of inhibiting that openness, including applying transparency requirements to Internet edge providers. Taking no further action today to regulate the practices of broadband ISPs is far preferable than “committing prematurely to a poorly-designed policy framework that fails to adequately address either today’s or tomorrow’s foreseeable threats to Internet openness,” thereby embracing regulatory inconsistency and engendering regulatory uncertainty for years to come.⁶²

III. THE COMMISSION SHOULD NOT ADOPT ADDITIONAL DISCLOSURE REQUIREMENTS FOR BROADBAND INTERNET SERVICE PROVIDERS

In the NPRM, the Commission tentatively concludes that enhancements should be adopted to its current transparency rule. More specifically, the NPRM describes a series of “enhancements” to the disclosure requirements and posits that such enhancements are necessary to ensure that consumers and edge providers “have the information they need to understand the services they are receiving and to monitor practices that could undermine the

⁶² Lehr Paper at 26.

open Internet.”⁶³ ACA respectfully disagrees that there is a problem with the current disclosure requirements that warrants these enhancements, and urges the Commission not to adopt the proposed changes.⁶⁴

The current transparency rule strikes an appropriate balance between the need for disclosure and burdens placed on broadband ISPs. More importantly, it has proven effective and workable. The NPRM’s tentative conclusions that the proposed enhancements should be adopted are not supported by a body of evidence that would justify the additional burdens on broadband ISPs, and especially those placed on smaller providers. Given that consumers and edge providers rarely, if ever, inquire, complain, or otherwise raise concerns about current disclosures – and when they do, in ACA’s experience, broadband ISPs have been responsive – the Commission should, rather than adopt enhancements, continue to rely upon its complaint and enforcement procedures to address any material concerns about individual providers’ disclosures that may arise.

A. The Current Transparency Rule Has Worked.

In its 2010 *Open Internet Order*, the Commission adopted a transparency rule that, while providing guidance to broadband ISPs about compliance, afforded them the flexibility to make disclosures in a way they believed would be effective for users of their services.⁶⁵ The Commission wisely concluded that whether broadband ISPs successfully complied with the transparency rule would be assessed on a case-by-case basis rather than adherence to a

⁶³ NPRM, ¶ 10.

⁶⁴ In this section, ACA addresses the Commission’s proposals for enhancing the disclosure obligation imposed on broadband ISPs as described in the NPRM. ACA maintains, as discussed in the preceding section, that the Commission should apply any open Internet rules, including the transparency rule, bi-laterally to broadband ISPs and edge providers alike.

⁶⁵ See 2010 Open Internet Order, ¶¶ 53-62. The Commission explained that “We believe that at this time the best approach is to allow flexibility in implementation of the transparency rule, while providing guidance regarding effective disclosure models.” *Id.*, ¶ 56. See also *id.*, ¶ 59 (“[T]he transparency rule we adopt today gives broadband providers some flexibility to determine what information to disclose and how to disclose it.”)

detailed and lengthy list of “one-size-fits-all” prescriptions. Although the Commission gave examples of the types of information it expected would be disclosed by affected providers, it underscored that the sufficiency of the disclosures would depend upon the network of the provider and the technology used “in light of relevant circumstances.”⁶⁶ The Commission explained that disclosures “sufficient” to enable “consumers to make informed choices regarding use of services” generally will satisfy the portion of the transparency rule regarding disclosures to content, application, service, and device providers and to the Commission itself.⁶⁷

In 2011, not long before the rules became effective, the Chief of the FCC’s Enforcement Bureau and the Office of General Counsel issued a Public Notice (“Enforcement Advisory”) offering further guidance on compliance with certain aspects of the Open Internet rules, including the transparency rules.⁶⁸ While the Enforcement Advisory provided examples of approaches that would satisfy the transparency rule, it stressed that affected broadband ISPs could comply through alternative approaches – in other words, that the methods of compliance described in the Enforcement Advisory were “not required or exclusive.” Significantly, the Enforcement Advisory indicated that the Commission or the Enforcement Bureau may provide further guidance in the future. In the intervening three years, neither the Commission nor the Enforcement Bureau has seen fit to provide further guidance, a strong indication that the flexible transparency rule, as written, has been working. The experience of ACA members supports this conclusion.

⁶⁶ *Id.*, ¶ 56.

⁶⁷ *Id.*

⁶⁸ *FCC Enforcement Bureau and Office of General Counsel Issue Advisory Guidance for Compliance with Open Internet Transparency Rule*, Public Notice, 26 FCC Rcd 9411 (2011).

Based upon recent feedback from ACA members, there are no indications that either end users or edge providers have found the disclosures to be inadequate or inaccurate. In fact, ACA members have neither received complaints nor even inquiries from end users or edge providers seeking additional information beyond that disclosed under the existing rule. This strongly suggests that there are neither problems with the current rule nor need for new costly and burdensome enhancements imposed across the industry as a whole.

By contrast, edge providers are not reluctant to contact smaller providers when they have other issues of concern to them. The Motion Picture Association of America, for example, will contact smaller broadband ISPs such as ACA member USA Communications and issue “takedown” notices when there are copyright infringements.⁶⁹ Other edge providers have contacted ACA members to negotiate and place caching capabilities in their headends.⁷⁰ In light of these examples, it stands to reason that, if edge providers were dissatisfied with the disclosures that smaller providers, such as ACA members, have been making, they would have made their concerns known directly either to the ACA members or to the Commission.

In addition, the recently released 2014 “Measuring Broadband America” Report (“2014 MBA Report”) of the Commission confirms, for example, that actual results are tracking and even beating advertised performance characteristics. The 2014 MBA Report explained “The February 2013 Report showed that the ISPs included in the Report were, on average, delivering 97 percent of advertised download speeds during the peak usage hours. This [the 2014] Report finds that ISPs now provide 101 percent of advertised speeds.”⁷¹ These results, which show a

⁶⁹ See Declaration of Christian Hilliard, Chief Executive Officer, USA Communications, ¶ 10 (Attached as Exhibit D) (“Hilliard Declaration”).

⁷⁰ See, e.g., McKay Declaration, ¶ 12.

⁷¹ FCC, Office of Engineering and Technology and Consumer and Governmental Affairs Bureau, *2014 Measuring Broadband America Fixed Broadband Report: A Report on Consumer Fixed Broadband Performance in the U.S.*, at 14, available at <http://www.fcc.gov/reports/measuring-broadband-america-2014>.

year-over-year improvement, demonstrate the general accuracy of the results of the disclosures under the current transparency rule, as well as the industry's record of positive behavior.

Most importantly, there is no indication that there has been a material influx of complaints at the Commission regarding the accuracy or adequacy of compliance with the transparency rule. The Commission's rules and the *2010 Open Internet Order* describe three principal avenues of enforcement: informal complaints, formal complaints, and Commission-initiated proceedings. The *2010 Open Internet Order* also adopted a special set of rules for formal complaints regarding the open Internet rules, including the transparency rule.⁷² Further, on repeated occasions, the Commission has reminded the industry and the public about the ability to file informal complaints as a means to enforce the transparency rule.⁷³

The relatively small number of complaints received by the Commission, while they may indicate some isolated instances where consumers are confused by a broadband provider's disclosure or concerned about the accuracy of pricing or speed information, do not demonstrate either that current rule is not working or that it requires enhancements. In fact, just the opposite would appear to be the case. While the NPRM states, in quantitatively ambiguous fashion, that it has "received hundreds of complaints from consumers,"⁷⁴ given that there are well over 80,000,000 broadband subscribers in the United States served by major providers alone,⁷⁵

⁷² 2010 Open Internet Order, ¶¶ 155-156.

⁷³ See, e.g., *New Docket Established to Address Open Internet Remand*, Public Notice, 29 FCC Rcd 1746 (2014).

⁷⁴ NPRM, ¶ 63. The NPRM's claim that the number of complaints is "significant" is suspect given that the NPRM fails to say how many complaints regarding network disclosures there have been. See *id.*, ¶¶ 63, 69 n.163. Similarly, the NPRM fails to share any of its "analysis" of the complaints and limits itself to offering *four (4)* short quotes from letter that are not in any way identified. See *id.*, ¶ 69 nn.164-167 (The Commission does not make the consumer complaints it receives available for inspection and, therefore, analysis.). The quotes do not even identify who the providers that are the subject of the complaints are or whether they are large or small providers. Further, the NPRM does not indicate whether these complaints have been investigated or substantiated but rather takes the quoted allegations at face value.

⁷⁵ Om Malik, *The U.S. now has over 83 million broadband subscribers*, GIGAOM, Nov. 29, 2013, available at <http://gigaom.com/2013/11/29/u-s-now-has-over-83-million-broadband-subscribers/> (figures compiled by Leichtman Research Group show over 83,600,000 broadband subscribers at the end of 3Q 2013 from major telephone and cable providers).

several hundred consumer complaints over a two-and-one-half-year period is an extremely small number. Further, the NPRM makes clear the Commission has received no formal complaints since the 2010 rules went into effect.⁷⁶ And, indeed, the NPRM acknowledges that among these “hundreds of consumer complaints,” it is difficult to discern whether the consumer’s frustration is with slow speeds or high prices generally or instead with how the service as actually provided differs from what the provider has advertised.⁷⁷ In other words, many of these complaints may be unrelated to compliance with the transparency rule or shed any light on whether the rule is sufficient. Consequently, by any measure, the dearth of consumer complaints over the past two and one-half years regarding compliance with the transparency rules in comparison with the number of subscribers in the country is a strong demonstration that the current rules are working. The lack of complaints, as reported by the Commission in the NPRM, from edge providers only bolsters the conclusion that the current transparency rules are working.

B. There Is No Evidence That “Enhancements” to the Transparency Rules Would Be Beneficial Relative to the Burden.

As noted earlier, the NPRM calls for a number of so-called “enhancements” to the transparency rules. All of these enhancements would increase the burdens of compliance for broadband providers. ACA submits that burdens from the tentatively proposed increased and targeted disclosure requirements would be significant and disproportionate relative to already non-trivial cost of compliance with the current unitary disclosures. Moreover, these burdens, particularly where they involve costs independent or largely independent of the size of the provider and do not scale, would fall particularly hard on smaller and medium-sized providers, such as the ACA membership. For this reason, the flexibility in the current transparency rule

⁷⁶ NPRM, ¶ 161.

⁷⁷ It is also unclear from the NPRM’s discussion whether the number of potentially relevant consumer complaints is increasing or has slowed since the period when the rules first took effect.

strikes an appropriate balance between detailed disclosure about particular services to particular target groups and general industry disclosure of information to end users and holds down costs for providers, most significantly for smaller providers.⁷⁸

Significantly, the NPRM, in reaching its tentative conclusions, fails to examine whether there are material differences between small and large broadband ISPs in terms of their present activities or their relative incentives and abilities to cause harm, and fails to explore ways of lessening disproportionate burdens as require by the Regulatory Flexibility Act.⁷⁹ Before the Commission considers increasing the burden on broadband providers, there should be substantial evidence of clear tangible benefits that outweigh those burdens as the result of any “enhancements” to the current transparency rule. This is especially true for smaller providers who have less ability to engage in behavior that could adversely impact any edge providers, and most particularly larger ones. Unfortunately, the NPRM’s tentative conclusions that there should be changes to current transparency rule are based on anecdotes and supposition, not data –

⁷⁸ ACA, in its comments leading up to the Commission’s *2010 Open Internet Order*, advocated (along with others) for general industry disclosures. See, e.g., *Consumer Information and Disclosure*, CG Docket No. 09-158, Comments of the American Cable Association (filed May 26, 2011). Specifically, ACA made the case for development and publication of a standard, industry-wide guide for consumers to use when considering what they needed in a broadband service based on what their expected uses were. *Id.* at 2-6 (advocating that the Department of Agriculture’s “food pyramid” approach, rather than a “nutritional label” approach, as a model for educating consumers about broadband performance needs). While the current rule, instead, placed information disclosure burdens on all broadband providers individually, the Commission should not, in this proceeding, increase those burdens.

⁷⁹ The Initial Regulatory Flexibility Analysis, appended as Appendix B to the NPRM (“IRFA”), falls short of the requirements of the Regulatory Flexibility Act (“RFA”) in several respects. For example, while the Commission engages in an inconclusive estimation of the number of small cable providers that might be affected by the proposed rule changes, it fails to provide any discussion of “the impact of the proposed rule on small [cable providers],” “the type of professional skills necessary for [their] preparation of the report or record [i.e., the disclosures]” that the changed transparency rule would require, or “significant alternatives such as . . . the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small [cable providers].” See 5 U.S.C. §§ 603(a), (b)(4), and (c)(1). Rather than provide an analysis, as the RFA requires when rules are first proposed, the Commission impermissibly postpones fulfillment of its statutory obligation by seeking comment on these issues. See, e.g., IRFA, ¶ 52 (“We seek comment here on the effect the various proposals described in the Notice, and summarized above, will have on small entities, and on what effect alternative rules would have on those entities.”)

and no distinctions between smaller and larger providers. At bottom, the NPRM provides no facts justifying any changes.

For example, there is no evidence that the nature of broadband services and their provision have changed since 2010 in a way that justifies the imposition of “enhanced” transparency requirements in light of such changes. ACA’s polling of its members indicates that, while broadband speeds have generally increased over time, even substantially, the basic functionalities that broadband service providers offer, as reflected in their current disclosures, have remained the same. Consequently, there has been no evolution in the fundamental management of the network or in the service provided to end users that has require additional disclosures.

The NPRM states that some recent research suggests “that consumers have difficulty understanding commonly used terms associated with the provision of broadband services,” such as “traffic management.”⁸⁰ ACA submits that even assuming this may be the case for some individual consumers, that does not justify enhancing the rules. There are plenty of resources readily available to consumers to learn basic, and commonly used, network terminology which would better allow them to understand broadband providers’ disclosures. In addition, the Commission itself could undertake this task, as it has done with broadband measurement. It makes no sense to impose the burden on each broadband ISP, particularly each smaller provider, of educating consumers about basic terminology that may possibly cause them confusion when reading the disclosures required by the Commission’s transparency rule.

Further, the NPRM provides no evidence that average consumers are likely to require or benefit from more detailed disclosure information concerning, for example, jitter, packet loss or corruption, latency, or even total data usage.⁸¹ ACA submits that if consumers do not

⁸⁰ NPRM, ¶¶ 68, 68 n.161.

⁸¹ See, e.g., *id.*, ¶ 73.

understand a rather general term like “traffic management,” the disclosure of even more granular data and detailed network performance information would likely create even greater confusion. Additional disclosure requirements such as these, were they to be adopted, would only pile on unnecessary compliance obligations and costs for broadband providers. Were the Commission to go even further and require disclosures that permit consumers “to identify application-specific usage or to distinguish which user or device contributed to which part of the total data usage,”⁸² – given the total lack of evidence that most consumers would have a use for the information – it would only create an even greater imbalance between the increased administrative burdens of broadband providers and the lack of corresponding benefit from any enhancements to the existing rules.

The practical value of enhanced and tailored disclosures to edge providers relative to the increased burden is just as, if not more, dubious. Based solely on the conjecture that “[e]dge providers . . . may benefit from descriptions that are more technically detailed” than those disclosures some broadband providers currently post on their websites, the Commission tentatively concludes that it should require broadband providers to create and more specifically tailor a second set of disclosures to meet the needs of edge providers.⁸³ ACA submits that the Commission should not move in this direction for several reasons. First, the applications and purposes to for which the Internet is being used due to innovation by edge providers, are subject to continuous flux and evolution. It is extremely doubtful that large broadband providers – let alone individual smaller providers – could effectively anticipate how myriad different edge providers may want their disclosures tailored. It is similarly unclear to ACA how various categories of edge providers could be defined to lessen this new burden while making it more meaningful than the existing disclosures. This is particular true when considered against the

⁸² *See id.*

⁸³ *Id.*, ¶ 68.

backdrop of the ability of edge providers to contact individual broadband ISPs directly, as has previously been discussed.⁸⁴

Second, as the NPRM notes, many edge providers rely upon others, such as CDNs or cloud service providers, to interconnect directly with broadband ISPs.⁸⁵ Large edge providers, such as Google or Netflix, interconnect with many broadband providers directly.⁸⁶ These types of connections are mutually beneficial to broadband ISPs and the interconnecting CDNs, cloud service providers, and/or content providers, and broadband ISPs are motivated to enter into such arrangements.⁸⁷ In these circumstances, the interconnectors will obtain the information they need directly from the broadband ISPs network characteristics in the course of establishing and maintaining their relationship. If they have particular concerns or inquiries, these edge providers are far more likely to obtain the information they require by contacting the broadband ISP directly than by looking to periodic disclosures pursuant to a generic rule. Consequently, instead of increasing the burden of broadband ISPs by enhancing the disclosure rules with extensive tailored disclosure requirements, the Commission should at most take the opportunity to encourage broadband ISPs and edge providers, CDNs, and cloud service providers to explore mutually beneficial arrangements for the exchange of traffic.⁸⁸ The Commission should let the market operate, and it has good reason to do so.

The NPRM also asks whether more comprehensive network performance measurements, and attendant disclosures should be adopted than are in place today under the

⁸⁴ The suggestion in the NPRM that “start-up companies” might somehow form a distinct category of edge provider with definable and “distinct needs” meriting a specific and separate type of disclosure misapprehends the complex diversity of edge providers across-the-board, whether start-up companies or more seasoned concerns. *See id.*, ¶ 76.

⁸⁵ *See id.*

⁸⁶ *Id.*

⁸⁷ *See, e.g.*, McKay Declaration, ¶ 12.

⁸⁸ As discussed elsewhere in this filing, there is value in requiring edge providers to be more transparent in their business practices, and such disclosures could be informative to broadband ISPs in anticipating the needs of these edge providers.

unitary disclosure rule.⁸⁹ ACA submits that the MBA program is achieving its aims and providing sufficient disclosure of accurate measurements of key performance metrics of greatest interest and potential utility to consumers. Only one ACA member participates in the MBA project, but many ACA members reference the published speeds of MBA participants as a proxy for their network performance in their disclosures as permitted under the *Enforcement Advisory* guidance. There is no evidence that this proxy approach has created confusion or dissatisfaction among consumers or edge providers. Its continued use should be permitted. While a small minority of ACA members have made a business decision to install their own systems to monitor speed as a network management tool,⁹⁰ these providers consider that a significant investment and the Commission should not ubiquitously mandate the use of monitoring devices and impose the corresponding costs in the absence of a clear general need and benefit.⁹¹ If the Commission nonetheless concludes, after reviewing the record that will be generated in this proceeding, that an enhanced speed or broader network performance disclosure requirement should be considered, it should seek the guidance of a multi-stakeholder advisory group, which includes representation from smaller and medium-sized broadband providers and consumer advocates in addition to large providers, to develop such a requirement based on consensus.

For the foregoing reasons, no additional reporting or certifications are required at this time. Neither the need for nor the benefit of enhancements to the transparency rule has been established by the NPRM. Rather the Commission should continue to rely on the current rules and its existing enforcement and complaint mechanisms. For example, as partial justification for the proposal to enhance the transparency rules, the NPRM asserts that, “an informal review of broadband provider disclosures conducted by Commission staff found that the majority are

⁸⁹ See NPRM, ¶¶ 79-80.

⁹⁰ See, e.g., Hilliard Declaration, ¶ 7; McKay Declaration, ¶¶ 8-9.

⁹¹ See NPRM, ¶ 80.

providing some form of disclosure statements, but that many do not appear to provide all the information the rule was designed to disclose.”⁹² The NPRM provides no further detail regarding this “informal review,” and it is extremely difficult to assess based on the brief discussion in the NPRM whether there are potentially any widespread patterns or trends of concern justifying consideration of rule changes.⁹³ Consequently, the solution to any alleged shortfall in compliance in the current rule is increased guidance from the Commission – while retaining the overall flexibility of the rule – coupled with enforcement where appropriate, not enhancements of the existing rule that will only increase the burden on providers with minimal, if any, benefit to consumers, edge providers, or the public at large. The Commission should continue to exert a “light touch” when it comes to regulating broadband Internet access service providers, especially smaller and medium-sized companies that have benefited from such a regulatory framework while delivering broadband Internet access services to a wide variety of lower density markets.

C. If the Commission Were to Adopt Enhanced Transparency Rules, It Should Not Adopt a One-Size Fits All Approach; Smaller and Medium-Sized Broadband Internet Access Providers Should Be Exempt.

As noted above, the NPRM makes no effort to differentiate the behavior of smaller broadband providers from large providers. The latter historically have been the cause of the Commission’s attention and concerns, whether in the form of imposition of merger conditions,⁹⁴ or complaints regarding compliance with the Commission’s 2005 *Internet Policy Statement*.⁹⁵ In discussing marketplace developments that may lead to potential concerns regarding Internet openness, the NPRM cites only examples involving large providers.⁹⁶

⁹² *Id.*, ¶ 67 n.159.

⁹³ See discussion at *supra*, note 74.

⁹⁴ See NPRM, ¶ 14 (Comcast/Adelphia/Time Warner; SBC/AT&T; Verizon/MCI; and Comcast/NBCU).

⁹⁵ See *id.*, ¶¶ 18-21 (Comcast)

⁹⁶ See *id.*, ¶¶ 37-38 (Verizon and AT&T), ¶ 41 (Verizon and AT&T).

The NPRM reiterates the Commission's observation that the threat of interference with Internet openness is exacerbated when broadband Internet ISPs have market power over potential providers.⁹⁷ Small broadband ISPs in particular have no leverage to do anything of concern that would mandate a rule with more tailored disclosures for edge providers or end users that are not addressed by the current rules. Smaller and medium-sized broadband ISPs typically lack the incentives and economic ability to harm Internet openness that larger, vertically integrated broadband providers may have.⁹⁸ There is no compelling evidence that smaller and medium-sized providers can harm large or impede edge providers or CDNs in a way that can be remedied by increased transparency requirements.

Further, smaller and medium-sized broadband Internet access providers have resource constraints. Compliance with the existing transparency rules, as well as numerous other regulatory obligations, already places a considerable strain on their resources.⁹⁹ The enhancements generally alluded to by the NPRM – such as tailored disclosures for different categories of edge providers – would push those resources to the limit. Smaller operators have no ability, for example, to determine as a general matter what information various small edge provider start-ups might require.¹⁰⁰

Consequently, in the event the Commission ultimately concludes to adopt any enhancements to the current unitary disclosure transparency rule, it should exempt “small providers,” which should remain subject to the current transparency regulations. Over time, the Commission can monitor consumer and edge provider complaints to determine whether it

⁹⁷ See *id.*, ¶ 43.

⁹⁸ See *id.* ACA takes no position on whether larger broadband providers have the economic and technical incentives and abilities to harm Internet openness that the NPRM implies that they may have.

⁹⁹ See, e.g., Hilliard Declaration, ¶¶ 7-9; McKay Declaration, ¶¶ 8-11.

¹⁰⁰ As noted above, ACA submits that those edge providers that are not connecting indirectly with broadband providers, as many do, are fully capable of contacting specific broadband providers through which they would connect to the Internet to discuss their needs and obtain information about the network characteristics and practices of the provider.

should modify the qualifications of exempt “small providers.” However, given the rarity of consumer complaints regarding provider disclosures under the existing rules over all providers, large and small, it is unlikely the Commission would conclude that the exemption should be narrowed once established, let alone eliminated in its entirety.

In addition, those providers which are not categorically exempted as “small providers” should be eligible to ask for a waiver of any enhanced transparency requirements based upon a demonstration that they cannot harm large edge providers, have resource constraints, and/or have not received any material complaints – or material numbers of complaints – from end users or edge providers regarding their transparency disclosures.¹⁰¹

D. If Any Disclosure Requirements Regarding Congestion Are Applied to Broadband Internet Service Providers, They Should also Apply to All Other Entities in the Transmission Path Since They Too Can Be the Source of Network Congestion.

The NPRM tentatively concludes that broadband providers should have a greater obligation to report on the causes and indicators of network congestion than applies under the current transparency rule. The Commission proposes to require broadband providers to “disclose meaningful information regarding the source, location, timing, speed, packet loss, and duration of network congestion” and seeks comment on the proposal, “including on how to implement it in a practical manner that provides meaningful information to end users, edge providers, and other stakeholders without causing undue burden on broadband providers.”¹⁰²

As a general matter, ACA submits that the need for such an expansion of the existing disclosure rule has not been established. Most, if not virtually all, providers already disclose information about their network management including practices to address network congestion.

¹⁰¹ At a minimum, if the Commission does adopt any enhanced transparency requirements, it should streamline the additional disclosure requirements as they apply to smaller and medium-sized providers so as to reduce the burden. For example, were the Commission to impose a reporting requirement concerning disclosure practices, smaller and medium-sized providers should be able to satisfy their obligation by submitting compliance certifications rather than reports.

¹⁰² NPRM, ¶ 83.

Given the flux of Internet use and the constantly changing environment, the burden to provide up-to-date detailed disclosures regarding “the source, location, timing, speed, packet loss, and duration of network congestion” would be considerable and unjustified in light of the likely limited benefit. Again, consistent with the previous section, any enhanced disclosure rule regarding network congestion that the Commission may adopt should exclude “small providers.”

Further, the NPRM acknowledges that congestion, as experienced by an end user, could originate from a variety of sources other than the broadband provider serving that end user. Consequently, the potential exists for the “filing of an unjustified complaint against a broadband provider (if the source of the congestion were elsewhere) or a mistaken decision by the end user to purchase additional bandwidth to improve performance (again, if the source of congestion were elsewhere).”¹⁰³ Indeed, where the source of congestion lies elsewhere, a broadband ISP may become aware of the congestion but not its specific source, apart from an origin outside its network. Moreover, when the source of congestion lies off the broadband ISPs network, there is the potential that the end users of multiple providers may be impacted simultaneously. Thus, if the Commission determines to impose a greater disclosure requirement regarding the sources of congestion, it should extend the applicability of any expanded disclosure rule to all entities involved, from the edge provider to the broadband ISP. In fact, edge providers should be included because they are a potential source of the congestion.¹⁰⁴ Only in this way could the Commission even theoretically provide the public with “additional information concerning the existence and duration of congestion, *regardless of its cause*.”¹⁰⁵

¹⁰³ *Id.*

¹⁰⁴ Again, as noted elsewhere in these comments, edge provider disclosures could be informative both to broadband Internet ISPs in anticipating and meeting their needs and to end users in understanding the requirements necessary for accessing the edge providers’ content or utilizing their applications.

¹⁰⁵ NPRM, ¶ 83 (emphasis added).

IV. THE COMMISSION HAS AUTHORITY TO REGULATE BROADBAND INTERNET SERVICE AND EDGE PROVIDERS UNDER SECTION 706 OF THE ACT AND SHOULD CONTINUE ITS LIGHT TOUCH REGULATORY APPROACH BY REFRAINING FROM REGULATION OF BROADBAND INTERNET SERVICE PROVIDERS UNDER TITLE II

In its *Verizon* decision, the D.C. Circuit accepted the Commission's premise that an open Internet enables a "virtuous circle" or cycle of innovation, investment and broadband development and that the Commission may regulate the economic relationship between broadband ISPs and Internet edge providers pursuant to Section 706 to ensure that broadband ISPs do not themselves constitute "barriers" to broadband infrastructure deployment by inhibiting that openness.¹⁰⁶ The NPRM proposes to base the no-blocking and commercial reasonableness rules on the Commission's Section 706 authority, as interpreted by the *Verizon* court. At the same time, the NPRM seeks comment on whether the Commission should revisit its decisions to classify broadband Internet access service as an "information service" and reclassify the services as a "telecommunications service" under Title II of the Act. The Commission also asks whether it should "separately identify and classify as a telecommunications service a service that 'broadband providers . . . furnish to edge providers.'"¹⁰⁷

ACA submits that reclassification of the services of broadband Internet access service providers is unwarranted and unnecessary. To the extent the Commission finds it necessary, upon a proper evidentiary record, to adopt rules prohibiting blocking and requiring broadband Internet access providers to adhere to a standard of "commercial reasonableness" in their business practices in order to protect and promote Internet openness, Section 706, as interpreted by the *Verizon* court, is sufficient.¹⁰⁸ Further, to the extent that Section 706 provides

¹⁰⁶ See *Verizon*, 740 F.3d at 643.

¹⁰⁷ NPRM, ¶¶ 142, 148.

¹⁰⁸ The Commission's jurisdiction to adopt the transparency rules was not addressed by the *Verizon* court, other than to suggest that the court would not find the imposition of such requirements to constitute per se common carriage if the question were before it. *Verizon*, 740 F.3d at 659.

the Commission authority to regulate the behavior of information service providers (*i.e.*, broadband ISPs) to protect the virtuous circle of Internet innovation by preventing harmful blocking and commercially unreasonable behavior, that provision equally provides the Commission with authority over harmful blocking and commercially unreasonable behavior on the part of other information service providers such as Internet edge providers. That is, the Commission has adequate authority under Section 706 as interpreted by the *Verizon* court to adopt rules regulating the both sides of the economic relationship between Internet access and edge providers.

For broadband ISPs, maintaining the Commission's "light touch" regulatory environment under Section 706 is key to their ability to continue to invest in their plant and in their communities.¹⁰⁹ Above all, the current regulatory regime has allowed them adequate flexibility to respond to demand for broadband Internet service without undue or disproportionate regulatory burdens. Member companies of ACA have thrived in this "light touch" regulatory environment, which has allowed them to steadily deploy broadband Internet services and upgrade infrastructure to deliver services at ever-increasing speeds. The Commission must take care not to disrupt these public policy benefits that emanate from light touch regulation. To the extent the Commission adopts new open Internet rules for information service providers such as broadband ISPs, it should do so under its Section 706 authority, as interpreted by the *Verizon* court.

There is no legal justification or sound public policy reason for the imposition of Title II regulation on all or part of the broadband Internet access service, for the reasons ACA provided

¹⁰⁹ See 2009 Open Internet NPRM, ¶ 9 ("[W]e recognize the importance of preserving and protecting broadband providers' flexibility to manage their networks in a way that benefits consumers and will further the safety, security and accessibility of the Internet. We also recognize the importance . . . of preserving and protecting the ability of broadband providers to experiment with technologies and business models to help drive deployment of open, robust, and profitable broadband networks across the nation.").

in response to the Commission’s 2010 “Third Way” Inquiry.¹¹⁰ Broadband Internet service offered today by network providers is not factually different than when the Commission last examined this question, and such a change is required for the Commission to support a change in the regulatory classification of the service. Apart from the question of legal authority, imposing utility-style regulation on broadband ISPs, particularly smaller providers, would have an immediate and deleterious economic impact. Further, the imposition of Title II status on broadband ISPs would fail to achieve the goal of prohibiting “paid prioritization” sought by reclassification advocates for the simple reason that Title II prohibits only “unjust and undue” discrimination while protecting the ability of common carriers to offer a service to similarly situated buyers on similar rates, terms, and conditions.¹¹¹ In view of the lack of legal support, the enormous costs, and correspondingly few gains, the imposition of utility-style regulation on broadband ISPs would simply be bad public policy.

¹¹⁰ *Framework for Broadband Internet Service*, MB Docket No. 10-127, Comments of the American Cable Association (filed July 15, 2010) (“ACA Third Way Comments”); *Framework for Broadband Internet Service*, MB Docket No. 10-127, Reply Comments of the American Cable Association (filed Aug. 12, 2010) (“ACA Third Way Reply Comments”). As noted earlier, ACA is filing these comments in response to both the NPRM and the Wireline Competition Bureau’s request for commenters to refresh the record in the Third Way NOI proceeding.

¹¹¹ 47 U.S.C. § 202(a); *See, e.g., Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010; Establishment of Rules and Requirements for Priority Access Service*, Second Report and Order, 15 FCC Rcd 16720 (2000) (finding Priority Access Service, a wireless priority service for both governmental and non-government public safety personnel, “*prima facie* lawful” under section 202); *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Interexchange Carrier Purchases Of Switched Access Services Offered By Competitive Local Exchange Carriers; Petition of US West Communications, Inc. for Forbearance from Regulation as a Dominant Carrier in the Phoenix, Arizona MSA*, Fifth Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 14221 (1999) (granting dominant carriers pricing flexibility or special access services, allowing both higher charges for faster connections as well as individualized pricing and customers discounts); *GTE Telephone Operating Companies Tariff F.C.C. No. 1 et al.*, 9 FCC Rcd 5758 (Common Carrier Bur. 1994) (approving tariffs for Government Emergency Telephone Service (GETS), a prioritized telephone service, and additional charges therefor); *see also, e.g., Interstate Commerce Commission v. Baltimore & O.R. Co.*, 145 U.S. 263, 283–84 (1892) (noting that common carriers are “only bound to give the same terms to all persons alike under the same conditions and circumstances,” and “any fact which produces an inequality of condition and a change of circumstances justifies an inequality of charge”). Nor, as the Commission itself concedes, could paid prioritization be prohibited under Section 706. NPRM, ¶ 138.

Nor can imposing common carrier status be reasonably related to the goal of encouraging broadband deployment, which is a key policy objective in this proceeding, in Section 706, and more generally in the Commission's overall policy agenda. Title II "reclassification" or partial "classification" of broadband Internet access service would have immediate and disastrous economic consequences for small and medium-sized ISPs and cannot be justified. No amount of forbearance could undo the harm of imposing Title II regulation on broadband ISPs, and the Commission should refrain from taking this unnecessary and destructive route.

A. The Commission has Adequate Authority under Section 706 as Interpreted by the Verizon Court to Adopt Rules to Protect and Promote the Open Internet Applicable to Broadband Internet Access and Edge Providers.

The NPRM proposes that the Commission "exercise its authority under Section 706, consistent with the D.C. Circuit's opinion in *Verizon v. FCC*," to adopt the proposed no-blocking and commercial reasonableness rules.¹¹² The NPRM interprets "sections 706(a) and (b) as independent and overlapping grants of authority that give the Commission the flexibility to encourage deployment of broadband Internet access service through a variety of regulatory methods, including removal of barriers to infrastructure investment and promoting competition in the telecommunications market, and, in the case of section 706(b), giving the Commission authority to act swiftly when it makes a negative finding of adequate deployment," and seeks comment on the Commission's authority under Section 706.¹¹³ ACA agrees with this interpretation of the Commission's authority under Section 706. Further, ACA agrees that the Commission may rest open Internet rules once again solely on Section 706 by following the *Verizon* court's suggestions for avoidance of the imposition of "per se common carrier" obligations upon broadband Internet access providers. ACA submits further that Section 706

¹¹² NPRM, ¶ 142.

¹¹³ *Id.*

permits the Commission to regulate edge providers to the same extent it may regulate broadband Internet access service providers.

1. The Commission May Rely upon Section 706, as Interpreted by the Verizon Court, to Regulate Practices of Broadband Internet Access Service Providers that Threaten Internet Openness.

Sections 706 (a) and (b) have been interpreted by both the Commission and the *Verizon* court as granting the Commission authority to adopt rules that would “‘encourage the deployment’ of advanced telecommunications capability by promoting competition in the telecommunications market and removing barriers to infrastructure investment.”¹¹⁴ More specifically, the *Verizon* court upheld the Commission’s authority under Section 706 to regulate “broadband providers’ economic relationships with edge providers if, in fact, the nature of those relationships influences the rate and extent to which broadband providers develop and expand their services for end users.”¹¹⁵ In the NPRM, the Commission has interpreted the court’s decision as suggesting that Section 706 supplies authority for an appropriate no-blocking rule based on the its conclusion that “safeguarding consumers’ ability to access and effectively use the lawful content, applications, services and devices of their choice on the Internet is an essential component of protecting and promoting the open Internet.”¹¹⁶ Further, the Commission tentatively concludes that “by preserving end users’ ability to access the Internet content of their choice, reinstating a no-blocking rule would increase demand for broadband services and thus increase investment in broadband services and thus increase investment in broadband network infrastructure and technologies.”¹¹⁷ Similar reasoning was proffered in the

¹¹⁴ *Id.*, ¶ 143; *Verizon*, 740 F.3d at 635-643.

¹¹⁵ *Verizon*, 740 F.3d at 643.

¹¹⁶ See NPRM, ¶ 95.

¹¹⁷ See *id.*, ¶¶ 94-95. The key difference between the vacated no-blocking rule and the no-blocking rule propose in the NPRM is the Commission’s revised rationale that the rule be interpreted as requiring the provision of access to broadband subscribers generally leaving broadband ISPs and edge providers free to engage in individualized bargaining for access about the minimum level of service necessary to provide such generalized access, subject to the requirement of “commercial reasonableness.” Once again, the Commission proposes to apply a more comprehensive no-blocking rule to providers of fixed broadband

NPRM in support of a companion rule requiring broadband ISPs to observe a standard of commercial reasonableness in their practices concerning the provision of fixed broadband Internet access service.¹¹⁸

The Commission's proposed no-blocking and commercial reasonableness rules are consistent with the *Verizon* court's view of the type of rules permissible under Section 706. The NPRM proposes to re-adopt the Commission's 2010 no-blocking rule with a clarification intended to preserve the ability of broadband providers to negotiate individualized, differentiated arrangements with similarly situated edge providers so long as they do not degrade lawful content or service in their "best efforts" mass-market offering below a minimum level of access. This approach of permitting individualized negotiations with some edge providers while still protecting the ability of all edge providers to continue to reach end users unimpeded over a "best efforts" service fits well within the "roadmap" laid out by the court for avoiding the imposition of "per se common carrier" status.¹¹⁹ Similarly, the proposed commercial reasonableness rule follows the court's directive to avoid relegating fixed broadband Internet access providers to "per se common carrier" status by permitting them to serve customers and carry traffic on an individually negotiated basis so long as such conduct is commercially reasonable as judged under a "totality of the circumstances" standard, without requiring them to hold themselves out to serve all indiscriminately on the same or standardized terms.¹²⁰

Internet access services than is applied to mobile broadband Internet access service providers. See Appendix A, Proposed Rules, § 8.5, No Blocking.

¹¹⁸ *Id.*, ¶ 116. The rule proposed applies only to fixed broadband ISPs and specifies that "reasonable network management" shall not constitute a commercially unreasonable practice. See Appendix A, Proposed Rules, § 8.7, No Commercially Unreasonable Practices.

¹¹⁹ *Id.*, ¶¶ 89-97; *Verizon*, 740 F.3d at 658-659 (suggesting that an interpretation of the 2010 "no blocking" rule that required broadband providers to furnish service to end users at a level sufficient to make Internet edge services usable, over and above which providers could negotiate for enhanced speeds, etc. would not run afoul of the prohibition under the Act of imposing common carrier obligations on information service providers).

¹²⁰ NPRM, ¶¶ 111-136; *Verizon*, 740 F.3d at 655-658 (discussing why the FCC's data roaming rule, permitting individualized negotiations, that did not impose per se common carrier status on mobile wireless carriers whereas the 2010 "no discrimination" rule did impose such status by requiring

Accordingly, the Commission may comfortably rest its exercise of regulatory authority to protect Internet openness by regulating the practices of broadband Internet access providers in this manner under Section 706.

2. Section 706 as Interpreted by the Verizon Court Also Permits the Commission to Regulate the Practices of Internet Edge Providers That Threaten Internet Openness.

To the extent the Commission has the authority it asserts under Section 706 to regulate broadband ISP interference with the virtuous cycle of edge innovation/consumer demand/broadband deployment/edge innovation for the purpose of protecting and promoting Internet openness, it also has the authority it needs to regulate the behavior of Internet edge providers that threaten this same openness. Specifically, Section 706 provides the Commission authority to protect Internet openness from practices of edge providers that threaten to block consumer access to content otherwise made freely available on the Internet. It also provides the Commission authority to prevent edge providers from engaging in commercially unreasonable practices in their relations with broadband Internet service providers. Furthermore, Section 706 permits the Commission to apply transparency obligations on the edge providers. As ACA demonstrates, should the Commission find it necessary to adopt open Internet rules to protect the “virtuous circle” of Internet innovation, investment and deployment by applying them to broadband ISPs, at the same time – if it is to be successful in achieving its public policy objectives – it cannot leave Internet content providers like CBS, News Corp. or Viacom and other edge providers like Google, Netflix, or Amazon free to selectively block access, engage in commercially unreasonable practices, and hide their actions behind a veil of secrecy, or as in the case of Viacom, hypocrisy.

broadband ISPs to hold themselves out indiscriminately to carry traffic for Internet edge providers at a mandated fee of “zero”).

The D.C. Circuit rejected Verizon's arguments that the Commission's authority under Section 706 would be unbounded if it accepted the Commission's "virtuous circle of innovation" reasoning in support of its authority to encourage broadband deployment and remove barriers to telecommunications competition through the imposition of "no-blocking" and non-discrimination rules on broadband ISPs.¹²¹ The court pointed to the fact that the Commission's authority under Section 706(b) is constrained by "both the boundaries of the Commission's subject matter jurisdiction and the requirement that any regulation be tailored to the specific statutory goal of accelerating broadband deployment."¹²²

As demonstrated below, the Commission has ample subject matter and regulatory authority under Title I and Section 706 to adopt rules that work bilaterally to govern the economic relationship of broadband ISPs and Internet edge providers. Taken together, Sections 706(a) and (b) direct the Commission to "encourage deployment" of advanced telecommunications capability by promoting competition in the telecommunications market and removing barriers to infrastructure investment.¹²³ The Commission's broad authority to protect Internet openness under Section 706 permits, if not compels, the Commission to reach the behavior of Internet edge providers for precisely the same purpose of ensuring that the virtuous "circle" of innovation on the Internet is not broken by the anticompetitive or discriminatory actions of "must have" Internet edge providers.

¹²¹ Verizon had dubbed this theory a "triple-cushion shot." Verizon, 740 F.3d at 643. The court noted that it may be, but what counts is getting the ball in the pocket, which it found the Commission to have done in this instance. "In billiards, however, a triple-cushion shot, although perhaps more difficult to complete, counts the same as any other shot. The Commission could reasonably have thought that its authority to promulgate regulations that promote broadband deployment encompasses the power to regulate broadband providers' economic relationships with edge providers if, in fact, the nature of those relationships influences the rate and extent to which broadband providers develop and expand their services for end users." *Id.*

¹²² *Id.* at 640-643.

¹²³ 47 U.S.C. § 1301; NPRM, ¶ 43. Whether the Commission *should* exercise this authority to impose open Internet rules on the record before it is a separate question.

Subject matter jurisdiction. The Commission's subject matter jurisdiction is set forth in Sections 1 and 2 of the Act. The former provides that, "[f]or the purpose of regulating interstate and foreign commerce in communication by wire or radio," the Act "creates" the FCC, and the latter providing that "[t]he provisions of this chapter shall apply to all interstate and foreign communication by wire or radio" and "to all persons engaged within the United States in such communication or transmission" by radio or wire.¹²⁴ In addition to these general statements, Section 4 – which describes the Commission's organization and structure – provides that "[t]he Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this chapter, as may be necessary in the execution of its functions."¹²⁵

Edge providers are involved in interstate and foreign communication by wire or radio insofar as they utilize or form a part of the interconnected "network of networks" that comprise "the Internet" for the purpose of responding to end user requests for their content, applications and services.¹²⁶ In many cases, these Internet edge providers provision their own Internet

¹²⁴ 47 U.S.C. §§ 151, 152(a).

¹²⁵ 47 U.S.C. § 154(i).

¹²⁶ There is no set definition of "the Internet." Congress included one definition in Section 230(f). 47 U.S.C. § 230(f)(1) ("The term 'Internet' means the international computer network of both Federal and non-Federal interoperable packet switched data networks."). The Commission has cited various definitions over time, including in its 2009 Open Internet NPRM, which refers to the Internet as a "network of networks." See 2009 Open Internet NPRM, ¶ 17; see also *id.*, Appendix, Proposed Rules, § 8.3 ("Internet. The system of interconnected networks that use the Internet Protocol for communication with resources or endpoints reachable, directly or through a proxy, via a globally unique Internet address assigned by the Internet Assigned Numbers Authority."); see also Esbin, "Internet Over Cable: Defining the Future in Terms of the Past," FCC OPP Working Paper No. 3, at 50 (Sept. 1998), available at http://transition.fcc.gov/Bureaus/OPP/working_papers/oppwp30.pdf ("The Internet is not a single physical or tangible entity, but rather a complex series of interconnected computer networks forming a widespread information infrastructure, commonly described as a 'network of networks.' Such networks are connected in a manner which permits each computer in any network to communicate with computers on any other network in the system by using the non-proprietary Internet protocol ("IP"), a set of rules for exchanging data. This global web of linked networks and computers is referred to as "the Internet." Some of the computers and computer networks that make up the Internet are owned by governmental and public institutions, some are owned by non-profit organizations, and some are privately owned by corporations. The resulting whole is a decentralized, global medium of communications – or 'cyberspace' -- that links people, institutions, corporations, and governments around the world."). Similarly, the Oxford Dictionary defines "the Internet" as "a global computer network providing a variety of information and communication

platforms and purchase or provision their own connectivity to the Internet to enable them to engage in this interstate commerce in communications. For example, Internet content companies, like Netflix and others, buy connections to Internet points of presence for their originating traffic.

Internet content, services and applications providers fit comfortably within the ambit of the definition of the “information service” providers under Communications Act. The Act defines an “information service” as “the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service.”¹²⁷ No less than broadband ISPs, edge providers make available to consumers “information via telecommunications” in response to their requests, and they commonly do so using telecommunications that they provision for themselves or obtain from others.

Regulatory Authority. Under *Verizon*, the Commission’s Section 706 authority “encompasses the power to regulate broadband providers' economic relationships with edge providers if, in fact, the nature of those relationships influences the rate and extent to which broadband providers develop and expand their services for end users.”¹²⁸ To the extent Internet content provider actions influence the rate and extent to which broadband ISPs develop and expand their services for end users, the Commission may exercise this same authority to

facilities, consisting of interconnected networks using standardized communication protocols.” See ["http://www.oxforddictionaries.com/us/definition/english/Internet](http://www.oxforddictionaries.com/us/definition/english/Internet).

¹²⁷ 47 U.S.C. § 153(20). In contrast, the Act defines “telecommunications service” as “the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.” 47 U.S.C. § 153(46).

“Telecommunications” is defined as “the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.” 47 U.S.C. § 153(43).

¹²⁸ *Verizon*, 740 F.3d at 643.

regulate their commercial behavior. As Dr. Lehr has demonstrated, there are classes of Internet edge providers – and most certainly these would include powerful Internet content providers like Google, Facebook, Disney/ESPN, Amazon, eBay, or Netflix – that would severely threaten the overall value of an ISP’s broadband service if they chose to engage in commercially unreasonable practices affecting broadband Internet access subscribers, such as reverse blocking or degraded access utilizing the telecommunications that they provision for themselves or obtain from others. ACA believes the record as a whole will provide the Commission with no less evidence warranting the exercise of this authority over Internet content providers who have the incentive and ability to selectively block access to content they make freely available to other Internet users to those end users served by particular broadband ISPs than it has with respect to regulating the network management practices of broadband ISPs. ACA requests that the Commission not only explicitly acknowledge that it has as much regulatory authority over Internet edge providers as information service providers under Section 706, but that it exercise such authority in this proceeding.

Further, the Commission should not fear that, by doing so, it would be regulating “the Internet” in contravention of the Congressional policy expressed in Section 230(b)(2).¹²⁹ The Commission has found that its open Internet rules were consistent with several provisions of Section 230 because they further the Congressional policies of promoting: (i) the continued development of the Internet; (ii) “technologies which maximize user control over what information is received over the Internet;” (iii) and preserved the “vibrant and competitive free market *that presently exists for the Internet*, unfettered by Federal or State regulation.”¹³⁰ As Dr.

¹²⁹ 47 U.S.C. § 230(b)(2) (It is the policy of the United States “to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation”). The NPRM states that it “believes the Commission’s interpretation of section 706 is bolstered by th[e] congressional policies” set forth in Section 230(b)(1), (2) and (3), and seeks comment on how the Commission should read section 230(b) in exercising its section 706 authority. NPRM, ¶ 146.

¹³⁰ NPRM, ¶ 146, *citing* 47 U.S.C. §§ 230(b)(1), (3) (emphasis added).

Lehr observes, broadband Internet access providers are just as much a part of “the Internet” as edge providers.¹³¹ If the Commission’s proposed open Internet rules as applied to one class of information service providers – broadband ISPs – do not contravene Section 230(b)(2), neither would they have that effect if applied to another class – Internet edge providers.

Moreover, the extent of Commission regulatory authority under Section 706 over edge providers is subject to the same constraints identified by the *Verizon* court: the need to avoid the imposition of *per se* common carrier obligations and the need for any rule adopted to further the statutory directive of promoting broadband deployment by removing barriers to infrastructure investment and by promoting competition in the telecommunications market.¹³² As discussed above, to the extent Section 706 provides the Commission authority to regulate the behavior of broadband ISPs to protect the virtuous circle of Internet innovation by preventing harmful blocking and commercially unreasonable behavior, it provides the Commission the same authority over harmful blocking and commercially unreasonable behavior on the part of other information service providers such as Internet edge providers. Specifically, Section 706 provides the Commission with adequate authority to implement a balanced policy of regulating the behavior of both broadband ISPs and Internet edge providers that threatens Internet openness and, in turn, the deployment and adoption of broadband Internet networks and services.

¹³¹ Lehr Paper at 10-11 (“What are often referred to as broadband access “on ramps” are part of the Internet and cannot be thought of as separate components that serve solely the function of connecting users or edge providers to the Internet The demand for broadband Internet access services is inextricably linked to the demand for all of its components since broadband access is only valuable when used in conjunction with other communications goods and services supported in the ecosystem.”).

¹³² *Verizon*, 470 F. 3d at 641, 650 (the scope of any authority granted by Section 706(b) is limited “both by the boundaries of the Commission’s subject matter jurisdiction and the requirement that any regulation be tailored to the specific statutory goal of accelerating broadband deployment;” the Commission may not this authority in a manner that contravenes any specific prohibition contained in the Act, including by the imposition of *per se* common carrier obligations on information service providers). See 47 U.S.C. § 1302(a) & (b).

However, should the Commission disagree and find that it lacks authority to regulate the behavior of Internet edge providers under Section 706 or elsewhere under the Act, the better course of action is to refrain from imposing any new open Internet rules generally than to impose such rules asymmetrically only to broadband ISPs and to continue to rely on its broadly accepted Internet Policy Statement, together with the current transparency rule, to guide behavior.

B. The Commission Should Not Reclassify Broadband Internet Access Service as a Title II Common Carrier Service.

In addition to seeking comment on whether the Commission should base its open Internet rules on its Section 706 authority, the Commission seeks further and updated comment on whether it should instead revisit its prior classification decisions and apply Title II to broadband Internet access service (or components thereof).¹³³ The NPRM seeks comment specifically on marketplace changes that would bear upon the classification decision, whether broadband Internet access service is being held out on a common carrier basis today, and whether the Commission should compel the offering of such functionality on a common carrier basis.¹³⁴ The NPRM also asks whether the Commission should separately identify and classify a broadband service that is furnished to edge providers in order to protect and promote Internet openness.¹³⁵ Finally, comment is sought on the extent to which forbearance from certain provisions of the Act or the Commission's rules would be justified in order to strike the right

¹³³ Specifically, the NPRM questions whether the Commission should revisit the classification of broadband Internet access service as an information service and whether it should separately identify and classify as a telecommunications service a service that "broadband providers . . . furnish to edge providers." NPRM, ¶ 148.

¹³⁴ *Id.*, ¶ 150. Comment is also sought on the extent to which any telecommunications component of that service is integrated with other components to the extent that it is "inextricably intertwined" with the underlying connectivity service, and whether the Commission should compel the offering of "such functionality" on a common carrier basis. *Id.*, ¶¶ 149-150.

¹³⁵ *Id.*, ¶ 151.

balance between minimizing the regulatory burdens on providers and ensuring that the public interest is served.¹³⁶

Given the ample breadth of its authority to accelerate broadband deployment by removing threats to Internet openness under Section 706 of the Act, the Commission has no need to attempt a complete or partial reclassification of broadband Internet access as a Title II service in order to adopt rules for the protection and promotion of the open Internet. Separate and apart from the scope of its authority under Section 706, reclassification of all or part of the broadband Internet access service as a Title II telecommunications service is unwarranted, unjustified and would be bad policy. Thus, the short answer to the question whether the Commission should reclassify broadband Internet access services, or any of its components, as Title II common carrier services is a categorical “No.”

- 1. The Commission Should Not Revisit the Classification of Broadband Internet Access Service.**
 - a. There is no basis for reclassifying broadband Internet access service as a common carrier offering.**

The Commission's prior determinations established that, under the Act's service and technology-specific regulatory framework, Internet service providers should not be treated as providers of "telecommunications service." The legal question in each case turned on whether broadband Internet access simply provides a mechanism for transmitting user-generated content without modification, like traditional telephone service, or whether it functionally integrates the ability to generate, acquire, store, transform, process, retrieve and/or utilize data by offering, for example, personalized settings, ISP-provided e-mail, content storage and security functions.

In four separate rulings over a five-year period, the Commission concluded that broadband Internet access service fit the statutory definition of an "information service" based

¹³⁶ *Id.*, ¶¶ 153-155.

on the nature of the functions the end user is offered regardless of the underlying technology (cable modem, wireline broadband internet access, broadband over power line Internet access, or wireless broadband Internet access services).¹³⁷ In each decision, the FCC compared the service characteristics to the statutory definitions, keeping in mind market characteristics, the level of actual and likely competition, and congressional policy goals contained in various provisions of the Act. In each case, the Commission concluded that broadband Internet access service provided on a functionally integrated basis – *i.e.*, where the transport, data processing and content elements of the end user service were "inextricably intertwined"¹³⁸ – should not be treated as a telecommunications service.

The Commission found not only that the service characteristics best fit within the definition of information services, but also that sufficient actual and planned market entry would ensure that consumers were protected such that it *need not* regulate the services under the more restrictive framework of Title II. These rulings were consistent with over 30 years of FCC precedent.¹³⁹ The Commission has *never* treated Internet service providers as common

¹³⁷ *In re Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd. 4798, ¶ 2 (2002) ("Cable Modem Declaratory Ruling"); *In re Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities; Universal Service Obligations of Broadband Providers; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review—Review of Computer III and ONA Safeguards and Requirements; Conditional Petition of the Verizon Telephone Companies for Forbearance Under 47 U.S.C. § 160(c) with regard to Broadband Services Provided Via Fiber to the Premises; Petition of the Verizon Telephone Companies for Declaratory Ruling or, Alternatively, for Interim Waiver with Regard to Broadband Services Provided via Fiber to the Premises; Consumer Protection in the Broadband Era*, Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd. 14,853, 14,980 (2005) ("Wireline Broadband Order"); *In re United Power Line Council's Petition for Declaratory Ruling Regarding the Classification of Broadband over Power Line Internet Access Service as an Information Service*, Memorandum Opinion and Order, 21 FCC Rcd. 13,281, ¶ 9 (2006) ("Broadband Over Power Line Order"); *In re Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, Declaratory Ruling, 22 FCC Rcd. 5901, ¶¶ 18, 22–26 (2007) ("Wireless Broadband Declaratory Ruling"); *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 968 (2005) ("Brand X").

¹³⁸ Wireline Broadband Order, ¶ 9.

¹³⁹ In the Matter of Federal-State Joint Board on Universal Service (Report to Congress), CC Docket No. 96-45, 13 FCC Rcd 11,501 (1998) ("Stevens Report").

carriers, and cable operators have never provided broadband transmission as common carriers. The Commission has always treated Internet service providers as "enhanced" or "information service" providers not subject to Title II regulation.¹⁴⁰

The key to the Commission's decisions classifying broadband Internet access service as an information service were its determinations, in each case, that although broadband Internet access contained a telecommunications component—"via telecommunications" being part of the definition—the providers were *not separately offering* telecommunications service to the public for a fee. Most importantly, the Commission determined that, in the case of cable modem service, it would not surgically remove that "via telecommunications" element and treat it as if the cable operators were offering a transmission capability separately for the purpose of treating cable modem service as a telecommunications service.¹⁴¹

The Supreme Court upheld the *Cable Modem Declaratory Ruling* in its *Brand X* decision.¹⁴² The Court ruled that the Commission acted reasonably when it classified the cable modem service as an information service rather than a telecommunications service on the basis of the *integrated functionality offered* to the end user. Following the *Brand X* decision, the Commission removed its Computer Inquiry requirements that had compelled wireline carriers to offer a pure transmission component to third-party ISPs, on the basis of changed market characteristics. There being no separate telecommunications service component, the

¹⁴⁰ Congress codified this approach in the Telecommunications Act of 1996 when it created the statutory definitions of "information service" and "telecommunications service." Not only has the Commission declined to treat ISPs as common carriers, the courts have as well. See, e.g., *Howard v. AOL*, 208 F.3d 741, 753 (9th Cir. 2000) (quoting the Stevens Report that "[t]he service that Internet access providers offer to members of the public is Internet access," and agreeing with the FCC's analysis that because hybrid services like those offered by AOL that include email and similar offerings – including "chat rooms" that are under AOL's control that may be reformatted or edited – and accessed by its subscribers are information or enhanced services, "AOL does not act as a mere conduit for information").

¹⁴¹ Cable Modem Declaratory Ruling, ¶ 43 ("As we have found above, cable modem service providers currently offer subscribers an integrated combination of transmission and the other components of cable modem service. EarthLink invites us, in essence, to find a tele-communications service inside every information service, extract it, and make it a stand-alone offering to be regulated under Title II of the Act. Such radical surgery is not required.")

¹⁴² *Brand X*, 545 U.S. at 968.

Commission classified wireline broadband Internet access service as an information service, as it had the cable modem service, based on the integrated functionality provided the end user.¹⁴³ Undoing this series of decisions now would require the Commission to effectively disprove each of its earlier factual findings and demonstrate why elements of broadband Internet access service are no longer "inextricably intertwined," why it should now force providers to offer the telecommunications functionality on a common carrier basis, and why the competitive forces it cited in its earlier Orders are no longer present in the marketplace.

Regulatory policy may *guide* an exercise of regulatory authority, but the Commission's ability to make purely policy choices is constrained by the words of the Act. The pertinent terms of the Communications Act have not changed since 1996. To support a change in *regulatory classification*, as opposed to a change in *regulatory policy*, the Commission will have to show that the broadband Internet service offered today over cable, wireline, power line and wireless networks is *factually different* today than it was seven years ago, when it last examined the question.

Yet nothing has changed in the intervening years to disturb these factual findings and conclusions. Broadband ISPs today are offering and providing the same essential functionalities to consumers today that they were when the Commission last analyzed the matter, albeit at substantially faster speeds.¹⁴⁴ Moreover, as Dr. Lehr has noted, if anything,

¹⁴³ Wireline Broadband Order, ¶¶ 41-46. The Commission nonetheless left open the option for carriers to continue to offer broadband transmission service on a common carrier basis, if they so desired. *Id.*, ¶¶ 89-95. The Commission later extended that treatment to broadband over power line and wireless facilities. See Broadband Over Power Line Order; Wireless Broadband Declaratory Ruling, ¶¶ 19-26, 29-33.

¹⁴⁴ See Hilliard Declaration, ¶ 4; McKay Declaration, ¶ 4. See also Letter from Rick Chessen, National Cable & Telecommunications Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 14-28 (filed May 14, 2014) (the functions offered to consumer by broadband Internet service providers have not materially changed since the Commission analyzed them in previous orders); *Preserving the Open Internet, Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Comments of AT&T Inc., at 70-78 (filed Jan. 14, 2010) (detailing how the data processing and transmission components of broadband Internet access offered by AT&T and other broadband ISPs are more tightly integrated components of a unified service offering in 2010 than previously).

broadband Internet access providers are offering more enhanced functionalities that have become necessary as the importance of safe and secure broadband Internet access has grown (e.g., filtering for malware, policy-based routing), and have added new functionalities, including expanded options for personal data storage, media messaging, or WiFi roaming capabilities.¹⁴⁵ If anything, mass market broadband Internet access service is a more, not less, differentiated and complex information service today than it was when last classified as such by the Commission, making reclassification of the service as a transparency telecommunications even less appropriate today than earlier.

The Commission has previously described “Internet access service” as a service that always and necessarily combines computer processing, information provision, and computer interactivity with data transport, enabling end users to run a variety of applications such as e-mail, and access web pages and newsgroups.¹⁴⁶ More specifically, it has found wireline broadband Internet access service, like cable modem service, to be “a functionally integrated, finished service that inextricably intertwines information-processing capabilities with data transmission such that the consumer always uses them as a unitary service.”¹⁴⁷ It found that these services enabled an end user to retrieve files from the World Wide Web, the end user has the capability to interact with information stored on the service provider’s facilities.¹⁴⁸ Moreover, “to the extent a provider offers end users a capability to store files on the service provider’s

¹⁴⁵ Lehr Paper at 10 and n.18.

¹⁴⁶ See Wireline Broadband Order, ¶ 14; Cable Modem Declaratory Ruling, ¶ 36; Wireline Broadband NPRM, 17 FCC Rcd at 3019, ¶ 14 (*citing Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report to Congress, 13 FCC Rcd 11501, ¶ 33 (1998) (*Report to Congress*) (Internet access services are services that “alter the format of information through computer processing applications such as protocol conversion and interaction with stored data.”)); see also 47 U.S.C. § 231(e)(4); *Reno v. American Civil Liberties Union*, 521 U.S. 844, 851 (1997).

¹⁴⁷ Wireline Broadband Order, ¶ 9, *citing* Cable Modem Declaratory Ruling, ¶ 38. That is, the transmission component of wireline broadband Internet access service is “part and parcel” of [that service] and is integral to [that service’s] other capabilities.” Brand X, 545 U.S. at 988, *quoting* Cable Modem Declaratory Ruling, ¶ 39. The same findings were later made with respect to wireless broadband and broadband over power line. See *supra*, note 143.

¹⁴⁸ Wireline Broadband Order, ¶ 9.

computers to establish “home pages,” the consumer is utilizing the “capability for . . . storing . . . or making available information.”¹⁴⁹ On this basis, the Commission has found that providers of broadband Internet access service offer subscribers many forms of functionality and services, the ability to run a variety of application, that are intrinsic to providing broadband Internet access services that go well beyond simple packet transport and fit under the characteristics stated in the information service definition.¹⁵⁰ Since those earlier decisions, broadband access services have only become more capable and the range of services broader (e.g., including home monitoring, specialized content, and additional roaming services).¹⁵¹

As Dr. Lehr explains:

When mass-market consumers purchase broadband Internet access they are purchasing a bundle of functionalities that allow them to exchange packets with other end hosts, whether those are with other end users or edge providers (e.g., content on a website) and wherever those hosts are located (whether on the same sub-net or across the globe). This includes the necessary packet transport and routing functionality that is intrinsic to the Internet's role as a data communications network as well as a range of other functions and services such as email, news group access, Web access, and various network monitoring and traffic management features (e.g., SPAM and parental filters, virus scanning, etc.). Fundamentally, broadband access service includes the ability of end-users to access (use) popular content, applications, and devices as part of the broadband Internet experience. Over time, as the capabilities of applications, devices, and ISP services, including broadband access, have improved and new services have emerged (e.g., more support for real-time multimedia, new offerings for home sensor management, etc.), the scope of services that are included in broadband access have expanded. The demand for broadband Internet access services is inextricably linked to the demand for all of its components since broadband access is only valuable when used in conjunction with other communications goods and services supported in the ecosystem.¹⁵²

¹⁴⁹ *Id.*

¹⁵⁰ See, e.g., Cable Modem Declaratory Ruling, ¶¶ 10, 16-17, 35-38; Wireline Broadband Order, ¶¶ 9, 13-15.

¹⁵¹ Lehr Paper at 10.

¹⁵² *Id.* at 11. Dr. Lehr further explains that the transport and routing functionality often includes Domain Name Services (DNS) which maps website names to network addresses, and may include additional services for dynamic or static address assignment, specialized routing functionality (including fault tolerant, least cost, or some other policy-based routing service), and other services, such as support for caching, protocol conversions, and rate adaptation support. Some of this functionality may be accessed directly by end-users, some by their client device software applications, and some by other service providers upstream, whether edge providers or other ISPs. *Id.* at n. 34.

This is consistent with statements from ACA members that, with the exception of increasing the speed of their mass-market Internet access offerings, they are doing nothing different today than they were at the inception of their service offerings.¹⁵³ Accordingly, there is no factual basis for a different regulatory classification for broadband Internet access services today.

b. The Commission’s “light touch” approach to broadband Internet Regulation has been highly successful, and there is no demonstrable need to alter this approach.

Nor would it be good policy to change the classification of these services for the purpose of imposing Title II common carrier obligations. For over a decade, the Commission has created a highly successful “light touch” regulatory environment for broadband Internet services. ACA member companies have thrived in this environment and have been able to bring broadband Internet service to some of the hardest-to-serve regions of the country. Despite their small size, ACA members have invested significantly in infrastructure to provide a suite of advanced communications services to homes, businesses and community institutions. Based on data from National Cable Television Cooperative, the National Broadband Map, and SNL Kagan, ACA members pass 18.2 million homes with broadband plant, and serve 6.3 million subscribers. ACA members serve a disproportionate share of customers in small cities and rural areas. While 28% of the US population lives in small cities and rural areas, 42% of the people covered by ACA members live in these areas.¹⁵⁴

Set against this impressive record of broadband deployment is the utter lack of consumer complaints of small and mid-sized broadband ISP deviations from the Commission’s Open Internet principles or complaints about their disclosures under the Commission’s 2010

¹⁵³ See McKay Declaration, ¶ 4; Hilliard Declaration, ¶¶ 2-4.

¹⁵⁴ The population density in the broadband footprint of ACA members is 145 per square mile as compared to 709 per square mile for the top six cable multisystem operators, Comcast, Time Warner Cable, Charter Communications, Cox Communications and Bright House Networks. See Cartesian Report at 3-7.

Open Internet rules. In fact, the number of substantiated deviations from the Commission's Open Internet principles since 2005 is relatively small compared to the hundreds of millions of broadband Internet connections that are made *each day* in this country without incident, and nearly all of them involved larger ISPs. Departing from a "light touch" policy approach, risks foisting on smaller providers increased regulatory burdens and costs that will impair their ability to maintain and expand their broadband Internet offerings. Even assuming that the Commission has authority to impose common carrier status on broadband ISPs to carry out this purpose, ACA counsels the Commission to stay this course and refrain from reclassifying broadband Internet services, in whole or part, for the sole purpose of subjecting providers to extensive economic regulation as Title II common carriers.¹⁵⁵

¹⁵⁵ There is some debate as to whether the Commission can involuntarily subject an entity to Title II regulation, that is, supply the legal compulsion that the entity hold itself out as a common carrier for hire. Many commenters claim such authority exists, whereas others dispute the Commission's authority to impose common carrier status at will. *Compare, e.g., Open Internet Remand*, GN Docket No. 14-28, Comments of Consumers Union, at 1-3 (filed Mar. 24, 2014) (advocating reclassification); *Open Internet Remand*, GN Docket No. 14-28, Comments of The Benton Foundation, at 7-9 (filed Apr. 11, 2014) (advocating reclassification); Susan Crawford, *So, who owns the Internet?*, HARVARD GAZETTE, Jan. 7, 2014, available at <http://news.harvard.edu/gazette/story/2014/01/so-who-owns-the-internet/> ("All the FCC has to do is change their mind and say, 'We got it wrong.' [The FCC] has ample political congressional authority to do that, this is just a political battle.") *with Preserving the Open Internet, Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Comments of the Progress and Freedom Foundation, at 74-81 (filed Jan. 14, 2010) (the FCC is not free to impose common carrier status at will); *Preserving the Open Internet, Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Reply Comments of Verizon and Verizon Wireless, at 97-98 (filed Apr. 26, 2010) ("The Commission's power to compel an entity to act as a common carrier where that entity does not voluntarily choose to do so is limited, and those limits are grounded in fundamental concepts of property rights."); 2010 Open Internet Reply Comments of AT&T at 144-15; Scott Cleland, *Title II is no 'solid legal foundation' for broadband*, THE PRECURSOR BLOG, Apr. 28, 2010, available at <http://precursorblog.com/?q=content/title-ii-no-solid-legal-foundation-broadband>. At the very least, in pre-1996 cases, the D.C. Circuit made it clear that the FCC may not impose Title II regulation based simply on its notions of good policy. In the NARUC I decision, *National Ass'n of Regulatory Utility Commissioners v. FCC*, 525 F. 2d 630 (1976), the court rejected portions of an FCC order concerning special mobile radio systems "which imply an unfettered discretion in the Commission to confer or not confer common carrier status on a given entity, depending on the regulatory goals it seeks to achieve." Similarly, in *Sw. Bell Tel. Co. v. FCC*, 19 F.3d 1475 (D.C. Cir. 1994), the court overturned an FCC attempt to regulate the provision of dark fiber by requiring phone companies to provide dark fiber under tariff on a common carrier basis. *But see Virgin Islands Tel. Corp. v. FCC*, 198 F.3d 921, 925-27 (D.C. Cir. 1999); *AT&T Submarine Systems, Inc.*, 13 FCC Rcd 21,585, ¶¶ 7-8 (1998) (FCC decision to impose common carrier treatment depends on whether "the public interest . . . require[s] the carrier to be legally compelled to serve the public indifferently" on the grounds the carrier "has sufficient market power"); *Cable & Wireless, PLC*, Cable Landing License, 12 FCC Rcd 8516, ¶¶ 12-17 (1997). At the very least, the issue of FCC authority to compel a broadband ISP to provide service on a common carrier basis is far from settled, and the better course of action for the Commission is to avoid ACA Comments
GN Docket Nos. 14-28; 10-127
July 17, 2014

2. Reclassification Under Title II Would Significantly Increase Regulatory Obligations and Compliance Costs for Small Providers.

a. The direct economic costs of Title II regulation will be substantial.

In its previous filings, ACA detailed the practical implications that reclassification, even if accompanied by partial forbearance from portions of Title II, will have for its small and mid-size member companies.¹⁵⁶ Efforts to comply with these Title II burdens will have an immediate and significant adverse economic impact on small broadband Internet providers, particularly those with no prior common carrier regulatory experience.

Should the Commission choose to go forward with reclassification of all or a portion of broadband Internet service from a lightly regulated “information service” to a Title II common carrier “telecommunications service,” most ACA members will suddenly be subject, for the first time, to economic and behavioral regulation of their provision of broadband Internet service. The result will be significantly increased FCC filing and reporting requirements, and a plethora of related compliance burdens, including those associated with regulatory assessments (e.g., USF contributions). Providers will also face the prospect of immediate rate increases for their pole attachments, the likelihood of attempts by state and local governments to impose service regulation and fees, and the prospect of increased state taxation burdens.¹⁵⁷ The costs associated with this new regulatory framework, many of which are fixed regardless of the size of the provider, will disproportionately burden mid-sized and smaller cable operators. These providers have fewer resources with which to respond to complaints, comply with common carrier filing requirements, and litigate the inevitable attempts to impose additional regulatory requirements, fees, and taxes at the state and local levels. In addition, reclassification would

taking this path altogether, particularly in the absence of determination that all broadband ISPs have substantial market power.

¹⁵⁶ ACA Third Way Comments at 8-13; ACA Third Way Reply Comments at 5-24.

¹⁵⁷ 5 U.S.C. § 553; ACA Third Way Reply Comments at 12-24.

likely remove the protections of the Internet tax moratorium from broadband ISPs, leaving them potentially subject to new state and local taxes.¹⁵⁸

Although it is impossible to predict with specificity, assuming the Commission coupled reclassification with partial forbearance along the lines described in its Third Way NOI, the direct and indirect burdens arising under the Title II provisions most likely not to be forborne from include, at a minimum:

Direct Regulatory Burdens under Title II:

- Increased behavioral and economic regulation of the rates, terms and conditions of service under self-executing provisions of Sections 201 and 202.
- Increased legal expenses and time associated with case-by-case adjudication of rates, terms, conditions of service under Section 208.
- Increased costs resulting from:
 - Compliance with customer proprietary network information rules pursuant to Section 222.
 - Compliance with disabilities access guidelines pursuant to Section 255.
 - Administrative recordkeeping, reporting and filing requirements associated with common carrier status.
- Increased legal expenses and time associated with potential liability for monetary damages and federal court litigation under Sections 206, 207 and 209.

Indirect Burdens Caused by Need to Reflect New Provision of Stand-alone Telecommunications Service:

- Costs associated with changes to:
 - Consumer marketing and billing materials.
 - IT systems used for billing, accounting, ordering and maintenance.
 - Customer service operations.
 - Network reconfiguration.
 - Business model for broadband Internet service
 - Need to review and revise subscriber terms of service and related agreements.

Additional Regulatory and Economic Burdens Associated with Reclassification:

¹⁵⁸ The current law banning state and local taxes on Internet access services is the "Internet Tax Freedom Act Amendment Act of 2007" that extends the prohibition, first imposed as the "Internet Tax Freedom Act" in 2004, until November 1, 2014. See 47 U.S.C. § 151. Two bills have been proposed to permanently exempt such services, the Senate's "[Internet Tax Freedom Forever Act](#)" and its companion bill in the House, the "[Permanent Internet Tax Freedom Act](#)." See also Steve Pociask, *A Perfect Storm: Net Neutrality And The End Of The Internet Tax Moratorium*, FORBES, Jul. 7, 2014, available at [http://www.forbes.com/sites/realspin/2014/07/07/a-perfect-storm-net-neutrality-and-the-internet-tax-moratorium/](http://www.forbes.com/sites/realspin/2014/07/07/a-perfect-storm-net-neutrality-and-the-end-of-the-internet-tax-moratorium/).

- Increased pole attachment rates under the telecommunications rate formula of Section 224(e).
- Likelihood of burdensome state and local telecommunications regulation.
- Prospect of the imposition of state telecommunications taxes.

The forgoing list is not exclusive, as reclassification would also impact the amount of regulatory fees owed the Commission by increasing the number of categories of regulated services fee payors must support under the Commission's regulatory fee rules,¹⁵⁹ and undoubtedly have other similar effects.

As ACA explained in its Third Way filings, the undeniable practical effect of reclassification of a lightly regulated information service, in whole or part, as a regulated telecommunications service will be a significant alteration of the legal responsibilities of broadband Internet service providers and the rights of their subscribers.¹⁶⁰ Today, broadband Internet service providers are not subject to any provision of Title II in their provision of this service. Following reclassification, and assuming the Commission follows the outline described in its Third Way NOI, however, these providers could be subject to anywhere between six and seventeen provisions of Title II and perhaps more. The practical effect will be the immediate imposition of new laws, rights, and duties on broadband Internet service providers where none exist today, together with their attendant economic and administrative costs.

This is true regardless of whether the Commission reclassifies the transmission component of the integrated broadband Internet service on the basis of a finding that all or a portion of the service *is* today being offered as a stand-alone telecommunications service or

¹⁵⁹ 47 C.F.R. §§ 1.1101 *et seq*; *Assessment and Collection of Regulatory Fees, Assessment and Collection of Regulatory Fees for the Fiscal Year 2014, Assessment and Collection of Regulatory Fees for the Fiscal Year 2013, Procedures for Assessment and Collection of Regulatory Fees*, MD Docket Nos. 14-92, 13-140, 12-201, Notice of Proposed Rulemaking, Second Further Notice of Proposed Rulemaking, and Order (rel. June 13, 2014).

¹⁶⁰ ACA Third Way Comments at 6-13; ACA Third Way Reply Comments at 3-9.

mandating that it *must be* so provided.¹⁶¹ It is also true notwithstanding the ultimate level of forbearance exercised by the Commission with respect to this service.

b. The economic burdens of reclassification will adversely impact broadband prices and deployment.

It is also evident that reclassification will also increase the costs of providing broadband Internet service as operators institute service and system changes to comply with the new regulatory mandates, and these costs will ultimately be borne by subscribers.¹⁶² The additional burdens of state and local regulation will also increase the cost of service and drain operator resources.¹⁶³ As Charter has observed, it is consumers who will “eventually shoulder the economic burden of reclassification” through increased prices as providers and state and local governments begin to re-test and litigate the parameters of regulatory authority over the newly minted telecommunications service.¹⁶⁴ Yet in the smaller markets and rural areas serving fewer and lower-income consumers per mile, it is likely that a large portion of these costs will be absorbed by the provider rather than passed along to subscribers. Very clearly, reclassification would subject providers, and especially small and mid-sized providers, to the heavy weight of a common carrier regulatory framework and its attendant

¹⁶¹ NPRM, ¶ 150. See also ACA Third Way Comments at 19-21; ACA Third Way Reply Comments at 28.

¹⁶² See, e.g., *Framework for Broadband Internet Service*, GN Docket No. 10-127, Comments of Comcast Corporation, at 36 (filed July 15, 2010) (new regulatory burdens will increase the cost of providing and using broadband); *Framework for Broadband Internet Service*, GN Docket No. 10-127, Comments of AT&T Inc., at 63 n.114 (filed July 15, 2010) (significant provider costs of compliance that include changes to accounting, billing, ordering, provisioning, customer service and maintenance systems will ultimately be borne by subscribers); *Framework for Broadband Internet Service*, GN Docket No. 10-127, Comments of Charter Communications, at 9 (filed July 15, 2010) (“Charter Third Way Comments”) (it is the consumer who will eventually shoulder the economic burden of reclassification); *Framework for Broadband Internet Service*, GN Docket No. 10-127, Comments of the National Cable & Telecommunications Association, at 79-80 (filed July 15, 2010) (reclassification may either automatically trigger state telecommunications tax assessments or encourage states to extend telecommunications taxes to broadband Internet service providers, putting, “upward pressure on the price for broadband that could impede the goal of wider adoption.”).

¹⁶³ Time Warner Cable asserted in its Third Way Comments that the significant costs of compliance with reclassification mandate will discourage investment, as the Commission itself has consistently found in the past. See *Framework for Broadband Internet Service*, GN Docket No. 10-127, Comments of Time Warner Cable, Inc., at 39-40 (filed July 15, 2010).

¹⁶⁴ Charter Third Way Comments at 9.

obligations and consequences designed without regard for the size of the provider and its ability to bear the costs.

Such results appear starkly at odds with the Commission's overarching policy goal, which ACA shares, of making available affordable broadband Internet service to all Americans as well as its statutory mandate under Section 706 to encourage broadband deployment. The deterrent effect on cable broadband deployment of suddenly increased pole attachment rates and the administrative costs of complying with common carrier mandates should concern the Commission. ACA submits that that higher costs to provide service as a result of the increased regulatory burden reclassification would impose will leave operators with less incentive to deploy and offer broadband in higher cost areas because the return on investment becomes lower than returns that could be received from other investments. If the Commission wishes to maximize private investment in smaller markets and rural areas and promote competition, then it should consider the consequences of increased regulatory burdens on operators serving these areas. The concern is not only with the adverse impact on deployment in unserved areas, but also about continued investment in areas where service is already available, including the offering of higher speeds, lower latency, and higher data usage. Furthermore, in terms of adoption, if costs are passed along to consumers, then that will have negative impact on the desire of consumers to subscribe to service in the first instance or of existing end users to subscribe to better tiers of service.

3. **The Commission Should Refrain from Identifying and Applying Title II to a Putative "Service" Broadband ISPs are Providing Internet Edge Providers.**

The NPRM also seeks comment on two proposals based on action by the Commission to identify and classify a service purportedly provided by broadband ISPs to edge providers as a common carrier offering, along the lines of reasoning suggested by the *Verizon* court that the ISPs act as the edge providers' "carriers" for the purpose of achieving its open Internet

objectives.¹⁶⁵ The two theories approach the question somewhat separately, but each essentially depends upon the Commission segmenting the service actually provided by broadband ISPs to their subscribers – access to all endpoints of the Internet – into an “end user-facing” access service and an “Internet-facing” access service. The Mozilla proposal requests the Commission to “recognize” what it terms “remote delivery services in terminating access networks; classifying these services as “telecommunications service” under the Act; and forbear as necessary from “inapplicable or undesirable provisions of Title II for such services.”¹⁶⁶ The other proposal, from academics Tim Wu and Tejas Narechania of Columbia University, would split broadband Internet access service into two components: (i) the subscriber’s request [for] data from a third-party provider; and second, the content provider’s response to the subscriber. The latter would be classified as “sender-side” traffic, sent in response to a broadband provider’s customer’s request as a telecommunications service, and be subject to Title II as a stand-alone offer of telecommunications—transmission between points specified by the end-user.¹⁶⁷ In this case, the “end user” would be the edge provider rather than the broadband ISP’s retail customer.

Each of these proposals are crafty ways to re-package an old concept and impose new regulatory obligations on broadband ISPs to respond to requests for service from entities they have no direct commercial arrangements with today and impose charges for any “telecommunications service” provided in response.¹⁶⁸ First, the Commission has previously

¹⁶⁵ NPRM, ¶¶ 151-152.

¹⁶⁶ NPRM, ¶ 152; see Mozilla, Petition to Recognize Remote Delivery Services in Terminating Access Networks and Classify Such Services as Telecommunications Services Under Title II of the Communications Act, GN Docket Nos. 09-91, 14-28, WC Docket No. 07-52, at ii, 10-13 (filed May 5, 2014).

¹⁶⁷ NPRM, ¶ 152; Letter from Tim Wu and Tejas Narechania, Columbia University to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 14-28, Attach. at 13-14 (filed Apr. 14, 2014).

¹⁶⁸ Even if a common carrier is only obligated under Section 201(a) to provide service “upon reasonable request therefor,” they are obligated to make the threshold determination whether a request would be
ACA Comments
GN Docket Nos. 14-28; 10-127
July 17, 2014

and correctly declined to extract the telecommunications element of the integrated broadband Internet access service and give it separate regulatory status and treatment as a “telecommunications service,” and should decline to do so again.¹⁶⁹ As ACA has explained, nothing in the manner in which broadband Internet access services are offered to the public and provisioned by its member companies has changed since the Commission made these determinations, other than increased broadband speeds. ACA members continue to offer broadband Internet access as a single, “inextricably intertwined” information service to their residential and business subscribers using the information services not to edge providers offering that may be offering their own information services to those subscribers. Accordingly there is no basis for a different outcome today.

Second, it is unclear exactly what the *Verizon* court had in mind when it posited that broadband ISPs act as “carriers” for Internet edge providers. Arguably, the court was only describing a relationship imposed by the Commission’s 2010 Open Internet rules and not a for-hire service relationship actually existing between Internet edge providers and broadband ISPs.¹⁷⁰ Regardless, while these proposals would have the surface appeal of side-stepping the problems the Commission would encounter by a full-scale or partial reclassification of the broadband Internet access service, they would each wreak even greater havoc on the operations and economics of the broadband ISP business today while the Commission worked

considered “reasonable” by the regulator, and risk having to respond to a Section 208 for any decision they make not to provide the service requested. See 47 U.S.C. §§ 201(a), 208.

¹⁶⁹ See, e.g., Cable Modem Declaratory Ruling, ¶ 38 (concluding that cable modem service combines “the transmission of data with computer processing, information provision, and computer interactivity, enabling end users to run a variety of applications,” and is therefore an information service); Wireline Broadband Order, ¶ 15 (Wireline broadband service is classified as an information service because it inextricably combines the offering of powerful computer capabilities with telecommunications, and this classification applies regardless of whether subscribers use all of the functions and capabilities provided as part of the service).

¹⁷⁰ *Verizon*, 740 F.3d at 653 (“The question is not whether, absent the *Open Internet Order*, broadband providers would or did act as common carriers with respect to edge providers; rather, the question is whether, given the rules imposed by the *Open Internet Order*, broadband providers are now obligated to act as common carriers.”).

through the details of how this service should be furnished, and on what rates, terms and conditions. For this reason alone, they should not be pursued by the Commission. There is simply no actual problem for which this could possibly be considered a reasonable solution.

For all these reasons, the Commission should politely decline the invitation to travel this problematic track down the Title II path.

V. CONCLUSION

The Commission once again has the opportunity to chart a course for protecting and promoting the open Internet by establishing rules that are fair, flexible and appropriately targeted at verified behavior that threatens the quality of openness that has made the Internet what it is today. It can best do so by using its Section 706 authority to adopt even-handed rules applicable to all Internet actors capable of inhibiting that openness and standing as barriers to broadband deployment. This will permit the Commission to continue its “light touch” approach to regulating broadband ISPs under which so many, including all ACA members, have flourished and consumers benefitted.

Respectfully submitted,

AMERICAN CABLE ASSOCIATION

By: 

Matthew M. Polka
President and CEO
American Cable Association
One Parkway Center
Suite 212
Pittsburgh, Pennsylvania 15220

(412) 922-8300

Ross J. Lieberman
Vice President of Government Affairs
American Cable Association
2415 39th Place, NW
Washington, DC 20007

(202) 494-5661

July 17, 2014

Barbara S. Esbin
Scott C. Friedman
Cinnamon Mueller
1875 Eye Street, NW
Suite 700
Washington, DC 20006

(202) 872-6811

Thomas W. Cohen
Edward A. Yorkgitis, Jr.
Kelley Drye & Warren LLP
3050 K Street NW
Suite 400
Washington, D.C. 20007
Telephone: (202) 342-8400
Facsimile: (202) 342-8451

Attorneys for the American Cable Association

Exhibit A

LEHR Paper

The Mistake of One-Sided Open Internet Policy

William Lehr¹

MIT

1. Executive Summary

The FCC is seeking comment on its proposed rules for regulating broadband Internet access ISPs as part of its goal to protect the Open Internet. While a broad consensus has emerged recognizing the value to the economy of protecting Internet openness, it would be a mistake to adopt one-sided rules targeting the network management behavior of broadband Internet access providers.

The economic theory of multi-sided markets highlights the problems that arise when one neglects to take into account all sides of the relevant market. The FCC's analysis focuses narrowly on potential threats to Internet openness associated with actions of broadband Internet access providers. This asymmetric approach is bolstered by the implicit focus on an overly simplistic 2-sided market model that fails to recognize the inherent complexity of the Internet ecosystem. Internet openness depends on open access to broadband, devices, applications, content, and other services (i.e., non-access ISP and other value-added services). The interdependencies among these elements means that threats to Internet openness may target multiple elements and come from multiple directions.

¹ Dr. William Lehr is a telecommunications/Internet industry economist and policy analyst with over twenty years of experience in academic research and industry consulting. He is currently a research scientist in the Computer Science and Artificial Intelligence Laboratory (CSAIL) at the Massachusetts Institute of Technology (MIT). Dr. Lehr's research focuses on the economic and policy implications of broadband Internet access, next generation Internet architecture, and the evolution of wireless technology. Dr. Lehr holds a PhD in Economics from Stanford, an MBA in Finance from the Wharton School, and MSE, BA, and BS degrees from the University of Pennsylvania. Dr. Lehr would like to acknowledge the support of the American Cable Association (ACA) in preparing this paper. All views expressed herein are the author's own.

Rules focusing solely on broadband access providers have the potential to misidentify the source of a threat (e.g., when the threat is due to limited choice in devices, applications, or content access) and/or mis-target potential remedies (e.g., target the wrong agent responsible). Such misidentification of problems and mis-targeting of remedies would distort market incentives and accentuate the potential risk of harms from agents not constrained by the rules, while perversely weakening the potential for access ISPs to mitigate those harms.

Recent examples of edge-providers of valuable video programming content blocking access to otherwise freely accessible Internet content in order to increase payments from MVPDs demonstrate that edge providers also pose a clear and significant threat to Internet openness, and highlight the potential adverse impact of asymmetric constraints on broadband access ISPs (that often are also MVPDs). In addition to failing to protect consumer's freedom to access the Internet content of their choice, one-sided Open Internet Policy rules adversely impact broadcaster-MVPD negotiations over retransmission consent. Thus, rules intended to promote an open Internet empower programmers that seek to restrict access to content and enable such programmers to threaten the revenue base of broadband providers that share the cost recovery burden of broadband infrastructure with legacy video and telephony services.

To translate the OIP into effective rules, the FCC should consider all relevant stakeholders in the ecosystem that pose a threat to Internet openness. Adopting one-sided rules would be counter-productive.

2. Introduction: setting the stage

The FCC seeks guidance on "what is the right public policy to ensure that the Internet remains open?"² This represents a continuation of the FCC's efforts to craft a regulatory

² See paragraph 2 of Notice of Proposed Rulemaking, In the Matter of Protecting and Promoting the Open Internet, GN Docket No. 14-28, Before the Federal Communications Commission, Adopted May 15, 2014 (hereafter, "*2014 Open Internet NPRM*").

framework to embody the Open Internet Principles (OIPs) that were first articulated by FCC Chairman Michael Powell in a speech in 2004³ and then adopted by the Commission in a Policy Statement in 2005.⁴ The focus of these principles is to "encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet."⁵

The FCC acknowledges that the "Internet is America's most important platform for economic growth, innovation, competition, [and] free expression."⁶ The value of the Internet derives from the opportunity it affords users to flexibly combine devices, applications, content, *and* network services (including broadband Internet access) to accomplish a range of valuable activities. A threat to open access to any of these elements – not just to broadband Internet access – poses a threat to the Internet and its economic value. Given what is at stake, there is broad consensus that protecting the Internet's openness and promoting broadband deployment are worthwhile goals.

In its efforts to protect Internet openness, the FCC has sought to embody the OIP in rules directed solely at constraining the network management and disclosure practices of broadband Internet access service providers (access ISPs). Those efforts culminated in its 2010 Order that was challenged in court.⁷ In January 2014, the D.C. Circuit Court of

³ See Remarks of Michael K. Powell, Preserving Internet Freedom: Guiding Principles for Industry, prepared for Silicon Flatirons Symposium, Boulder CO, February 8, 2004, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-243556A1.pdf

⁴ See *Policy Statement*, In the Matters of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities and related proceedings, CC Docket No. 02-33, Before the Federal Communications Commission, adopted August 5, 2005, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-151A1.pdf (hereafter "*2005 Open Internet Policy Statement*").

⁵ See *2005 Open Internet Policy Statement*, paragraph 4. These are stated as four principles, with appropriate caveats to ensure the choices are legal, do not cause harm to the network, and are consistent with the needs of law enforcement.

⁶ See *2014 Open Internet NPRM*, paragraph 1.

⁷ See *Report and Order*, In the Matter of Preserving the Open Internet (GN Docket No. 09-191) and Broadband Industry Practices (WC Docket No. 07-52), adopted December 21, 2010, available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf (hereafter, "*2010*

Appeals partially affirmed and partially vacated the 2010 Order, leading to the FCC's most recent attempt to craft rules.⁸

In this paper, I explain why, when considering how best to promote broadband and to protect Internet openness, it is essential to examine the entire Internet ecosystem and not focus solely on broadband access providers. For multiple reasons, one-sided application of an OIP regime would be a bad idea. Any regime that imposes OIP rules needs a broader focus that takes into account potential threats and the implications of OIP rules for the behavior of all of the powerful agents in the Internet ecosystem.

First, broadband Internet access is not the only vector from which Internet openness may be threatened. Limited access to devices, applications, content or non-access Internet Service Provider (ISP) services also pose threats to Internet openness that should be considered.

Second, devices, applications, content providers, content delivery networks (CDNs), and other critical components, in addition to access ISPs can have a significant impact on the quality of the broadband access experience. Focusing solely on access ISPs may misidentify the responsible agent for a broadband access problem. Such misidentification may aggravate the problem by enabling the responsible agent greater freedom to cause harms.

Third, promoting an Open Internet by focusing on a single actor in the Internet ecosystem is likely to be ineffective in today's changing market environment as technologies,

Open Internet Order"). Earlier, the FCC issued its *Notice of Proposed Rulemaking*, In the Matter of Preserving the Open Internet and Broadband Industry Practices, Federal Communications Commission, GN Docket No. 09-191 and WC Docket No. 07-52, Released October 22, 2009 (hereafter, "*2009 Open Internet NPRM*").

⁸ See *Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014), available at [http://www.cadc.uscourts.gov/internet/opinions.nsf/3AF8B4D938CDEEA685257C6000532062/\\$file/11-1355-1474943.pdf](http://www.cadc.uscourts.gov/internet/opinions.nsf/3AF8B4D938CDEEA685257C6000532062/$file/11-1355-1474943.pdf).

business models, and markets converge and blur what previously might have been seen as clear demarcations among actors.

Fourth, rules that single out access ISPs for special regulatory burdens distort incentives for efficient organization and may induce inefficient or perverse behavior from ISPs and from others in the Internet ecosystem who may seek to evade such rules or otherwise take advantage of the market distortions that asymmetric regulations induce. This can increase Internet costs and otherwise harm Internet openness.

Fifth, the FCC's singling out today's broadband access ISPs is like the proverbial "drunk under the streetlight" (who looks for his keys where the light is, not where the keys were most likely dropped). The legacy of last-mile telecommunications service regulation makes it reflexively easy and natural to focus on potential threats to Internet openness stemming from potential abuses by broadband access ISPs. Unfortunately, adopting such an unbalanced perspective contributes directly to regulatory uncertainty and inconsistency, which are significant economic costs of regulation and undermines both the open Internet and the promotion of broadband deployment (investment).

Sixth, the FCC cannot ignore actions that have obstructed the openness of the Internet at other points in the end-to-end system or from non-access ISP agents. As explained further below, there is evidence that such actions have occurred and it is reasonable to expect new acts to occur in the future. Focusing solely on the behavior of access providers and the elements of the Internet experience they control is likely to accentuate the risk from these other threat vectors.

Consequently, an appropriate regulatory framework for an Open Internet needs a more comprehensive approach. If there are to be Open Internet rules, strong consideration should be given to applying them to the ecosystem's most significant threats, which should include classes of actors other than access ISPs that have acted upon economic incentives and abilities to threaten the principles that underlie the Open Internet rules. Failure to do so is likely to be an ineffective and perverse remedy for promoting the

principal goals of the OIP and wider investment in, deployment of, and access to broadband services.

In Section 3, I modify the FCC's three-part industry taxonomy to highlight key players in the Internet ecosystem, all of which need to be considered in order to frame sound Internet policy. I explain how the complex inter-dependencies across the Internet ecosystem require the Internet to be viewed as a multi-sided market. Threats to Internet openness may come from multiple actors, and focusing on a single class of actor is likely to cause more harm than good.

In Section 4, I review the theory on multi-sided markets and consider what lessons this has for policy making. When viewed as a 2-sided market (the simplest perspective for expositional purposes), it is clear that broadband access and content/application markets need to be considered jointly to determine optimal pricing structures and levels. While the theory may be helpful in elucidating the complex platform aspects of Internet industry economics, policymakers should be cautioned against relying too heavily on the 2-sided market to frame its Internet policies.

In Section 5, I consider the implications for policy of an edge provider with the ability to adversely impact Internet openness. Most of the network neutrality debate thus far has assumed that edge providers (e.g., content and application providers) lack such power. However, numerous recent examples demonstrate that edge providers may threaten markets for broadband access services and Internet openness. These examples also highlight the potential adverse interactions that the Open Internet rules can have on other regulatory policy domains, like Multiple Video Programming Distributor (MVPD) regulation.

Section 6 summarizes the principal conclusions. A one-sided approach that focuses solely on constraining the behavior of access ISPs is unlikely to be effective in protecting an open Internet. Such an approach is more likely to accentuate threats to an open Internet from other directions, including from programmers acting as edge providers, but also

potentially from social networks, mobile devices, search engines, or some other as-yet unidentified vector. Asymmetrically constraining access ISPs is likely to distort MVPD-programmer negotiations and undermine the revenue base providing significant support for broadband infrastructure shared costs.

3. Understanding the Internet Ecosystem

According to the FCC, the "Internet has been, and remains to date, the preeminent 21st century engine for innovation and the economic and social benefits that follow."⁹ This appropriately characterizes the Internet as the complex economic system that it surely is.

However, the FCC has used a minimalist industry structure schema to characterize the Internet for purposes of adopting regulations by identifying only three relevant categories of participants (end users, broadband access ISPs, and edge providers).¹⁰ This has the virtue of allowing the Internet to be simply represented as a 2-sided market (see further discussion below) for purposes of economic regulation, but obscures the complexity of the real-world Internet and the role of broadband access services and the ISPs that provide such services. A slightly more realistic taxonomy would add another category of

⁹ See *2014 Open Internet NPRM*, paragraph 1.

¹⁰ In its *2014 Open Internet NPRM*, the FCC once again adopts an overly simplistic industry structure taxonomy, that it explained in its earlier decision as follows:

"For purposes of our analysis, we consider three types of Internet activities: providing broadband Internet access service; providing content, applications, services, and devices accessed over or connected to broadband Internet access service ("edge" products and services); and subscribing to a broadband Internet access service that allows access to edge products and services. These activities are not mutually exclusive. For example, individuals who generate and share content such as personal blogs or Facebook pages are both end users and edge providers, and a single firm could both provide broadband Internet access service and be an edge provider, as with a broadband provider that offers online video content. Nevertheless, this basic taxonomy provides a useful model for evaluating the risk and magnitude of harms from loss of openness" (see *2010 Open Internet Order*, paragraph 20).

It is worth noting that the FCC explicitly recognizes that in this tripartite division *all* of the categories are "Internet activities" and that this taxonomy is "basic."

ISP ("Transport ISPs") and an "Others" category for participants that cannot be cleanly fit into one of the other categories.

This slightly revised version of the FCC's industry schema recognizes five categories of agents: (i) End users, (ii) Access ISPs, (iii) Transport ISPs, (iv) Edge providers, and (v) Others (the catchall category for everything not included elsewhere). These are further described as follows:

- *End users* subscribe to broadband Internet access services and are the ultimate source of demand (willingness-to-pay) for Internet services.¹¹
- *Access ISPs* provide retail broadband Internet access services to mass-market consumers. This includes providers like Comcast, Verizon, AT&T, Cox Communications, Sprint, and lots of smaller firms.¹²
- *Transport ISPs* include providers of ISP services other than broadband Internet access that contribute to supporting end-to-end communications. Sometimes access providers are thought of as being at the edge of the Internet, with transport ISP providers offering services in the core of the network -- or the Internet cloud, which is also a network of ISP networks.¹³

¹¹ The FCC's focus is on mass-market end users, which includes consumers and small businesses (see *2014 Open Internet NPRM*, paragraph 54).

¹² For example, the American Cable Association (ACA) membership is comprised of "about 850 small and mid-sized independent providers serving nearly 7 million subscribers in all 50 states" (see http://www.americancable.org/about_us). Most ACA members provide broadband Internet access services, along with other services such as linear form cable video programming to subscribers in their serving areas. There are also a large number of non-cable ISPs that provide broadband access services. For example, the Wireless ISP Association (<http://www.wispa.org/member-directory>) has 746 members in the U.S. and USTelecom (the industry association of broadband providers) listed 1,712 total broadband providers in the U.S. as of the end of 2012, of which over 1,100 provided DSL broadband services over telephone infrastructure (see <http://www.ustelecom.org/broadband-industry/broadband-industry-stats/providers/broadband-providers-by-type-of-technology>).

¹³ Historically, these ISPs were organized in a hierarchy. The smallest ISPs (Tier 3) aggregate access traffic at the edges and provide local connectivity. Typically, Tier 3 ISPs purchased transit services from larger regional Tier 2 ISPs that assume responsibility for delivering packets between their Tier 3 customers and the rest of the Internet. These Tier 2 ISPs, in turn, purchased transit services from the largest Tier 1 ISPs at the top of the hierarchy. The Tier 1 ISPs peered with each other to create a mesh that ensured global connectivity. Over time, this taxonomy has become

- *Edge providers* include providers of content, applications, devices, and other complementary goods and services that are dependent on and interact with ISP services to connect with end users, but are regarded as distinct from the ISPs. For this reason, they are sometimes thought of as operating at the "edge" of the Internet.¹⁴ Companies like Netflix, CBS, Apple, Google, Microsoft, and the thousands of others that rely on ISPs to connect with their Internet customers are often regarded as edge providers.
- *Others* includes all of the providers of value-added services and participants in the Internet ecosystem that do not fit easily into one of the other categories above. Content Delivery Network (CDN) providers like Akamai and other value-added overlays, as well as providers of cloud services¹⁵ that offer in-network support for on-demand computing, data storage and other information processing services may be included here.¹⁶

flatter and the range of interconnection arrangements more complex, with lower-level ISPs peering directly and a complex array of paid-peering, partial transit, and other sorts of arrangements for exchanging traffic. For a further discussion of Internet interconnection see Faratin, P., D. Clark, S. Bauer, W. Lehr, P. Gilmore, & A. Berger (2008), "The growing complexity of Internet interconnection," *Communications & Strategies*, 1(72), 51-72.

¹⁴ The FCC uses "edge provider" to refer "to content, application, service, and device providers, because they generally operate at the edge rather than the core of the network" (see *2010 Open Internet Order*, footnote 2).

¹⁵ A common taxonomy for cloud services distinguishes between providers of Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS), and Infrastructure-as-a-Service (IaaS). Microsoft Office and Google Apps are examples of SaaS; Microsoft's Azure and Google App Engine are examples of PaaS; and Amazon's Elastic Cloud (EC2), Rackspace, and IBM Computing on Demand are examples of IaaS offerings. For further elaboration, see the Zhu, J. (2010) "Cloud Computing Technologies and Applications Handbook of Cloud Computing," B. Furht and A. Escalante, Springer US, 21-45; Armbrust, M., A. Fox, R. Griffith, A.D. Joseph, R.H. Katz, A. Konwinski, G. Lee, D.A. Patterson, A. Rabkin and I. Stoica (2009) "Above the Clouds: A Berkeley View of Cloud Computing," Technical Report UCB/EECS-2009-28, EECS Department, University of California, Berkeley; or, Rimal, B., E. Choi and I. Lumb (2010) "A Taxonomy, Survey, and Issues of Cloud Computing Ecosystems Cloud Computing," N. Antonopoulos and L. Gillam, Springer London, 21-46.

¹⁶ Some might argue that CDNs and some cloud service providers (e.g., providing distributed hosting services for software or off-site cloud-based storage) might be classified as edge providers or transport ISPs. Because such providers operate at the boundary between categories, it is desirable to include a category for "Others." For further discussion of overlays, see Clark, D.,

It is important to emphasize that even the above taxonomy is overly simplistic and in flux, which requires a degree of regulatory humility in discerning and concluding which actors are a threat to Internet openness and those who are not.

First, the category assignments are not mutually exclusive. For example, most access ISPs also provide other (non-access) ISP services either directly or via third-parties they interconnect with. Indeed, the provision of such services is intrinsic to any offering of broadband Internet access service. What are often referred to as broadband access "on ramps" are part of the Internet and cannot be thought of as separate components that serve solely the function of connecting end users or edge providers to the Internet.

When mass-market consumers purchase broadband Internet access they are purchasing a bundle of functionalities that allow them to exchange packets with other end hosts, whether those are with other end users or edge providers (e.g., content on a website) and wherever those hosts are located (whether on the same sub-net or across the globe). This includes the necessary packet transport and routing functionality¹⁷ that is intrinsic to the Internet's role as a data communications network as well as a range of other functions and services such as email, news group access, Web access, and various network monitoring and traffic management features (e.g., SPAM and parental filters, virus scanning, etc.).¹⁸

Lehr, B., Bauer, S., Faratin, P., Sami, R., & Wroclawski, J. (2006), "Overlay Networks and the Future of the Internet," *Communications and Strategies*, 63, 109.

¹⁷ For example, this usually includes Domain Name Services (DNS) which maps website names to network addresses. Routing services may include additional services for dynamic or static address assignment, specialized routing functionality (including fault tolerant, least cost, or some other policy-based routing service), and other services, such as support for caching, protocol conversions, and rate adaptation support. Some of this functionality may be accessed directly by end-users, some by their client device software applications, and some by other service providers upstream, whether edge providers or other ISPs.

¹⁸ In its earlier classification of broadband as an "information service" the FCC took pains to identify the many forms of functionality and services that are intrinsic to providing broadband services that go well beyond simple packet transport. For example, see paragraphs 10, 16-17, 35-38 in *Declaratory Ruling and Notice of Proposed Rulemaking*, In the matter of Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, GN Docket 00-

Fundamentally, broadband access service includes the ability of end-users to access (use) popular content, applications, and devices as part of the broadband Internet experience. Over time, as the capabilities of applications, devices, and ISP services, including broadband access, have improved and new services have emerged (e.g., more support for real-time multimedia, new offerings for home sensor management, etc.), the scope of functionalities that are included in broadband access have expanded. The demand for broadband Internet access services is inextricably linked to the demand for all of its components since broadband access is only valuable when used in conjunction with other communications goods and services supported in the ecosystem.

Furthermore, it is important to recognize that ISPs are quite heterogeneous and many ISPs also offer edge provider and other (e.g., transport, cloud, CDN, etc.) services. For example, Comcast provides in-network storage and access to a range of Comcast-provided applications and content services (e.g., Xfinity) to its subscribers, as do other ISPs like AOL, Verizon, and AT&T. And, many edge providers subscribe to broadband Internet access services and many end users provide Internet content.¹⁹ Google offers critical Internet functionality like Search, provides cloud services, is a broadband access ISP in some markets, and offers a range of other customer applications and content services. In light of these overlapping roles, it is inherently arbitrary to classify Comcast as an access ISP and Google as an edge provider for other than Google Fiber services.

185, Released March 15, 2002, available at <http://apps.fcc.gov/ecfs/document/view?id=6513182781> (hereafter "*2002 Cable Modem Declaratory Ruling*"); and paragraphs 9, 13-15 in *Report and Order and Notice of Proposed Rulemaking*, In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, CC Docket 02-33, Released September 23, 2005, available at <http://apps.fcc.gov/ecfs/document/view?id=6518170783> (hereafter "*2005 Wireline Broadband Order*"). Since those earlier decisions, broadband access services have only become more capable and the range of services broader (e.g., including home monitoring, specialized content, and additional roaming services).

¹⁹ The Internet provides a platform for commercial and user-generated content. Many commercial content/application providers rely on (mass market retail as well as other wholesale) broadband Internet access services as well as other value-added service providers to connect with their customers.

Second, the categorization of Internet services into access, transport or edge is far from precise. For example, the distinction between ISP access and transport services is arbitrary. Identifying where the edge of the Internet ends and the core begins is not easy. A user operating a server that provides publicly accessible content on the customer premises-side of an ISP's broadband access connection is part of the Internet. Similarly, some content providers may distribute their content from a centralized server located at the edge or in the core of the Internet, others via end user-supported peer-to-peer networks, and still others via commercial CDNs that host and distribute the content from managed servers located throughout the Internet.

Third, the taxonomy falsely suggests that specific functionality is offered uniquely by specific categories of participants. All five groups of participants are part of the Internet ecosystem and may play a role in the end-to-end transport of packets and offer alternative functionality. For example, content may be cached in multiple locations in the Internet – in DVRs on customer premises, in caches collocated in access networks, in caches at distributed data centers or in core networks. Packet filtering, traffic management, and routing functionality may be implemented in edge devices and applications, as part of the access service, or somewhere else in the end-to-end path and at various levels within the protocol hierarchy. Faster and more capable hardware and software throughout the Internet have expanded the technical and business options for implementing and managing key Internet functionality, rendering statements like "usually located at the edge" or "in the core" increasingly less meaningful.

For example, data rate throttling may occur at any point along the end-to-end path, and is neither limited to nor fully under the control of broadband access ISPs. A recent publicity stunt by Neocities, an edge provider, demonstrates how other players might adversely impact the broadband experience even though they do not directly provide broadband access services.

As part of their advocacy to induce the FCC to adopt strong network neutrality rules for access ISPs, Neocities modified their websites so as to simulate severe bandwidth

throttling of content from their websites to FCC staffers, delaying serving such content requests to match the performance of legacy dial-up services.²⁰ To promote the protest more broadly, they provided open source code for other websites that wanted to do the same.²¹

In summary, although the taxonomy presented above provides a broad characterization of key participants in the Internet ecosystem, these characterizations are increasingly blurring at the edges and do not adequately reflect the interdependencies across the groups of actors. Regulations targeted at a single class of actor may misidentify the source of harms and mis-target remedies to those harms.

4. Multi-sided markets and the need for a more comprehensive policy

From an economic perspective, the Internet should be viewed as a complex system, and some economists have found it useful to apply the emerging theory of multi-sided markets to understand certain of its characteristics.²² With this perspective, the Internet is viewed as a "platform" that creates economic value by facilitating more efficient transactions between buyers and sellers (located on opposite sides of the market) than would be possible if they engaged directly. The simplest example of a multi-sided market is a 2-sided market.

²⁰ See "We are limiting the FCC to dialup modem speeds until they pay us for bandwidth," Neocities Blog, May 8, 2014, available at: <https://neocities.org/blog/the-fcc-is-now-rate-limited>.

²¹ See "Websites Throttle FCC Staffers to Protest Gutting of Net Neutrality, Wired, May 16, 2014, available at <http://www.wired.com/2014/05/fcc-throttling/>.

²² There is a large and growing literature on multi-sided markets. For a review of this literature, see Evans, David S and Richard Schmalensee (2013) "The Antitrust Analysis of Multi-Sided Platform Businesses," Institute for Law and Economics Working Paper No. 623, National Bureau of Economic Research; OECD Competition Committee (2009), Two-Sided Markets, DAF/COMP(2009)20, available at <http://www.oecd.org/daf/competition/44445730.pdf>; or, Rochet, J. C., & Tirole, J. (2006), "Two-sided markets: a progress report," *The RAND Journal of Economics*, 37(3), 645-667.

The key feature of a 2-sided market is that the demand of economic agents on both sides of the market are related such that the determination of socially optimal pricing (to maximize total surplus taking into account both sides of the market jointly) depends both on the structure and levels of prices in both markets. In effect, there are indirect positive demand externalities across the two markets.²³

The FCC's overly simplistic tripartite taxonomy for Internet industry structure (discussed earlier) may be mapped to a 2-sided market framework by locating broadband subscribers or end users on one side and edge providers (content, application, device and other businesses that use the Internet to reach the end users) on the other side, with broadband access providers (bundled with transport ISPs and others, from my taxonomy) as the monopoly providers of the Internet platform in the middle.²⁴ One of the first key insights that this approach supports is that either side of the market may pay for access and use of the Internet platform since both derive value. A second important insight is that it is possible that the optimal pricing might involve pricing that is below incremental costs on one side. This means that traditional tests for anticompetitive behavior (e.g., predatory

²³ Positive demand externalities are a common feature of network industries. For example, the value that individual subscribers attribute to joining a telephone network is likely increasing in the total number of subscribers that may be called. Subscribers benefit when other subscribers join the network. This benefit conferred on others is not internalized by the subscriber and hence is referred to as a demand externality. In a two-sided market situation, a similar sort of effect may arise when the demand from users on one side of the market increase because of the demand of users on the other side of the market (an indirect demand externality). These benefits may arise as membership externalities which are associated with the number of subscribers on the other side of the market (see for example, Armstrong, M. (2006) "Competition in two-sided markets," *The RAND Journal of Economics*, 37(3), 668-691); as usage externalities which are associated with the level of usage by participants on the other side of the market (see for example, Rochet, J.-C., & Tirole, J. (2003), "Platform competition in two-sided markets," *Journal of the European Economic Association*, 1(4), 990-1029); or both.

²⁴ The FCC has previously cited two-sided market theory in its efforts to codify the OIP. See *2009 Open Internet NPRM* at paragraph 66. The FCC again references the multi-sided market theory in its *2014 Open Internet NPRM* at paragraphs 37-38.

pricing) and other insights gained from one-sided modeling approaches often no longer apply.²⁵

It might be reasonable, however, to suppose that edge providers are more likely to have multiple access (or multi-homing) options. For example, edge providers can take advantage of CDNs such as Akamai, other third-party hosting and delivery services from ISPs or others, or may self-provision such services to connect with their Internet customers. The FCC's simple 2-sided market framing does not make such options apparent since it does not unpack the Internet platform in the middle into the network-of-networks that includes (at a minimum) the access ISPs, transport ISPs, and "others" that more accurately reflects reality.

If one assumes (as most do in Network Neutrality discussions) that end users are single-homed such that each has only a single broadband access connection that ties those users to particular access ISPs, applying the 2-sided modeling framework as above suggests that access ISPs (i.e., the platform provider in this framing) would compete aggressively for broadband subscribers. Having attracted the subscribers, the access ISP would then sell access to those subscribers to edge providers from whom the platform provider would expect to recover most of its costs and capture its profits in the total welfare maximizing outcome.²⁶

While the 2-sided approach is attractive for expository purposes, it misses many important real-world features that render it overly simplistic as a foundation for ensuring Internet openness. For example, the 2-sided market approach does not adequately address

²⁵ See Wright, Julian (2004) "One-Sided Logic in Two-Sided Markets," Review of Network Economics, 3(1) March 2004. Other one-sided insights that potentially result in faulty conclusions include presumption that high price-cost margins indicate market power; that efficient pricing ought to mirror relative costs; that increased competition will result in more efficient pricing structures; or that regulating platform pricing is competitively neutral with respect to the two sides of the market.

²⁶ See Armstrong, Mark and Julian Wright (2007) "Two-Sided Markets, Competitive Bottlenecks and Exclusive Contracts." Economic Theory, 32(2), 353-80.

the changes associated with the rise of mobile broadband, social networking, or other fundamental changes buffeting the Internet ecosystem.²⁷

To better understand the real world complexity, consider further the challenges of adequately incorporating important features of the evolving mobile broadband ecosystem. Looked at separately from the Internet, it is possible to view the Android and the Apple iOS operating systems as platforms linking the market for mobile applications and devices (smartphones, tablets) with end users. Apple might be viewed as a one-sided platform provider since Apple bundles the handsets with the iOS; whereas Android may be viewed as a two-sided platform since many providers offer Android compatible devices for the Android capable applications. Moreover, there are multiple flavors of the Android OS and many application vendors provide versions for both Android and iOS platforms. It is far from clear how best to apply multi-sided market theory to the mobile ecosystem, and integrating that into an analysis of the Internet ecosystem is even more complicated.²⁸ However, it is clear that edge providers of mobile devices, applications, and content have significant impact on the quality of end-user's Internet access experience.²⁹

²⁷ The limits of the 2-sided model in accurately capturing the "network-of-networks" character of the Internet platform with respect to such features as distinguishing between access ISPs, transport ISPs, and "others," or the ambiguities in how to distinguish between the edge/core and identify edge providers, has already been noted. It is also worth pointing out that multi-sided market theory seldom addresses innovation in market structures or technologies, which are obviously key features of the real world ecosystem. This is to simplify what is already a complex modeling problem.

Obvious real-world phenomena that the simple 2-sided market approach fails to adequately address include the rise of the mobile broadband ecosystem (discussed in the text above); the emergence of social networks as new potential platforms for fundamental Internet functionality (e.g., Facebook/Twitter email/chat and other services complementing or substituting for more traditional ISP-based solutions); or the "Internet-of-things" sensor-enabled ecosystem that is just now emerging. While it is unclear how to fit these other "platform" conceptions into an economic model of the Internet ecosystem, it is clear that ignoring such important phenomena would be an inappropriate over-simplification.

²⁸ See Evans & Schmalensee (2013), note 22 supra; or, Bresnahan, T. and S. Greenstein (2014), "Mobile Computing: The Next Platform Rivalry," *American Economic Review*, 104(5), 475-480.

²⁹ For example, mobile devices have on-board computing, storage, and other resources that may complement functionality associated with an access ISPs broadband service. Applications

Finally, the 2-sided market approach fails to account for the competition between over-the-top video and legacy video distribution platforms. The video subscribers may be single- or multi-homed. That is, they may have broadband Internet and/or legacy multichannel video or broadcast television services from the same or different providers.³⁰ Programmers need to choose among the program distribution platforms for reaching their target audience, and to the extent the programming is advertiser-supported, how to interconnect with their advertisers. Multiple delivery platforms may compete with each other. Legacy services such as linear form television services (and telephony) share network infrastructure with broadband services and contribute to the revenue base for such infrastructure. Hence, taking into account the interaction effects between these two services is important for any regime that seeks to regulate Internet openness or broadband.

In summary, therefore, the 2-sided market approach is too simplistic to model the complex economic system of the Internet. It likely requires modeling as an n-sided market. Just as there is no single consensus definition for characterizing what constitutes the Internet, there is also no uniquely applicable economic model that provides the best framework for all questions. While this may seem unfortunate to those seeking a simple regulatory solution like “Network Neutrality,” it attests to the vibrancy of the Internet ecosystem and the need for a comprehensive approach that does not single out a single class of actors for one-sided regulations.

providers may invoke this functionality in ways that are more or less "network-friendly" for access and upstream ISPs. For example, some applications may adapt their data rates or use on-device storage to make more efficient use of variable network resources, while other applications may use keep-alive messages that unnecessarily burden mobile broadband service providers signaling networks. Furthermore, with the convergence of fixed and mobile broadband services (a desired outcome of the move to "seamless" mobility and associated with the shift to smaller-cell architectures for wireless services), it will be increasingly challenging to regulate mobile and fixed broadband services differently.

³⁰ For example, a subscriber may have DBS and wired broadband, cable service and broadband Internet, only broadband, only over-the-air TV, or some other combination of services.

In this context, singling out a solitary class of agents for asymmetric regulations is bad policy. It risks misidentifying the locus of a threat to Internet openness and mis-targeting the agent responsible. In both cases, the proposed regulations could accentuate the very harm they are intended to address. As already noted, even if a congestion/blockage problem is initially associated with the Internet access service, the access ISP may not be the party that is responsible, and the ISP's ability to alleviate the harm (i.e., be part of a solution) may be adversely impacted by the regulations.³¹ Furthermore, regulation of the access ISP may aggravate the actual cause of the harm.³² A more comprehensive approach would allow for a contextually nuanced approach to identifying the nature of the harm and the source of that harm. A more comprehensive approach would recognize

³¹ For example, a home broadband Internet user's own traffic (e.g., associated with use of a peer-to-peer application for downloading files) might be sufficiently congesting the home user's network to adversely impact the home user's ability to use VoIP services (potentially even effectively blocking such use if the self-congestion is acute enough). In such a situation, the access ISP is not the party responsible for the reduced broadband service quality, but the access ISP might be in a position to alleviate the problem by prioritizing the end user's traffic to allow both applications to share the access service more gracefully. Some of the peer-to-peer traffic might be delayed to allow adequate resources for the VoIP service to also work (under the assumption that VoIP traffic is more latency sensitive than are most peer-to-peer streams). Alternatively, edge providers might assist in alleviating this problem. For example, well-behaved applications might include rate-adaptive capabilities that could help avoid over-congesting a user's access connection; or, the user's device (smartphone, PC, home network) might locally manage traffic, including managing multi-homing options (for how traffic is routed to the Internet). Additionally, the congestion problem might be located somewhere upstream. For example, an upstream ISP or CDN, or the destination host server/end user network might be the locus of congestion. The point is that there is no single best solution to addressing this challenge and multiple agents may play a role in either causing or solving the congestion problem. Rules that constrain the access ISPs network management practices would not target those congestion points but might adversely impact the access ISPs options for working around such issues.

³² For example, blaming the wrong agent for a problem may reduce the incentives of the responsible parties to invest in mitigation. For example, restrictions prohibiting finer grained network management by access ISPs might hinder progress toward adopting congestion alleviating strategies such as rate adaptive application behavior. Today, a number of mobile applications use keep-alive messages that congest mobile network signaling networks and waste device battery power. There are a range of strategies that application providers (e.g., an on-line game provider), mobile device platform vendors (e.g., smartphone providers), and mobile network service providers might cooperate on that would improve the performance of all. That is, the game-playing experience would perform better, device battery life would be prolonged, and the mobile network provider's signaling network would be less congested. This might include inter-provider signaling, cooperative caching (mixed on the device and in the network) or dynamic rate adaptation.

that threats to Internet openness are continuously evolving, and thus the locus of potential threats to Internet openness are likely to change over time. Focusing on a single class of agents, when the facts undergirding the classification framework are changing and the interdependencies among classes of agents are changing, bakes an unnecessary and undesirable rigidity and false specificity into the regulatory structure.

Thus far, the discussion has focused principally on threats to the Internet openness that are associated with the quality of the end user's experience of broadband Internet access in terms of its technical service performance characteristics (speed, latency). The FCC has discussed at length potential ways in which access ISPs might threaten Internet openness.³³ However, the OIP are much broader in stressing the importance of enabling end user choice to content, applications, and devices. As noted earlier, this freedom of choice may be threatened even if broadband Internet access is not directly an issue. The next section shows how edge providers may threaten Internet openness.

5. Addressing Edge Provider Threats is Important to Protect Internet Openness

In most discussions of "Network Neutrality" policy, content (edge) providers are assumed to pose no threat to the Open Internet. It is worth considering what happens if this presumption is relaxed.³⁴

Not all edge providers are equal, and some edge providers offer content, applications, or devices that are sufficiently important to end users of the Internet, that limited access would severely threaten the overall value of broadband access services and the Internet.

³³ For example, see *2010 Open Internet Order* at paragraphs 20-37; and *2014 Open Internet NPRM* at paragraphs 39-53. The FCC articulates in some detail the economic incentives and technical means by which access ISPs could and have threatened Internet openness. What is needed is a more balanced discussion of the incentives and capabilities of other actors to threaten Internet openness and the quality of the broadband experience.

³⁴ In its *2014 Open Internet NPRM*, at footnote 118, the FCC notes "other forms of discrimination in the Internet ecosystem may exist, but such conduct is beyond the scope of this proceeding." Limiting the scope of this proceeding in this way is not appropriate since to do so is to assume away precisely those problems that the rulemaking purports to address.

For example, most users would likely regard broadband service that denied them or limited their access to Facebook.com, Google.com, Amazon.com, eBay.com, ESPN.com, YouTube, Netflix, Hulu, or a number of other well-known popular content sites as not providing open or acceptable access to the Internet. Similarly, most users would not regard broadband access that limited users to a single vendor's devices or a single OS (Apple, Windows or Android) as providing open Internet access.

The popular content and access devices account for a disproportionate share of Internet network usage and resources. For example, real-time entertainment accounts for over 63% of peak period traffic, with Netflix accounting for over 34% by itself.³⁵ Preliminary evidence suggests CDNs are accounting for just over 50% of US consumer backbone traffic and 50% of the traffic is coming from the top 35 sites.³⁶ All of the sites noted above are among the top sites, with each attracting in excess of 20 million unique visitors per month.³⁷ The largest share of user time is spent on social networking and entertainment,³⁸ with Facebook and Google being among the most important.³⁹ Google

³⁵ Focusing on peak period traffic is relevant because infrastructure capacity has to be sized to meet peak demand. Video is especially resource-intensive because of the relatively high bit rates required relative to other services. See Sandvine (1014), *Global Internet Phenomena Report: 1H2014*, available at <https://www.sandvine.com/downloads/general/global-internet-phenomena/2014/1h-2014-global-internet-phenomena-report.pdf>.

³⁶ An earlier 2009 study found 50% of the traffic coming from the largest 150 sites (see Labovitz, C., Lelak-Johnson, S., McPherson, D., Jahanian, F., Oberheide, J., & Karir, M. (2009), *ATLAS Internet Observatory Report (Arbor Networks, University of Michigan, and MERIT 2-year Internet Traffic Study)*, North American Network Operators Group Meeting 47 (NANOG47), October 2009, available at: https://www.nanog.org/meetings/nanog47/presentations/Monday/Labovitz_ObserveReport_N47_Mon.pdf (hereafter, "*2009 Arbor Network Study*"). The trend toward increased consolidation among content sites appears to have continued (see Labovitz, C. (2013), "Massive ongoing changes in content distribution," slides, Content Delivery Summit, Spring 2013, available at <http://blog.streamingmedia.com/wp-content/uploads/2013/07/2013CDNSummit-B102A.pdf>).

³⁷ See "comScore Media Metrix® Ranks Top 50 U.S. Desktop Web Properties for May 2014," June 16, 2014, available at <https://www.comscore.com/Insights/Market-Rankings/comScore-Media-Metrix-Ranks-Top-50-US-Desktop-Web-Properties-for-May-2014>.

³⁸ Data from eMarketer for the last half of 2012, reported that the largest share of online activity was devoted to social networking (27%), entertainment (15%), shopping (9%), business (5%) and email (5%). Moreover, the same data reported that 79% of users accessed the Internet via PCs

alone accounts for 67% of web searches.⁴⁰ In the desktop market, Microsoft windows still has 91% share with Apple at about 7%; while in the mobile market, Apple's iOS has 46% share and Android has 44% share.⁴¹

The ability to access popular content or devices contributes directly to the demand for broadband Internet access service. With less valuable content, applications, or devices, demand for (and hence investment in) broadband services and infrastructure would be reduced. The virtuous cycle of Internet innovation and investment would stop turning – and the reason for this need not have originated with or be directly attributable to any problem with the services provided by broadband ISPs.

Open Internet rules that focus only on the business threats of the broadband access platform provider, and do not protect against likely threats from edge providers will fail to protect the Openness of the Internet. Moreover, they will distort market incentives and accentuate content-providers' abilities and incentives to threaten Internet openness.

(but a declining share), with 44% using mobile phones (rising), and 17% using tablets (rising fastest) (July 2012-Jan 2013 survey data). It is worth noting that much of the mobile/tablet usage would be via home WiFi and so the broadband access service would likely be via fixed broadband, and that many users use more than one device to access Internet. (See "How Do Internet Users Divvy Up Their Desktop, Mobile Web Time?" eMarketer, April 25, 2013, available at <http://www.emarketer.com/Article/How-Do-Internet-Users-Divvy-Up-Their-Desktop-Mobile-Web-Time/1009841>.)

³⁹ In December 2012, comScore data identified the top 10 Web properties where users spend most of their time, with 10.8% of their time at Facebook and 10% of their time at Google sites (which include YouTube) (see "10 web sites where surfers spend the most time," USA Today, March 9, 2013, available at <http://www.usatoday.com/story/money/business/2013/03/09/10-web-sites-most-visited/1970835/>).

⁴⁰ See "comScore Releases March 2014 U.S. Search Engine Rankings," comScore Press release, April 15, 2014, available at <https://www.comscore.com/Insights/Press-Releases/2014/4/comScore-Releases-March-2014-U.S.-Search-Engine-Rankings>.

⁴¹ See "New usage stats show Windows holding steady as PC sales drop," ZDNet, June 1, 2013, available at <http://www.zdnet.com/new-usage-stats-show-windows-holding-steady-as-pc-sales-drop-7000016211/>. Data is from <http://www.netmarketshare.com/>.

More specifically, edge providers like Viacom, Disney (which owns ESPN and ABC), and CBS are not your usual mom-and-pop Internet content providers. These are large, and often dominant, enterprises that market their programming and services internationally and distribute media via multiple platforms, including via legacy over-the-air broadcasts, via MVPDs, "over-the-top" on the Internet, and by means of other off-line channels (e.g., via CDs distributed through the mail and through other platforms like entertainment parks and consumer product tie-ins).⁴² Indeed, these large programmers compete directly with others for end user attention, and thus it would be a mistake to assume that edge provider interests are always aligned. An abuse of power by large content providers poses a threat to other edge providers as well.⁴³

Large video programmers do not depend solely or even principally on the Internet to reach their target audience, and with respect to their Internet audience, are not solely dependent on particular ISPs (although as with edge providers, not all ISPs are created equal and some due to their sheer scale and extent of relationships with ISPs matter more than others).⁴⁴

⁴² For example, Disney, which earned revenues in excess of \$45 billion in 2013, is organized into Media Networks (which includes broadcast, cable, and other media distribution businesses), Parks and Resorts (which operate the theme parks), Walt Disney Studios (which produces the media content), Disney Consumer Products (which involves "thousands of categories from toys and apparel to books and art"), and Disney Interactive (which includes console games and on-line interactive content) (see <http://thewaltdisneycompany.com/about-disney/company-overview>).

⁴³ This threat may be both direct and indirect. The large content providers compete directly for consumer attention with other content and application providers, including user-generated and other smaller content sources. Large content providers might seek to foreclose access to distribution channels for other edge providers or otherwise raise their rivals' costs. Additionally, to the extent large content providers drive up the costs of broadband access they will reduce overall Internet demand and thereby indirectly harm other edge providers by making the overall pie smaller for all.

⁴⁴ Like edge providers, ISPs are heterogeneous and no "one-size-fits-all" regulatory framework makes sense for ISPs either. Current rules distinguish between mobile and fixed broadband ISPs, and need to distinguish between large and small (rural) ISPs. Large ISPs with many more eyeballs are typically more important to content owners than smaller ISPs.

One can view these programmers as being able to choose among competing multiple video distribution platforms (e.g., mobile v. fixed; cable v. telephone company provided broadband; cable v. over-the-air v. DBS; or CDs v. DVRs v. real-time streaming media). Many of their target audience customers are multi-homed with more than one option for accessing programming.

In this environment, asymmetric regulatory rules that constrain the business behavior of a single class of platform provider (i.e., fixed broadband ISPs that are also MVPDs) would distort market incentives and accentuate content-providers' abilities and incentives to threaten actors more constrained in their behaviors due to regulation, particularly ISPs subject to Open Internet rules. In this way, asymmetrical Open Internet rules that are intended to promote an Open Internet in some cases can themselves be the threat. For example, providers of valuable content might seek to abuse their control of such content to extract excess profits via their negotiations with access ISPs that would find their ability to respond to such threats via market-based mechanisms restricted due to the asymmetric application of the Open Internet rules.

Although viewers often avail themselves of multiple distribution channels when it comes to video programming, many subscribe to a single broadband Internet service provider. Similar to the linear video programming market, a programmer might seek payment from broadband access ISPs for the right for its users to receive the programmer's content online. In addition, they may leverage their market power over premium content by bundling it with content that the broadband access ISPs customers' may not want.⁴⁵ The broadband ISP's customers may either be unaware of the programmers' excessive charges or feel powerless to affect them, and consequently, be less likely to respond to these charges. The access ISPs are induced to accede to the programmer's demands because

⁴⁵ Normally, we presume that content owners (like patent holders) should be free to charge what they like for access to their content, including setting monopoly prices. The problem here is not with monopoly power associated with content ownership rights, but with its potential abuse that harms competition (e.g., by forcing broadband access ISPs to devote capacity and monetary resources to content controlled by premium rights holders that might otherwise be made available to other content/application providers).

they recognize that an inability to include the programming would harm the value of their overall platform. End users may be forced to pay more for broadband access than they would in the absence of such abuse of a programmer's special power over valuable broadband content. Such behavior poses a threat to the openness of the Internet both directly and indirectly.⁴⁶

Multiple examples of such threats of potential harms and to Internet openness associated with programmers have occurred in recent years, and thus this danger is not merely hypothetical. For example, a number of programmers engaged in negotiations with MVPDs over carriage rights or retransmission consent have elected to pull programming from MVPD networks when the negotiations broke down. In addition, the programmers have then opted to block access to otherwise freely accessible Internet content to broadband Internet subscribers of the affected MVPDs. Such blocking was not limited to those broadband subscribers who also subscribe to the MVPDs' video programming services, but included subscribers that subscribe only to the ISP's broadband access service.

- In 2009, Viacom threatened to block access to Time Warner Cable (TWC) broadband subscribers from accessing its web-based content, including such popular sites as MTV.com and Nick.com;⁴⁷
- In 2010, News Corp threatened to block access to Fox TV web content as part of its on-going retransmission dispute with Cablevision,⁴⁸ and,

⁴⁶ Internet openness is threatened directly because user choices with respect to content (content they wish to access, and may be willing to pay for, as well as content they do not wish to access, but are forced to pay for) are being restricted by the content provider; and indirectly, because the higher costs imposed on broadband Internet access reduce its economic viability as a platform.

⁴⁷ See "Cutting the (Video) Cord Part 3: the growing relevance of Internet TV," The Progress & Freedom Foundation Blog, January 8, 2009, available at <http://blog.pff.org/archives/2009/01/print/005419.html>.

⁴⁸ See "TV Blackout raises net-neutrality concerns," The Hill, October 17, 2010, available at <http://thehill.com/policy/technology/124567-tv-blackout-dispute-raises-net-neutrality-concerns>.

- In 2013, CBS elected to engage in such blocking for Time Warner Cable and Bright House Network broadband subscribers in New York as part of their dispute over retransmission rights, prompting Senator Edward Markey to write to the FCC advocating that they intervene to protect Internet users from this obvious threat to openness.⁴⁹
- In 2014, following unsuccessful carriage negotiations, Viacom retaliated by denying access to content otherwise made freely available on its websites to those broadband Internet subscribers served by dozens of smaller cable and broadband providers who refused to sign onto renewal. Viacom moved to block a select group of broadband Internet subscribers regardless of whether they subscribed to the operator's MVPD offerings or not.⁵⁰

In each of these cases, both broadband and MVPD subscribers were threatened with harms or were actively harmed by the breakdown of negotiations that often are themselves the legacy of a regulatory framework.⁵¹ Regardless of what one thinks of the merits of the arguments on either side, it is clear that "Edge Providers" possessed the ability and incentive to act in a way that poses a direct threat to the openness of the Internet. In this case, the threat was directly to the ability of broadband subscribers to access the otherwise freely available, legal content of their choice. To the extent that

⁴⁹ See "Is CBS's web blocking of Time Warner Cable customers illegal? Senator wants FCC to investigate," *Verge*, August 7, 2013, available at <http://www.theverge.com/2013/8/7/4598328/senator-ed-markey-wants-fcc-to-investigate-cbs-blocking-time-warner-cable>. Senator Edward Markey wrote: "A consumer's choice of cable television provider should not be tied to her ability to access Internet content that is freely available to other consumers. In such instances, consumers lose their freedom to access the Internet content of their choice" (see Letter to Honorable Mignon Clyburn, Acting Chairwoman, Federal Communications Commission, Washington DC, from Senator Edward Markey, August 6, 2013).

⁵⁰ See "Viacom, 60 Cable Firms Part Ways in Rural U.S.," *Wall Street Journal*, June 17, 2014, available at <http://online.wsj.com/articles/viacom-60-cable-firms-part-ways-in-rural-u-s-1403048557>.

⁵¹ Viacom was neither a broadcaster nor a cable-affiliated programmer in 2009, and so its dispute with Time Warner Cable was not directly constrained by the must-carry/retransmission cable television regulations.

accessing such content is important to subscribers, denying them access could adversely impact broadband Internet subscribership, reducing aggregate direct and indirect demand externalities and thereby adversely impacting broadband universal service goals, as described above.

In addition to the threat to OIP, these cable-programmer disputes highlight the potential for adverse spillover effects from unbalanced Internet policy. The potential harms are accentuated because the MVPDs, like many other access ISPs, provide more than broadband access services. The MVPDs are already subject to substantial broadcast carriage obligations such as "must carry" and "retransmission consent" that constraint the ability of MVPDs to bargain effectively with programmers over the prices and terms for making provider content available to MVPD viewers.

Salop et al. (2010) argue that the bargaining position of broadcasters has improved significantly in recent years, allowing them to engage successfully in brinksmanship to negotiate higher fees for retransmission consent.⁵² SNL Kagan is forecasting more than a doubling of retransmission fees to \$7.6 billion by 2019.⁵³ In light of these changes, constraining access ISPs while leaving programmers free of any OIP obligations risks further distorting regulatory-mandated negotiations between MVPDs and programmers, strengthening still further the bargaining position of programmers, precisely when a number of analysts are concerned those programmers are already too strong. Applying open Internet obligations only to broadband providers is likely to result in higher prices for programming content, and consequently, reduced demand for and investment in Internet and broadband infrastructure and services.

⁵² See Steven C. Salop, Tanseem Chipty, Martino DeStefano, Serge X. Moresi, and John R. Woodbury, Economic Analysis of Broadcasters' Brinksmanship and Bargaining Advantages in Retransmission Consent Negotiations, attached to the Reply Comments of Time Warner Cable, Inc., MB Docket 10-71, filed June 3, 2010, available at http://97.74.209.146/downloads/broadcaster_brinkmanship.pdf.

⁵³ See "Station Retrans fees to reach \$7.6B in 2019: SNL Kagan," Multichannel News, November 22, 2013, available at <http://multichannel.com/news/content/station-retrans-fees-reach-76b-2019-snl-kagan/356879>.

6. Conclusions

In this paper, I have explained why I believe the FCC's concern to protect the open Internet and promote broadband are justified; however, achieving this goal efficaciously will require that the FCC adopt a balanced policy approach. Imposing open Internet mandates unilaterally and asymmetrically to access ISPs will neither promote broadband access nor protect the openness of the Internet.

Indeed, doing so is more likely to accentuate the risk to the open Internet from elsewhere in the Internet ecosystem. This may include potential threats from so-called edge providers such as video programmers who provide content services, the edge device ecosystem of mobile devices and applications, or application platform providers of social networking services. Moreover, unilateral restrictions imposed on access ISPs who are also MVPDs poses an added risk of distorting the negotiations between MVPDs and powerful video programmers for broadcasting rights. Such rules have the potential to undermine MVPDs' bargaining positions, adversely impacting the revenue base for services that contribute significantly to recovering access ISPs shared costs for broadband infrastructure.

The problem with asymmetric open Internet rules arises because the Internet is a complex economic ecosystem that may best be modeled as a multi-sided market. The theory of such markets tell us that we need to consider explicitly the interaction affects across the various markets in order to craft optimal policies. Access ISPs do not pose the only threat either to broadband Internet access or to the openness of the Internet. Adopting a regulatory framework that focuses narrowly on a single category of actor will distort market incentives for efficient organization, may misidentify the party responsible for a threat to broadband or the openness of the Internet, and may perversely accentuate the responsible party's ability to cause harm. While crafting appropriate ex ante rules is complex and difficult, adopting simple but inappropriate rules is likely to be worse than adopting no rules. Committing prematurely to a poorly-designed policy framework that fails to adequately address either today's or tomorrow's foreseeable threats to Internet openness is to embrace regulatory uncertainty and inconsistency. A balanced approach to

Internet policy is needed to address the threats to OIP rules from whatever vector those threats may originate. Opting for what may seem an easier approach because of perceived limitations in FCC's legal authority or in keeping with a legacy bias is not the way to craft a fair and sustainable communications policy for the Internet.

Exhibit B

ACA Paper

Connecting Hometown America

How the Small Operators of ACA Are Having a Big Impact

A paper by



Research and analysis by



About ACA

The American Cable Association (ACA) advances the interests of smaller providers of broadband, video, voice and other communications services to a variety of customers—residential, business, government and institutional—by means of legal and government advocacy. Since 1993, the ACA has represented small- and medium-sized cable operators before the US Congress, Federal Communications Commission and other federal agencies.

About Cartesian™

Cartesian provides professional services in strategy, execution and managed solutions to global leaders in the communications, digital media, and technology industries.

Special thanks to National Cable Television Cooperative, Inc.

Published March 2014

In the US, nearly 100 million households are customers of subscription TV.¹ More than 80 million households subscribe to broadband.² US wireline operators spend more than \$35 billion a year building out the networks that support these services.³ No doubt, the US communications industry is big.

While big companies like AT&T, Verizon, Comcast and Time Warner Cable serve most of the market, there also are thousands of smaller operators. In some instances, these operators provide the same services to markets the big companies ignore. In other instances, they provide competition to the big operators. They are rarely household names on the national scene. But they are highly valued in the communities they serve.

These small and medium-sized operators include cable operators, rural telephone companies and municipality-owned service providers. These operators have seized opportunities to bring advanced communications services to their communities, despite unique challenges not experienced by the well-capitalized and well-connected giants of the industry. One thing many of these operators have in common is that they are members of the American Cable Association (“ACA”), which advocates for their interests in Washington.

The small and medium-sized operators of ACA serve a number of important functions in the US communications market and in society at large.

ACA members:

Provide broadband in rural areas. As the National Broadband Plan noted in 2010, providing rural broadband is one of the great infrastructure challenges of the 21st century. Despite the high costs of building networks in sparsely populated areas, ACA members have been building out broadband in rural areas for years. Most of them do so without any government funding, saving taxpayers billions in support for government-funded broadband networks.

Provide competition and choice in urban areas. Several of ACA’s biggest members are competitive providers of cable services in urban areas. These companies entered markets that were previously duopolies of large cable companies and the incumbent telephone company, bringing choice and price competition in the process. Today, ACA members provide choice to more than five million homes in the US.

Provide services to community institutions and businesses in underserved areas. ACA members make available high-speed Internet access, private data networks and multiline voice products to tens of thousands of community institutions in small cities and rural areas. Nearly one million small businesses in rural areas have access to these advanced communications products from ACA members.

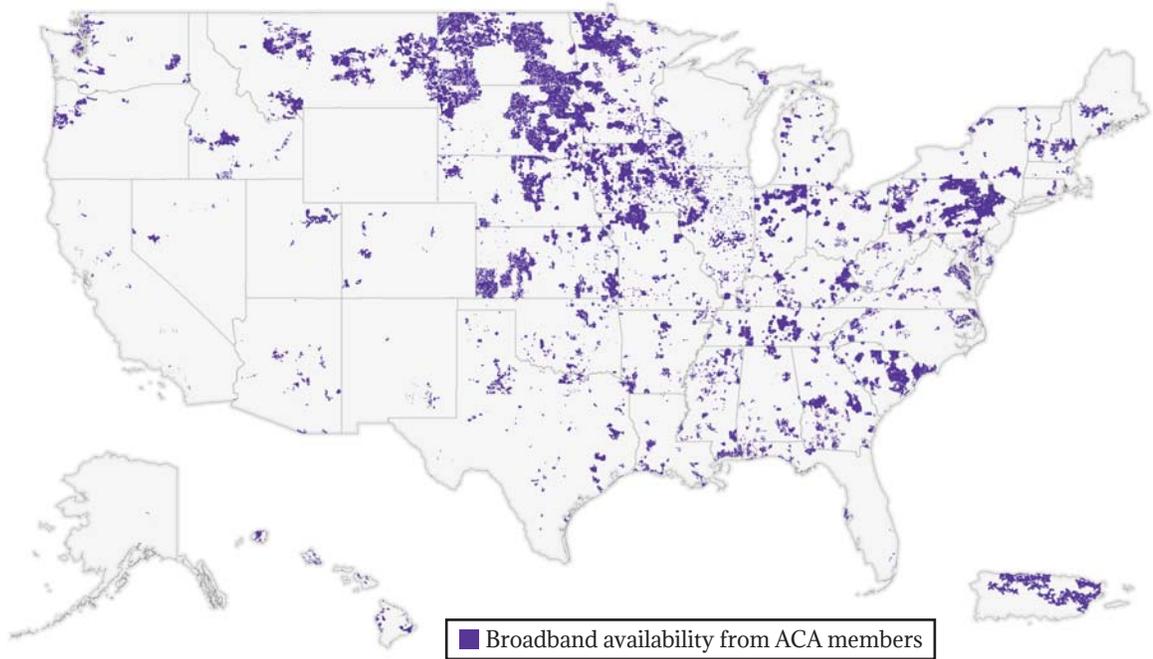
Note: Unless otherwise noted, all geographic analyses in this paper refer to ACA members’ broadband footprint, not their footprint for other services like video.

¹ Robin Flynn, “Cable & Multichannel Industry Overview,” SNL Kagan Multichannel Summit, November 11, 2013. Third quarter 2013 data.

² Leichtman Research Group, “About 520,000 Add Broadband in the Third Quarter of 2013,” November 19, 2013. Available at <http://www.leichtmanresearch.com/press/111913release.html>.

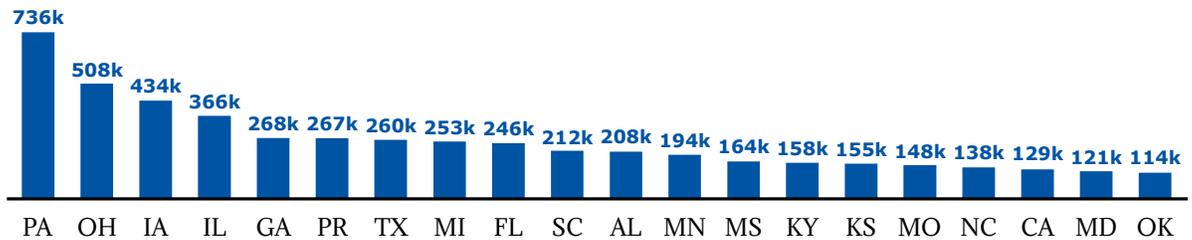
³ Total developed from operator SEC filings and secondary research estimates.

Figure 1: ACA Member's Broadband Footprint



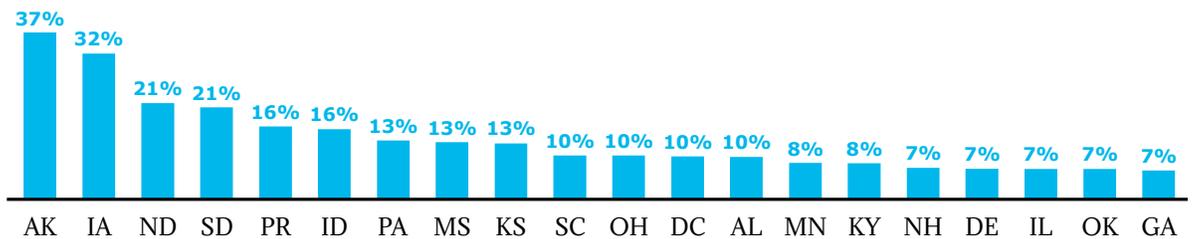
Source: Analysis of data from National Broadband Map

Figure 2: Top 20 ACA States, by Number of Video Subscribers



Source: Analysis based on data from National Cable Television Cooperative, Inc. (NCTC)

Figure 3: Top 20 ACA States, by Video Market Share of Total Housing Units



Source: Analysis based on data from NCTC and US Census

Introduction to ACA's Members

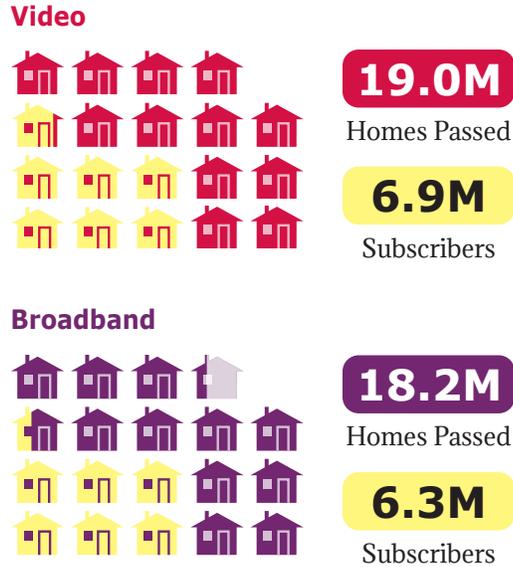
In 1993, a group of 150 independent cable operators formed the American Cable Association following the regulation of cable in the 1992 Cable Act. Since then, the ACA's membership roster has grown to 843 small and medium-sized operators.

ACA members offer advanced communications services to nearly 19 million homes—or 14% of total homes in the US. Nearly seven million of these homes are subscribers to ACA members' video services and a fast-growing 6.3 million subscribe to broadband. In addition, nearly 2.75 million households subscribe to ACA members' residential telephone service.

The ACA includes a diverse mix of cable operators, rural telecommunications companies and municipalities. Many ACA members are small, privately held companies with deep roots in their communities. No ACA member has more than one million subscribers. The median number of video subscribers per member is 1,060.

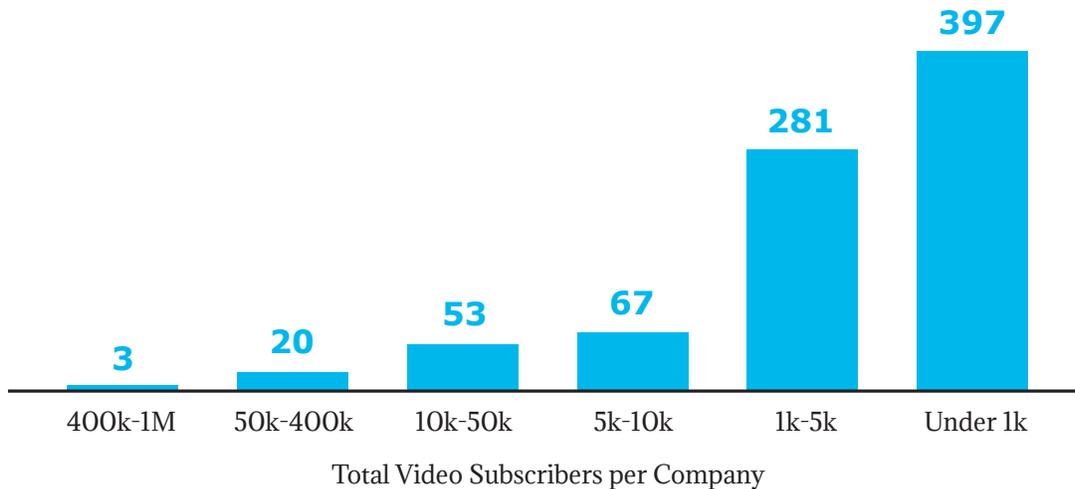
Despite their small size, ACA members have invested significantly in infrastructure to provide a suite of advanced communications services to homes, businesses and community institutions.

Figure 4: ACA Subscribers and Homes Passed



Sources: Number of ACA video subscribers from National Cable Television Cooperative, Inc. (NCTC). Number of ACA broadband subscribers estimated based on data from NCTC and SNL Kagan. Number of homes where ACA members can provide broadband based on analysis of National Broadband Map. Number of homes where ACA members can provide video estimated based on analysis of data from Warren News/MediaPrints and National Broadband Map

Figure 5: Distribution of ACA Members by Number of Video Subscribers



Source: Analysis of data from NCTC and ACA

Figure 6: TV Technology Used by ACA Members

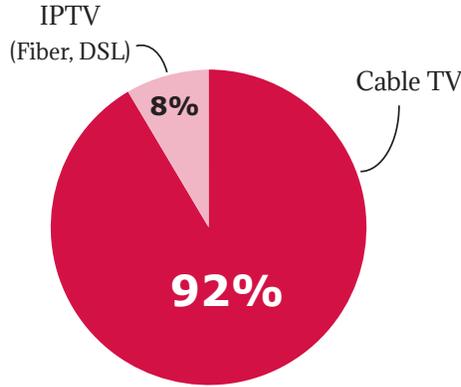
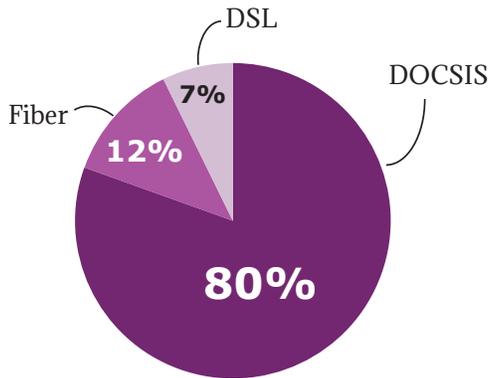


Figure 7: Broadband Technology Used by ACA Members



Sources: TV technology based on analysis of data from NCTC. Share based on subscribers. Broadband technology used based on analysis of data from National Broadband Map. Share based on homes passed

Most members provide services over cable networks. While these networks were originally used just for TV, advances in technology and privately funded investments have enabled these networks to be used for broadband, telephone and advanced video services like video-on-demand. Due to their efficient architecture, cable networks offer a cost-effective and quickly deployable upgrade path to higher broadband speeds.

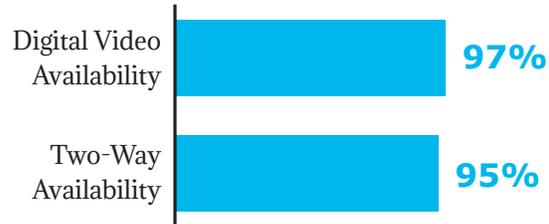
Investments in these networks include installing electronics to upgrade the bandwidth in existing cable wires and building out high-capacity optical fiber closer to end-customers. These investments have led to the great majority of ACA's members' subscribers receiving services over cable networks with 750MHz of bandwidth or higher. This allows for high-speed Internet and a large selection of high-definition channels and video-on-demand options.

Investments by ACA members have been significant. Historical capital expenditure figures are not readily available, but we estimate that ACA cable operator members have invested more than \$10 billion (in 2014 dollars) in their networks.⁴

Some of the rural telecommunications companies and a few municipalities use other technologies to provide TV, broadband and telephone service to their customers, including fiber-to-the-home and DSL.

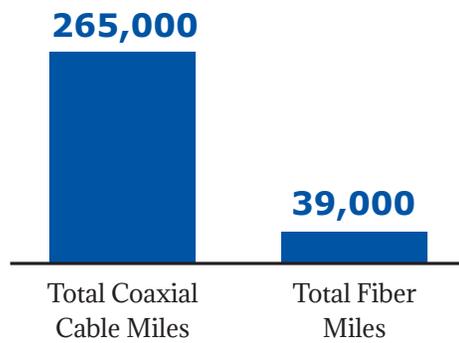
⁴ We developed this estimate by taking the number of plant miles in ACA's cable operators' networks and multiplying it by typical network build-out costs. Typical per-mileage network build-out costs range from \$20,000 to \$100,000 (and sometimes greater) depending on a variety of factors, including building density, terrain and availability of utility poles. 304,000 total plant miles X \$20,000-\$100,000 = \$6 billion to \$30 billion.

Figure 8: Availability of Advanced Services on ACA Cable Operators' Networks



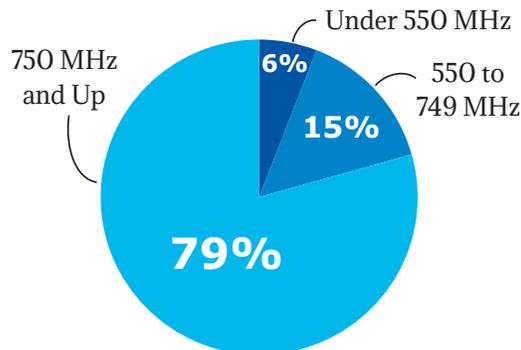
Source: Figures estimated based on analysis of data from Warren News

Figure 9: Total Miles in ACA Cable Operators' Networks



Source: Plant miles estimated based on analysis of data from Warren News and NCTC

Figure 10: Availability of Network Bandwidth in ACA Cable Operators' Networks



Source: Analysis based on data from NCTC. Shares based on total subscribers



ACA Members Provide Broadband to Rural Areas

Reliable, high-speed access to the Internet is a source of economic growth, innovation, social connection and education—especially for people located far from the resources of major metropolitan areas. But providing broadband to rural residents of the US has proven to be a challenge, as the large distances between homes has made building out broadband infrastructure expensive.

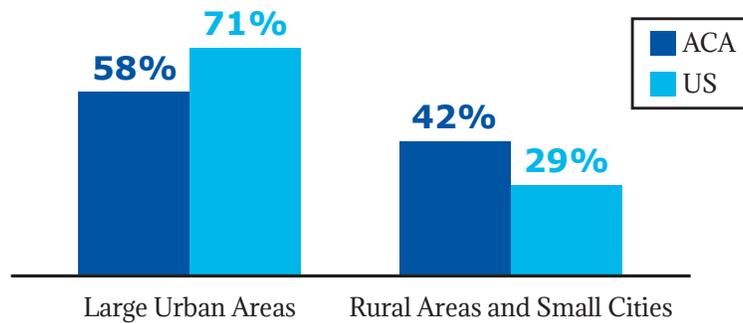
ACA members serve a disproportionate share of customers in small cities and rural areas.⁵ While 28% of the US population lives in small cities and

rural areas, 42% of the people covered by ACA members live in these areas.

ACA members’ broadband footprint covers nearly eight million homes in these areas, covering nearly 20% of the population in these areas.

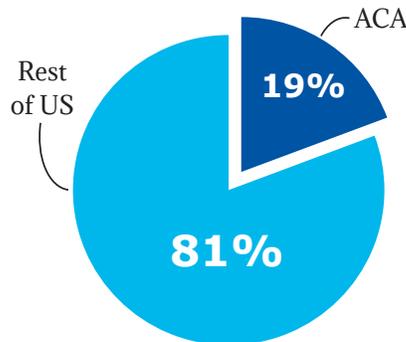
Population density often serves as a proxy for determining relative costs of building out network infrastructure. More densely populated areas are cheaper to build out because more locations can be supported by a given mile of network than in less densely populated areas. Despite the fact

Figure 11: Percent of Population in Different Market Types, ACA vs. US



Source: ACA urban/rural mix based on analysis of data from US Census and National Broadband Map. US urban/rural mix source: US Census

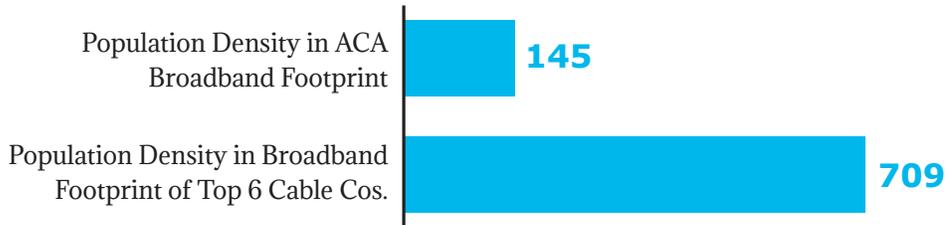
Figure 12: ACA Population Covered in Small Cities and Rural Areas, as % of Total US Population in Small Cities and Rural Areas



Source: Analysis of US Census and National Broadband Map data

⁵ We use “small cities” to refer to the US Census designation of “urban clusters,” which are contiguous urbanized areas with less than 50,000 people. Our term “large urban areas” refer to the US Census designation of “urban areas,” which are contiguous urbanized areas with more than 50,000 people. The US Census designation of “rural areas” includes all non-urbanized areas.

Figure 13: ACA Broadband Population Density vs. Top 6 Cable Operators



Source: Analysis based on data from US Census and National Broadband Map

that very few ACA members have access to public equity markets or cheap corporate debt, ACA members have built out networks in areas much less dense than the footprints of the six largest cable operators.⁶

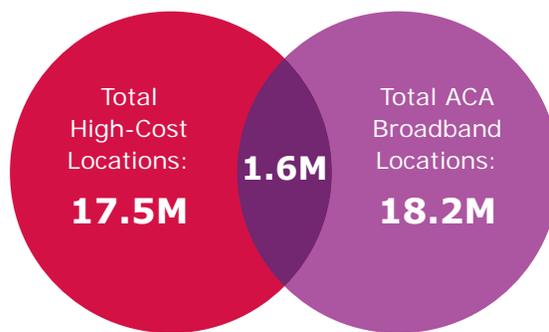
A more precise way of understanding the cost of network build-outs is via a network cost model. To help achieve the National Broadband Plan’s goal of universal broadband access, the Federal Communications Commission is adopting a cost model to determine how much support telephone companies should receive for providing broadband in their rural territories. In areas

the model deems “high cost,” the new Connect America Fund (“CAF”) will provide funding as long as an unsubsidized service provider—e.g., a cable operator—doesn’t provide broadband to that area.

Based on the FCC’s latest cost model, we estimate that 1.6 million homes in ACA cable members’ territories are considered “high cost.” That amounts to 9.3% of all US high-cost locations.⁷

Of these 1.6 million locations, more than half—842,000—would be eligible to receive government broadband funding if not for the presence of

Figure 14: Overlap between ACA Broadband Footprint and Locations Deemed “High Cost” by FCC Broadband Cost Model



Source: Total high-cost locations based on analysis of data from FCC and US Census. ACA high-cost locations based on analysis of data from FCC, US Census and National Broadband Map. Total ACA broadband locations based on analysis of data from National Broadband Map

⁶ The top six cable operators are, in order of number of subscribers, Comcast, Time Warner Cable, Charter Communications, Cox Communications, Cablevision and Bright House Networks.

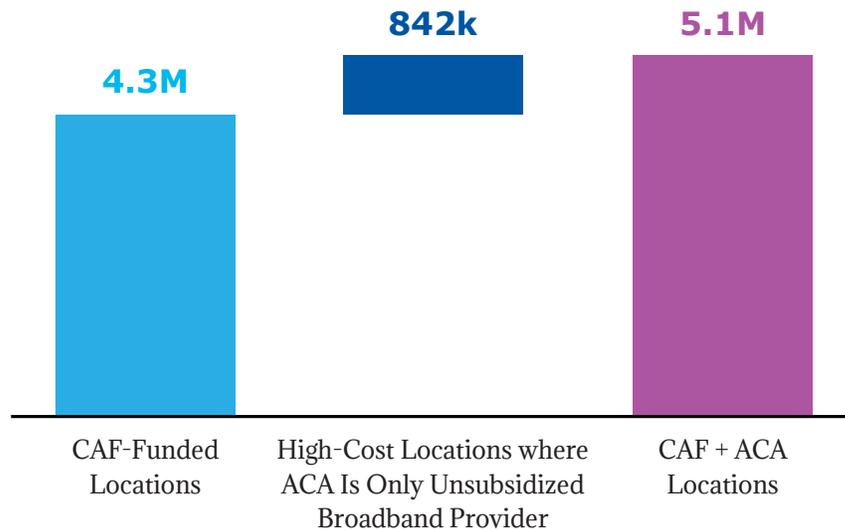
⁷ This number might slightly underestimate the total ACA homes considered high-cost because we excluded all ACA members who provide broadband via DSL from this analysis. Most of them are incumbent telephone companies that receive government funding to provide broadband. The goal with this analysis was to find the number of homes that have access to broadband without any government subsidy.

ACA members.⁸ This is a significant number when placed against the 4.3 million locations in areas of large incumbent telephone companies the FCC expects will be supported by the CAF.⁹ By providing broadband to 842,000 homes that would otherwise be eligible for subsidies, ACA’s cable operators free up government funds to help more remotely located homes. ACA’s cable operators are helping the FCC get significantly closer to its goal of universal broadband access—all without any historical or expected government funding.

ACA’s small rural telephone company members provide broadband to additional remote areas. While obligated by regulation to provide telephone service to all residents in their territories, these companies have gone above and beyond their obligations by building out DSL and fiber-to-the-home broadband networks. With a modest amount of government support, these companies provide broadband to some of the country’s neediest and most physically remote residents.

In addition to ACA’s cable operator members,

Figure 15: Unsubsidized ACA Broadband Locations vs. Locations to be Supported by the Connect America Fund (“CAF”)



Source: Analysis based on data from FCC, National Broadband Map and US Census

⁸ In the other ~800,000 locations, ACA members are not the only broadband provider not receiving government support—that is, they are not the only unsubsidized broadband provider. Therefore, if the ACA member were not present, the area would still not be eligible for government funding because another privately funded operator is offering broadband in the area.

⁹ This analysis only considers the nearly finished future funding model for price cap carriers (\$1.8 billion annually), not the unknown future funding model for Rate of Return carriers (\$2.0 billion annually). Price cap carriers include large incumbent telephone companies like AT&T, Verizon and CenturyLink whose rates for particular communications services are capped by regulation. Rate of Return carriers are small incumbent telephone companies, including many ACA members, which receive government support to provide affordable communications services in exchange for limiting their profits to a rate of return set by regulators.

ACA Members Provide Choice and Competition in Urban Areas

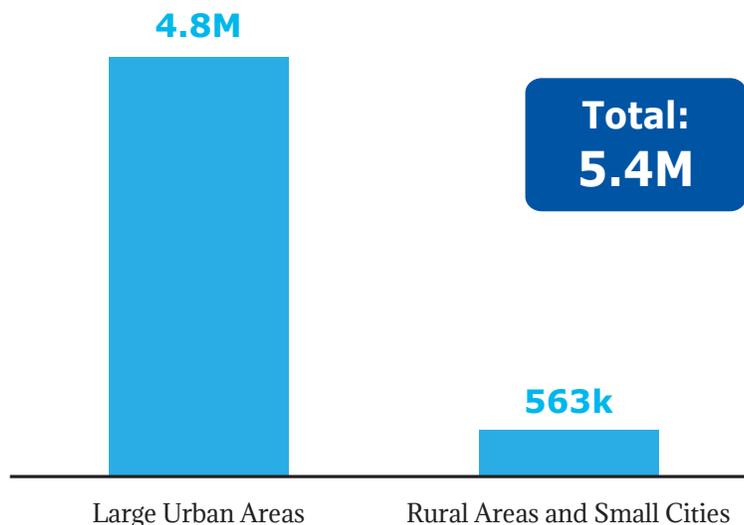
Until the 1990s, residents of urban and rural areas generally had the same limited options for communications services: a single cable provider for TV, and the incumbent local telephone company for telephone and low-speed Internet. But private investment in the subscription TV market and deregulation in the broader communications market transformed the industry over the course of a few years, bringing choice and lower prices to tens of millions of consumers. Urban residents were the primary beneficiaries.

ACA’s incumbent cable operators in urban areas began offering telephone and Internet services to their customers, largely using the same technologies as the local telephone company. With advancements in DOCSIS technology in the early

2000s, cable companies took the technological lead. With DOCSIS, cable operators were able to offer higher broadband speeds and more feature-rich telephone services for lower prices than the local telephone company.

In the ’90s and early 2000s, a number of communications companies entered the historical territories of large incumbent cable operators and built their own competing cable networks. The largest of these so-called “overbuilders” or “competitive providers”—WideOpenWest, RCN, Wave Broadband and Grande Communications—are all ACA members. These four companies, along with more than 50 other ACA members, together pass 5.4 million homes served by other cable operators. Most of these homes are in urban areas.

Figure 16: ACA Competitive Provider Homes Passed by Market Type



Source: Analysis based on data from National Broadband Map and US Census

Figure 17: Top Four ACA Competitive Providers Overlap with Top Six Cable Operators, by Homes Passed

	Comcast	TWC	Cox	Charter	Cable-vision	Bright-house	Total Overlap	Total Homes Passed	% Overlap with Top 6 Cablecos*
WideOpenWest	649k	866k	26k	188k	0	390k	2,119k	2,987k	71%
RCN	1,010k	300k**	0	0	0	0	1,310k	1,430k	92%
Wave Broadband	349k	0	0	16k	0	0	364k	698k	52%
Grande Communications	0	362k	0	2k	0	0	364k	485k	75%

* Percentages may be slightly overstated due to small overlaps between top six cable operators

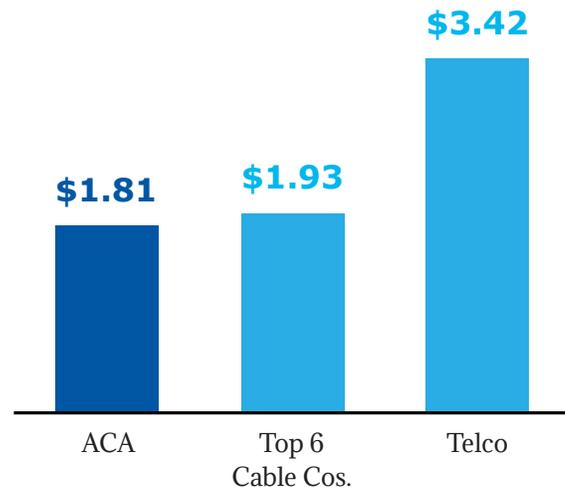
** RCN's Time Warner Cable overlap is estimated

Source: Analysis based on data from National Broadband Map and US Census

Competitive providers typically offer superior services and disruptive pricing to entice customers of incumbent operators to switch providers. This can be particularly challenging when they compete with much larger, better capitalized competitors, many of whom own programming assets essential to subscription TV providers. For example, RCN with its 316,000 subscribers competes with Comcast (21.7 million subscribers) and Time Warner Cable (11.4 million subscribers¹⁰) in more than 90% of its footprint.

This competition has led to lower prices for consumers, who have multiple choices for their budgets for broadband, telephone and subscription TV.

Figure 18: \$ per Mbps Pricing for Residential Broadband Customers in Competitive Markets



Source: Analysis of data based on primary research of operator websites¹¹

¹⁰ All subscriber numbers from SNL Kagan, 4Q13.

¹¹ Broadband price comparisons based on Internet price-shopping on operators' websites conducted March 8-March 20, 2014. Closest speed at or above 15 Mbps was chosen and non-promotional prices were used in all cases where available. In cases where speed at or above 15 Mbps was not available, highest speed available was chosen. "Top 6 Cable Cos." are top US cable operators Comcast, Time Warner Cable, Cox Communications, Charter Communications, Cablevision and Bright House Networks. "Telco" includes AT&T, Verizon Communications, CenturyLink, Windstream, Fairpoint and Frontier Communications. ACA operators and locations were chosen at random to provide diversity of operator size, geography and population density. All locations were checked via operators' website or National Broadband Map to validate availability of broadband by providers studied.

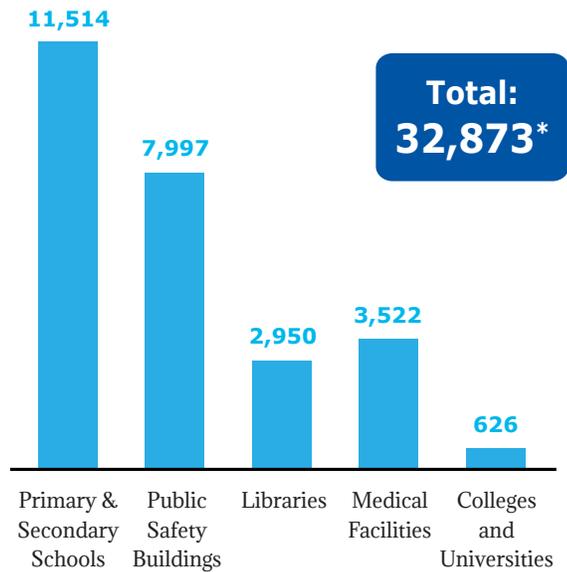
ACA Members Provide Services to Community Institutions and Businesses in Underserved Areas

Since the market transformations of the 1990s, urban businesses and institutions have increasingly had multiple choices for communications providers. But businesses and institutions in small cities and rural areas often have fewer options. In the late 2000s, cable operators began offering more sophisticated business-grade services, like private data networks and multiline voice products, to local businesses and institutions.

Many ACA members offer these and other advanced communications services in their footprints, which include more than 30,000 community institutions in rural areas and small cities. Hundreds of ACA members have received grants for providing communications services to local schools and libraries through the federal government’s E-Rate program. ACA members were awarded \$88 million through the E-Rate program in 2013.

ACA members’ commercial services are largely targeted to small and medium-sized businesses. In less densely populated areas, ACA members’ footprint includes more than one million businesses. Ninety-seven percent of these businesses have fewer than 50 employees.

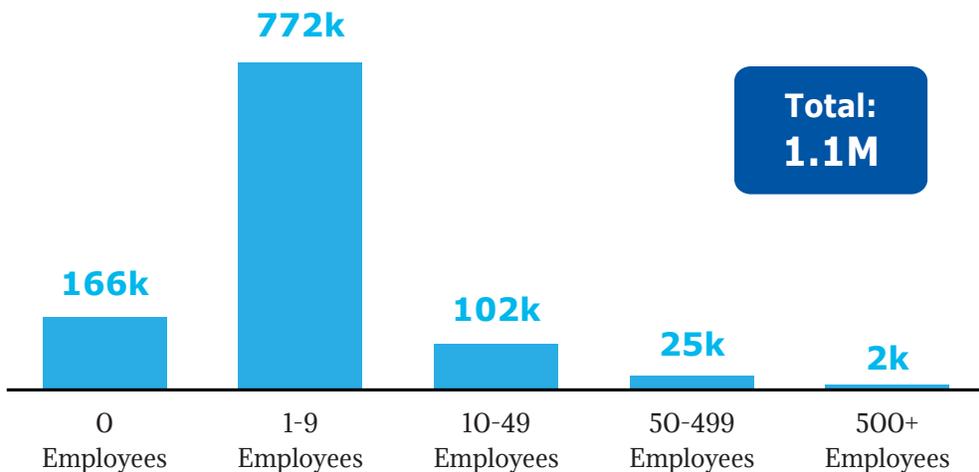
Figure 19: Anchor Institutions in ACA Members’ Broadband Footprint in Small Cities and Rural Areas



Source: Analysis based on data from National Broadband Map and US Census

* Total in entire ACA footprint, including Large Urban Areas, is 54,140

Figure 20: Businesses by Number of Employees in ACA Territories with Population Density < 1,000 People/Square Mile



Source: Analysis based on data from National Broadband Map and US Census



Conclusion

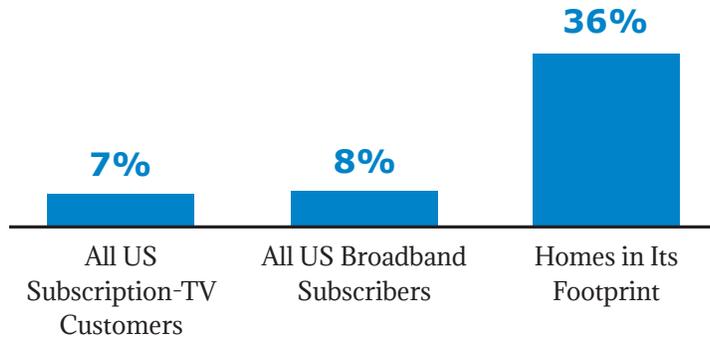
The small and medium-sized operators that make up ACA have demonstrated they can seize opportunities and bring advanced communications services to their communities. In spite of their size, ACA members have invested to offer affordable, high-quality communications services to nearly 20 million homes in the US.

In rural areas, ACA members provide broadband and other services to high-cost areas, largely without government support. In urban areas, they offer choice to consumers and keep prices low. In small cities and rural areas, ACA members' footprint includes more than 1 million businesses and community institutions. By bringing choice and vital communications services to millions of homes and businesses, small operators have made a big contribution to American society.

Yet ACA members also face unique challenges due to their size. They pay higher rates for programming than the larger cable operators and satellite TV providers. Local and regional cable operators must compete against large telephone companies receiving government subsidies to provide broadband to unserved areas. Given the relatively small volume of their traffic, they are disadvantaged in negotiations over interconnection with the networks of Tier 1 Internet Service Providers.

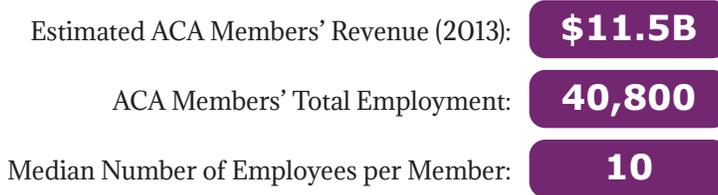
ACA is dedicated to addressing these problems and others. If all communities are to have access to advanced communications services on a competitive basis, small and mid-sized operators need to thrive.

Figure 21: ACA Members' Market Share of Various Markets



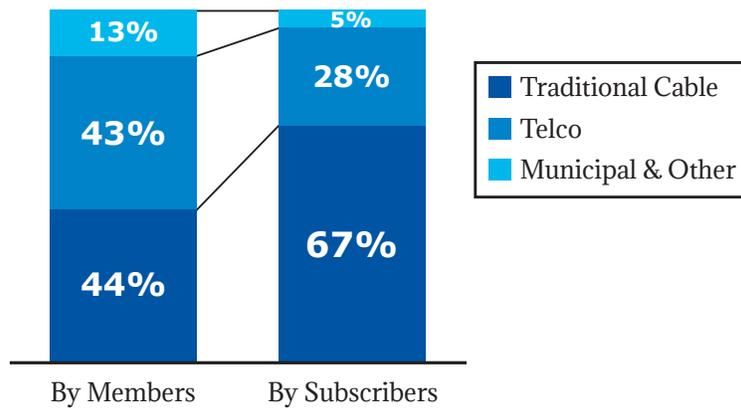
Source: Analysis based on data from ACA, NCTC, National Broadband Map and US Census

Figure 22: Revenue and Employment of ACA Members



Source: Analysis based on data from Infogroup and SNL Kagan

Figure 23: Mix of Member Types, by Members vs. by Subscribers



Source: Analysis of data from NCTC

American Cable Association

One Parkway Center
Suite 212
Pittsburgh, PA 15220
+1 (412) 922-8300

www.americancable.org



Exhibit C

McKay Declaration

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Protecting and Promoting the Open Internet)	GN Docket No. 14-28
)	
Framework for Broadband Internet Service)	GN Docket No. 10-127
)	

DECLARATION OF EDWARD H. MCKAY

1. My name is Edward H. McKay. I am the Vice President of Wireline and Engineering of Shenandoah Telecommunications Company (“Shentel”). I joined Shentel in 2004, and, in my present position, I am responsible for network planning and engineering for Shentel’s networks. I submit this Declaration in support of the Comments of the American Cable Association (ACA) in the above-referenced proceedings.

2. Shentel has its headquarters in Edinburg, Virginia. Shentel, through its operating subsidiaries, provides a comprehensive suite of voice, video and data communications services, including broadband Internet access service. Historically, Shentel’s primary market area has been the northern Shenandoah Valley of Virginia, including Shenandoah County and surrounding counties. Shentel has also expanded broadband and fiber optic facilities throughout portions of Virginia, West Virginia, and Maryland.

3. Shentel has approximately 60,000 Internet service customers, 80% of which we serve over our cable television facilities and the remainder over DSL facilities. We offer Internet access services from 1.5 Mbps up to 100 Mbps on our cable facilities and speeds of 1.5 to 10 Mbps to our DSL-based customers.

4. Shentel first provided fixed Internet access services in 1994. Within the next decade, it began providing broadband Internet access services, which expanded after acquiring cable properties from Rapid Communications in 2008 and from Jet Broadband in 2010 and others in the years following. By 2012, Shentel offered broadband Internet access services through its cable systems at speeds up to 25 Mbps in most markets, a figure which reached 50 Mbps in 2013 and 100 Mbps in 2014 for the majority of Shentel markets. We have been able to increase speeds without congestion through sound network enhancements. Of particular value in this regard has been our implementation of DOCSIS 3.0, which was released in 2006 and enables significantly increased transmission speeds (both upstream and downstream), as well as support for a host of other enhanced functionalities. DOCSIS 3.0 is extremely robust and, over Shentel's networks, congestion has been extremely rare. DOCSIS has allowed us to offer our subscribers the ability to freely access all lawful content on the Internet, run a variety of applications including e-mail, web browsing, audio streaming, video streaming, and file sharing, to name a few. Over the past several years, there have been no fundamental changes in the functionalities offered or nature of the broadband Internet access services that Shentel makes available to its subscribers and potential subscribers. However, Shentel has made significant investments of over \$120 million during the past six years to upgrade and expand our broadband and fiber optic facilities to deliver higher speeds and increased network capacity to our customers.

5. Shentel offers mobile telephone and mobile broadband service as an affiliate of Sprint Nextel. These services are branded as Sprint and provided using Shentel's 526 cell sites and fiber optic network. Since 2012, Shentel has invested over \$100 million to upgrade cell sites and switching equipment to deliver 4G LTE wireless broadband service to our customers.

6. As required by the transparency rules of the Federal Communications Commission (“FCC” or “Commission”), Shentel posts its Open Internet disclosures on its website. They can be found at https://www.shentel.com/legal/open_internet_disclosure. At this page, in addition to detailed network disclosure information, there are links to our terms and conditions of broadband Internet access services, our Internet access services and prices, our acceptable use policy, the types of modems that are compatible with our broadband Internet access services, a location where customers can perform speed tests (www.speedtest.net), the network disclosures of Sprint Nextel (for our mobile subscribers) and contact information for fixed service subscribers, our mobile service customers, and others.

7. Since we posted our first set of disclosures in late 2011 in compliance with the FCC’s Open Internet transparency rules, no complaints from customers or others about the accuracy or the sufficiency of our disclosure statements have been brought to my attention. As Vice President of Wireline and Engineering for Shentel, I was and am integrally involved with our network management practices, network performance, and efforts to comply with the transparency rule. If there had been any complaint about the accuracy or adequacy of our disclosure statement, I would have been made aware of it. Shentel has not received any pattern of inquiries or requests for further information that has compelled us to consider modifying our Open Internet disclosures in response.

8. Shentel expended significant resources to comply with the transparency rule when it took effect in November 2011. We installed a server system to monitor broadband Internet access service quality which cost us approximately \$5000 in equipment costs. While our company did not track the employee hours necessary to ensure we were adhering to the rules as they were scheduled to take effect in 2011, we conservatively estimate that we spent more than

150 hours doing so. The two main areas of activity were (1) setting-up the server and related software, and testing the software and the server system performance and (2) preparing our initial Open Internet disclosure statement.

9. Using the server system we installed, Shentel performs its own speed tests and conducts tests on service quality. We post speed and latency results from those evaluations (on an aggregate, average level) on the Shentel website. Subscribers can also perform speed tests on their own lines using resources we make available.

10. We also expend resources periodically to maintain our record of compliance with the FCC's network disclosure requirements. Again, we do not track how many employee hours are spent on these efforts – which consist of system maintenance and monitoring, as well as installing and testing upgrades, and updating our network disclosures. However, I can confidently estimate that my group and the Shentel legal department spends at least 40 hours annually on these two areas.

11. I am concerned that if the FCC were to make changes to the transparency rules to require more detailed disclosures and frequent updates, or mandate that broadband Internet access service providers have different disclosures for different groups (such as consumers and different classes of edge providers), the resources that Shentel would have to expend to comply would multiply significantly in terms of both dollars and personnel time. While I am not aware that the Commission has yet made any specific rule language proposals in this regard that would give potentially affected providers a clear sense of what the FCC has in mind, from my perspective such rule changes are not necessary. Based on our experience in operating the Shentel broadband networks and offering broadband Internet access service, such changes in the

disclosure requirements would be unlikely to have real benefit for either consumers or edge providers beyond the current transparency rules.

12. Of greater benefit to edge providers, in my opinion, is a policy of facilitating open dialogue. Recently, for example, two large Internet content providers reached out to Shentel to negotiate arrangements to allow them to directly peer with our network and to put dedicated caching servers in our network to support delivery of their content. These negotiations were conducted and completed extremely amicably, and the end result was cost savings for the two edge providers and Shentel due to a direct peering connection with our network, more efficient operation of our network, and improved Internet access service, especially video streaming service, for our consumers when accessing these two providers, which account for more than half of all the broadband Internet access traffic on Shentel's network. (To date we do not have any similar arrangements with any content delivery network, CDN, providers, which carry the content of many edge providers, e-commerce companies, and media providers, but similar arrangements would offer similar benefits for the CDN operators and the content and application providers whose traffic they carry.) These negotiations with two of today's largest edge providers demonstrate that, if edge providers require greater information to facilitate their offerings, directly reaching out to dialogue with Shentel is their best option.

I declare under penalty of perjury that the foregoing is true and correct to the best of my information and belief.

Executed on July 14, 2014

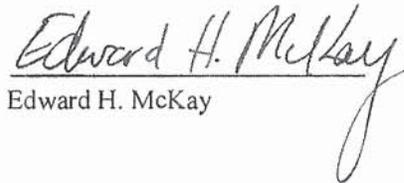

Edward H. McKay

Exhibit D

Hilliard Declaration

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Protecting and Promoting the Open Internet)	GN Docket No. 14-28
)	
Framework for Broadband Internet Service)	GN Docket No. 10-127
)	

DECLARATION OF CHRISTIAN HILLIARD

1. My name is Christian Hilliard. I am the Chief Executive Officer of USA Communications. I submit this Declaration in support of the Comments of the American Cable Associations (ACA) in the above-referenced proceedings.

~~2. USA Communications is headquartered in Kearney, Nebraska. USA~~
Communications currently operates its cable television systems and fixed wireless Internet access in portions of four states (Montana, Nebraska, California, and Colorado). We offer an array of services to our customers including broadband Internet access ("BIA") service advanced digital video programming services, and phone service using digital VOIP and High Definition programming. USA Communications' current cable systems have their origins in systems we first built in the 1980s. Late last year we completed the sale of about one-half of our business to Eagle Communications, consisting of certain cable systems in Nebraska and Colorado.

3. USA Communications now has 46 employees. USA Communications currently serves approximately 12,000 residential BIA customers, including approximately 2000 fixed wireless service customers.

4. We began providing broadband Internet access in the mid-1990s using Zenith modem platforms, moving to the DOCSIS platform in the mid-2000s, from which our Internet access services have evolved in conjunction with later generations of the DOCSIS platforms (currently DOCSIS 3.0). DOCSIS has allowed us to offer our subscribers the ability to freely access all lawful content on the Internet; run a variety of applications, including e-mail; stream online video content; retrieve, store, and share files; and establish “home pages.” Since we moved to DOCSIS there have not been any fundamental changes in the functionality of our BIA services, apart from the continual strides in the bandwidth speeds we offer and improvements in network stability and uptime. Over time, we have moved to a more automated provisioning system whereby our new subscribers can provision their own services and existing subscribers can upgrade their services and make other modifications.

5. USA Communications posts its detailed network management policy on its website in compliance with the Federal Communications Commission’s (“FCC’s”) Open Internet transparency rule, available at <http://www.usacomcommunications.tv/index.php>. We also post our terms and conditions of service, our acceptable use policies, and several means by which customers, edge providers, and others may contact us on our website as required by FCC rules.

6. USA Communications follows the guidance offered by the FCC concerning our BIA service speed by using the results of participants in the Measuring Broadband America project as a proxy. We also advise our customers in our network management policy document of the factors that affect actual speeds and that they can run speed tests on a variety of sites, and we specifically recommend Speedtest.net as one such option. We also advise subscribers to make sure they choose a test location within the same area as their current location for the most accurate results.

7. At the time the Commission's transparency rules first took effect, USA Communications made a substantial (for it) investment in an in-house server system to monitor network and service quality, costing tens of thousands of dollars. We also invested over 160 employee hours to come into compliance in anticipation of the rules taking effect. For a company the size of USA Communications, these up-front expenditures of resources and time were substantial, especially when added to the other federal and state regulatory requirements with which USA Communications must comply. Although we do not track these employee hours spent on regulatory matter specifically, we estimate that USA Communications spends roughly one thousand (1,000) hours annually devoted to maintaining regulatory compliance.

8. Internally, thanks to the in house server system I described above, we are able to track service quality by modem for network management purposes so that we can address subscriber and systems issues should they arise. USA Communications, however, could not justify, from a business perspective, installing a system that would provide individual subscribers with reports of their speed and other performance characteristics on a real-time basis or once daily, or on some other periodic basis.

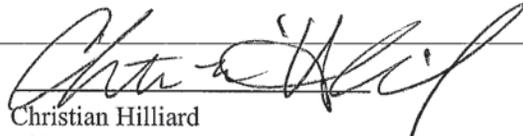
9. Two of our forty-six employees devote substantial amounts of their time annually to regulatory compliance, namely our chief technology officer and our chief financial officer. A good portion of this time, an estimated 250 hours annually, is spent to keep USA Communications compliant with the FCC's open Internet transparency requirements. Much of this time is spent upgrading our systems which monitor service quality and network performance, ascertaining whether updates to our disclosures are required, and updating all relevant documents, web pages and customer communication to comply.

10. Since the FCC's transparency rules went into effect in late 2011, USA Communications is not aware of any complaints or even inquiries about the accuracy or adequacy of our disclosures. This is not to say that our customer service representatives do not, at times, informally seek clarification of a point regarding our network management policies, our terms and conditions, our acceptable use policies. But these are handled immediately by our customer services representatives and do not result in any open issue that needs any extended or higher-level attention. If customers or Internet applications and content providers have questions or concerns, we provide several means on our website to make it convenient for them to reach USA Communications. Other parties know how to find us. For example, the Motion Pictures Association of America has on occasion sent takedown notices for alleged copyright violations by users or providers to USA Communications.

11. It is USA Communications' experience that the current transparency rules are working. We are concerned that any additional disclosure requirements beyond the current obligations would increase the burden of smaller broadband Internet access providers like USA Communications significantly. Because of USA Communications' small number of employees and more limited resources to devote to matters such as regulatory compliance as opposed to operating the business, any resulting increase in our regulatory burden will affect us disproportionately relative to large providers.

I declare under penalty of perjury that the foregoing is true and correct to the best of my information and belief.

Executed on July 15, 2014



Christian Hilliard
Chief Executive Officer
USA Communications