



Response to Questions in the First White Paper

"Modernizing the Communications Act"

by

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and

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Daniel Lyons, Boston College Law School
James B. Speta, Northwestern University Law School
Christopher S. Yoo, University of Pennsylvania Law School**

before the

Committee on Energy and Commerce

U.S. House of Representatives

January 31, 2014

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I. Introduction

At the outset, we want to commend the Committee for initiating this process to review and update the current Communications Act. In our opinion, the review is timely because the Communications Act does need updating. And we commend the deliberative and open nature of the review process as it begins.

At the time the review process was announced, Chairman Walden stated: “When the Communications Act was updated almost 18 years ago, no one could have dreamed of the many innovations and advancements that make the Internet what it is today. Written during the Great Depression and last updated when 56 kilobits per second via dial-up modem was state of the art, the Communications Act is now painfully out of

* While the signatories to this Response are in general agreement, of course, with the views expressed in these comments, their participation as signatories should not necessarily be taken as agreement on every aspect of the submission. And the views expressed are those of the individuals, and they should not be attributed to the institutions with which they are identified.

date.”¹ In the first White Paper, "Modernizing the Communications Act,"² the Committee explains the initiation of the updating process this way: "Changes in technology and the rate at which they are occurring warrant an examination of whether, and how, communications law can be rationalized to address the 21st century communications landscape." Regardless of precisely how this proposition is framed, and we do not intend to belabor the matter, the essential point is this: Since the Communications Act was last revised in any meaningful way in 1996, the communications and information services marketplace environment, driven in significant part by technological changes, has changed dramatically. Thus, in our view, the review and updating process not only is timely but necessary.³

The Committee has adopted a wise approach by initially seeking responses to questions that, as the White Paper puts it, "address thematic concepts" for updating the Communications Act. It is certainly preferable to begin the review and public comment process by eliciting responses at this higher thematic level, and then, as the process

¹ ["Upton and Walden Announce Plans to Update the Communications Act,"](#) News Release, Committee on Energy and Commerce, December 3, 2013.

² White Paper No. 1, ["Modernizing the Communications Act,"](#) January 8, 2014.

³ While we certainly hope that the review and updating process proceeds apace in light of the dramatic technological and marketplace changes that already have occurred, we understand that it may be several years before the end of the road is reached. In the interim, Congress should not necessarily refrain from adopting certain targeted revisions that may improve communications policy and which are consistent with the overall market-oriented reform direction that communications policy should take. Examples of such targeted measures that might be appropriate include two bills introduced last year by Rep. Bob Latta, Communications and Technology Subcommittee Vice-Chair: [H.R. 2649](#), the "FCC 'ABCs' Act of 2013," which would revise the forbearance provision in Section 10 of the Communications Act to require clear and convincing evidence that the forbearance requirements are not met before denying relief, and [H.R. 3196](#), the Consumer Choice in Video Devices Act, which would revise Section 629 of the Act to require elimination of the cable television set-top box integration ban imposed by the FCC.

progressively moves forward, the Committee will be in a better position to seek responses to questions at less thematic, more specific, levels of detail.

The questions asked in the first White Paper are the proper ones. Given the nature of the current statute, and the direction that changes in the statute likely should take, it is not surprising that, at least from our perspective, the questions would elicit responses with considerable overlap and duplication if each is answered separately and in serial fashion. Therefore, we prefer, in order to avoid undue repetition and duplication, to provide a narrative that, in essence, takes the second question: "What should a modern Communications Act look like?" as the primary focal point of our response. In answering this broad framing question posed by the White Paper, we necessarily will address the other questions relating to the structure of the Act, the need for flexibility and technological neutrality, the distinction between information and telecommunications services, and so forth.

II. The Major Guiding Principles for Reforming the Communications Act

In this section, before providing a more expansive narrative statement responsive to the Committee's questions, we want to set forth in summary fashion what we believe should be the guiding foundational principles of the reform effort. These principles will guide the narrative statement that follows this Section II.

A. In updating the Communications Act, a clean slate approach is needed to adopt a "replacement" regime – a new Digital Age Communications Act, if you will⁴ – because the new act should be much different in concept and structure than the existing one.

⁴ In 2005, at the Progress & Freedom Foundation, Randolph May and James Speta, working with a group of scholars with diverse views and political leanings, led an effort to develop a regulatory framework for what was called a "Digital Age Communications Act" or "DACA." The framework ideas presented here certainly owe much to the ideas developed then, because we think that they remain proper guiding principles at this time. Indeed, we still favor "Digital Age

- B. Generally, the broad delegation of indeterminate authority to the FCC to regulate "in the public interest" should be replaced with a marketplace competition-based standard, so that, except in limited circumstances, the FCC's regulatory activities will be required to be tied to findings of consumer harm resulting from lack of sufficient competition.**
- C. With a competition regulatory standard in place that is generally applicable to all entities providing electronic communications subject to the Commission's jurisdiction, the existing "silo" regime, which results in the regulation of entities providing comparable services in a disparate manner, should be eliminated in favor of FCC authority over all electronic communications networks.**
- D. The FCC's authority to adopt broad anticipatory rules on an *ex ante* basis should be substantially circumscribed, and agency rules should be sunset after a fixed number of years absent a strong showing at the sunset date that they should be continued; the Commission should be required to rely more heavily than is presently the case on adjudicating individual complaints alleging specific abuses of market power and consumer harm.**
- E. To a significant extent, the FCC's structure as a matter of form in an institutional sense will be dictated by the structure of the new act and the fundamental decisions made regarding the agency's role. The new act should require that the agency adhere to certain process reforms such as those contained in H. R. 3675, the "Federal Communications Commission Process Reform Act of 2013." With respect to jurisdiction, certain matters (for example, privacy and data security regulation) currently under the FCC's jurisdiction should be transferred to the FTC because those matters are closer to the FTC's core institutional expertise and because consolidating such jurisdiction in the FTC makes it less likely that various providers of comparable services in the overall Internet ecosystem will be regulated in a disparate fashion. Finally, the authority of the states to engage in economic regulation of service providers should be circumscribed in the new act.**
- F. In drafting a new act, one guided by these foundational principles, the concept of "simplicity" should remain an important goal. In the**

Communications Act" as the name for the new act. Once again, we acknowledge the debt owed to the DACA Working Group. See Randolph J. May and James B. Speta, "Digital Age Communications Act," [Proposal of the Regulatory framework Working Group](#), Progress & Freedom Foundation, June 2005. See also, Randolph J. May, *Why Stovepipe Regulation No Longer Works: An Essay on the Need for a New Market-Oriented Communications Policy*, 58 FED. COMM. L. J. 103, 106 (2006)(referring to the need for a new regulatory framework that reflects today's digital age competitive marketplace realities, "what one might call a new Digital Age Communications Act.")

Fourteenth Century, William of Ockham wrote: "What can be explained on fewer principles is explained needlessly by more." This theorem became known as Ockham's Razor. In drafting a new act, the Razor should be kept close at hand.

III. "What Should a Modern Communications Act Look Like?"

As stated above, within the context of answering this broad framing question we believe we will answer below all of the questions posed by the Committee. But because we understand that this is just the beginning of the process, a process that certainly will focus more narrowly on specific subject matters and issues as it continues, our response, by design, is broadly thematic in keeping with the nature of the initial set of questions.

A. A Clean Slate for Adopting a Replacement Regime

Perhaps the most fundamental question the Committee will face is whether Congress should approach the updating process by, for the most part, starting with a "clean slate" to devise a replacement regime, or whether, on the other hand, it could achieve what needs to be accomplished in an update by employing more targeted revisions to the current statute. There may well be some who suggest that rather replacing the current act with a new one embodying a very different model, a principal drafting objective should be to amend the statute as little as possible. We do not discount the possibility that the existing Communications Act could be improved, perhaps even substantially, by amendments to the current statute.⁵ But the option of "tinkering around the edges" in order in an effort to minimize the changes to the current statute should be rejected in favor of adopting a replacement statute.

⁵ And as stated earlier in footnote 3, we do not suggest that, in the interim, pending adoption of a comprehensive rewrite, the current act should not be revised in limited targeted ways that are consistent with the market-oriented, less regulatory direction the new act ultimately should take.

There are two primary reasons for this. First, as explained below, the conceptual changes in communications law and policy that are warranted, indeed required, by the dramatic technological and marketplace changes described in the Committee's White Paper, are major. The governing concepts and philosophical principles embodied in the new act that we envision are very different from the governing concepts and philosophical principles embodied in the current statute. After all, in many important respects, in a foundational sense, the current statute remains intact as adopted in 1934, and the 1934 Act itself closely resembled, in significant respects, the Interstate Commerce Act of 1887. The ICA's very purpose was to tame what were considered to be static carriers exercising monopolistic power, not to oversee a technologically dynamic marketplace. This being so, the "clean slate" approach simply makes more sense.

Second, and relatedly, the clean slate approach is more susceptible to achieving the goal of simplicity. A clean slate approach adopting a replacement regime is much more likely to result in a governing statute that is shorter, better organized, more intelligible, with fewer unintended conflicts, than one that takes the current act as its starting point.⁶

B. The Silos Should Be Eliminated

As the Committee's first question states: "The current Communications Act is structured around particular services." No one really disputes this assertion, and there is fairly widespread agreement that the current act's structure, with its various regulatory

⁶ It is worth noting here that we understand that there will need to be attention paid to transitional periods and transitional mechanisms to get from the existing statute to a new one. These transitional issues, which may involve phase-outs of certain obligations and duties over a period of time, will present some difficult and important questions. Nevertheless, at bottom, they are still transitional issues. It would be a mistake to sacrifice the benefits of long-term improvements in the law because of a fear of short-term disruption.

"silos" or "stovepipes" is increasingly problematic in the digital age. Under the existing statute, disparate regulations often apply to services that, from the consumer's perspective, compete against each other in the marketplace. Thus, for example, "telecommunications" providers are regulated differently from "information services" providers. "Cable " television operators are regulated differently from broadcasters and "satellite" television operators. Wireless service providers are subject to their own set of regulatory requirements, even though the services they offer increasingly compete with all of the others.

Without belaboring the point, whatever the merits of the "silo" structure in an earlier age, it no longer makes sense. The various silos, in essence, primarily are based on "techno-functional" constructs⁷ that do not comport with the realities of digital age technologies and services. Even a casual examination of the definitions of "telecommunications," "information services," "cable service," "mobile service," and so forth shows that these definitions, with the attendant regulatory classification impacts, mostly are tied to descriptions of certain technological capabilities or functional characteristics of the services.

The old saw that a "byte is a byte is a byte" is now a digital world truism, at least in the sense that is relevant here. And it is this technological reality that has rendered the

⁷ Randolph J. May, *Calling for a Regulatory Overhaul, Bit by Bit*, CNET NEWS, Oct. 19, 2004, http://news.com/Calling+for+a+regulatory+overhaul%2C+bit+by+bit/2010-1028_3-5415778.html. ("The policy framework embodied in our existing communications laws is often called 'stovepipe' regulation. This is because there are distinct technology-based and functionally driven regulations that apply in a disparate fashion, depending on whether different services are classified as telecommunications, information services, cable, satellite or broadcast. Imagine each distinct service classification as a vertical stovepipe.... [O]n the regulation of VoIP services, I called the distinctions underpinning stovepipe regulation metaphysical in the sense that the existing definitions rest upon transcendent and highly abstruse techno-functional constructs.")

current silo regime obsolete as a policy paradigm as the transition to IP networks has rapidly accelerated. As Christopher Yoo put the matter as early as 2003: “Gone are the days in which each communications technology could be regarded as occupying a separate regulatory silo. The impending shift of all networks to packet-switched technologies promises to complete the collapse of any remaining attempt to base regulation on differences in the means of transmission.”⁸ Shortly thereafter, in 2004, the FCC itself recognized the impact and implications of the IP transition. In opening its (yet to be completed) *IP-Enabled Services* proceeding, the Commission explained that the greater bandwidth of digital broadband services encourages the introduction of services “which may integrate voice, video, and data capabilities while maintaining high quality of services.”⁹ Then, in a prediction that certainly has proven to be true, the FCC added: “[I]t may become increasingly difficult, if not impossible, to distinguish ‘voice’ service from ‘data’ service, and users may increasingly rely on integrated services using broadband facilities delivered using IP rather than the traditional PSTN (Public Switched Telephone Network).”¹⁰

The Commission's 2004 statement predicting the increasing difficulty in distinguishing "voice" from "data" services, not at all surprisingly, has been proven true, and this surely is a contributing reason as to why the Commission, some nine years later, has yet to take further action in the *IP-Enabled Services* proceeding definitively to classify interconnected VoIP services as "telecommunications services" or "information services." We are entirely sympathetic to the difficulty faced by the Commission and

⁸ Christopher S. Yoo, *New Models of Regulation and Interagency Governance*, 2003 MICH. ST. L. REV. 701, 714 (citation omitted).

⁹ *IP-Enabled Services*, Notice of Proposed Rulemaking, 19 F.C.C.R. 4863, para. 16 (2004).

¹⁰ *Id.*

understand its reluctance to conclude that these IP-based voice services are "telecommunications" with all the attendant regulatory consequences that may flow from such a determination. Nevertheless, it is the consequences of this non-action – at best, continued regulatory uncertainty, or, at worst, the application of disparate regulations to services that, from the consumer's perspective, compete against each other in the marketplace – that demonstrate the need to dismantle the silo regime, including the distinction between "telecommunications service" on the one hand and "information services" on the other.¹¹

The transition from narrowband to broadband and from analog to digital has rendered the silo regime statutory structure obsolete. In the current environment, the communications marketplace has become increasingly competitive – but the competition primarily takes place across multiple digital broadband platforms employing various technologies, and sometimes a mix of technologies. These various communications platforms should not be subject to disparate regulations simply because they are consigned to one silo or another. Instead, a new act should be technologically neutral. The current approach creates incentives for companies to invest capital in efforts to gain advantages through regulatory arbitrage, rather than investing in ways to deliver better services to consumers more efficiently.

¹¹ This is not to say that the distinction between "telecommunications services" and "information services," which dates back to the *Computer II* regime adopted by the FCC in 1980, did not, for a number of years, play a valuable role in allowing the newly emerging information services to continue to develop free from Title II common carrier regulation. The point is that now, in a new act, the Title II silo itself should be eliminated.

C. The Public Interest Standard Should Be Largely Eliminated

Aside from the silo structure, there is another paradigm in the Communications Act that, for the most part,¹² should be jettisoned in a new Digital Age Communications Act. This is the ubiquitous "public interest" standard, which "still pervades the current regulatory regime."¹³ There are nearly 100 different provisions in the Communications Act which delegate authority to the FCC to regulate in the "public interest, convenience, and necessity" (or some very close variant thereof).¹⁴ There is an argument that the public interest standard, which originated in Progressive/New Deal era theories of public administration based on notions of an agency's presumed impartial, nonpolitical expertise, is so indeterminate in meaning that it constitutes an unconstitutional delegation of legislative authority.¹⁵ Among long-time FCC-watchers, there is an old saw that the "public interest" is whatever three of the five commissioners say it is on any given day. While the Supreme Court has rejected the constitutional challenge to the public interest

¹² We say "for the most part" because there may be a few limited instances in which retention of the public interest standard might be appropriate. It is not the proper place here, at the beginning of the review process, to attempt to delineate those places, if any. The main point now is the public interest standard is ubiquitous throughout the Communications Act, and this certainly should not be the case in the replacement regime.

¹³ See Randolph J. May, A Modest Plea for FCC Modesty, 60 ADMIN. LAW REV. 895, 897 (2008) ("The public interest standard that was the keystone of the Radio Act of 1927 and its successor, the Communications Act of 1934, still pervades the regulatory regime.")

¹⁴ See Randolph J. May, *The Public Interest Standard: Is It Too Indeterminate to Be Constitutional?*, 53 FED. COMM. L.J. 427, at 456–67 (2001) (listing provisions in the Communications Act that pertain to the public interest standard). In 1999, constitutional law scholar Gary Lawson called the public interest standard "[e]asy kill number 1" on nondelegation doctrine grounds because the licensing provisions of the Communications Act grant "nearly absolute discretion...." Gary Lawson, *Delegation and the Constitution*, REG., Spring 1999, at 23, 29, available at <http://www.cato.org/pubs/regulation/regv22n2/delegation.pdf>.

¹⁵ For a full discussion of this argument with citation to many authorities, see Randolph J. May, *The Public Interest Standard: Is It Too Indeterminate to Be Constitutional?* 53 FED. COMM. L.J. 427 (2001).

standard on nondelegation doctrine grounds,¹⁶ this does not mean that this Progressive/New Deal era standard should remain the FCC's governing lodestar for regulation in today's radically changed environment. It should not. Simply put, the public interest standard is so vague that it necessarily confers too much unbridled discretion on the agency without sufficient direction from Congress.

D. A Marketplace Competition Standard Should Replace the Silos and Public Interest Standard

If the silo regime should be disassembled and the public interest standard largely jettisoned, then what should be at the core of the replacement regime as the governing lodestar? The answer is a competition-based standard that directs the FCC generally to undertake an antitrust-like economic analysis when it engages in regulatory activity that is subject to its jurisdiction.¹⁷ We are not suggesting that a new statute direct the FCC, in an overtly strict sense, to incorporate and apply current antitrust jurisprudence or precedents. But given the development of competition in most communications market segments, and the technological dynamism that characterizes these markets, the

¹⁶ See *FCC v. Pottsville Broad. Co.*, 309 U.S. 134, 138 (1940); *National Broadcasting Co. v. United States*, 319 U.S. 190, 219-226 (1943).

¹⁷ In our view, the Commission generally should retain jurisdiction over electronic communications networks and services that, to a significant extent, mirrors the extent of the agency's jurisdiction under the current Communications Act. Thus, while the language would be updated to reflect modern usage, we envision that the scope of the Commission's *jurisdiction* would not be materially narrowed from the scope of the agency's *jurisdiction* in present Section 2(a) of the Act. We hasten to add, though, as explained in the text, that the *exercise* of whatever jurisdiction the Commission is granted should be substantially constrained by the new competition-based standard that ties the *exercise* of the Commission's authority to findings of market failure and consumer harm. In other words, it is important to distinguish between the conferral of jurisdiction and the real constraints placed on the exercise of such jurisdiction. Finally, there are delegations of authority in the current act, such as the enforcement of privacy (CPNI) rules for telephone and cable companies, that probably should be transferred to the Federal Trade Commission so that various entities providing comparable services in the Internet ecosystem would be subject to the same type of regulations. And enforcing a uniform set of privacy rules, and other consumer protection-like rules, for example, is closer to the core competency of the FTC than the FCC.

Commission generally should be required to find a threat of an abuse of market power and a concomitant threat of consumer harm before imposing regulations on entities subject to its jurisdiction.¹⁸ In line with the recommendation of the Digital Age Communications Act Regulatory Framework Working Group, and the technological dynamism that characterizes the communications marketplace, it may be advisable for the new statute to specify that any market failure found by the Commission must be determined to be "non-transitory."¹⁹

By virtue of adoption of a competition standard grounded in antitrust-like jurisprudential principles, before regulating the FCC would be required, much more than it is today under the existing act, to engage in a rigorous economic analysis that focuses on actual and potential marketplace competition. As part of such analysis, the agency necessarily would need to take into account the impact of the dynamism that characterizes the digital marketplace.

Recognizing the importance of the interconnection of communications networks that serve the public, the FCC should have authority to maintain interconnection by addressing interconnection practices that might pose significant consumer harm, where it finds that marketplace competition is not adequately protecting consumers. This standard also recognizes the importance of competition analysis, but also empowers the FCC to maintain the most central aspect of the modern Internet – its interconnected nature.

¹⁸ There may be some limited areas of regulatory activity subject to the Commission's jurisdiction that should not be tied to the market failure standard, but the purpose here is to suggest the proper general framework, not to identify any specific exceptions. These may be addressed as the updating process continues.

¹⁹ See Randolph J. May and James B. Speta, "Digital Age Communications Act," Proposal of the Regulatory framework Working Group, Progress & Freedom Foundation, June 2005, and note 4 *supra*.

E. Curtailing *Ex Ante* Rulemakings and Relying More Heavily on *Ex Post* Adjudication of Complaints

In a new act, the FCC should be required to favor narrowly-tailored *ex post* remedial orders in addressing practices that are alleged to be anticompetitive or abusive rather than undertaking broad *ex ante* proscriptions developed in generic rulemakings. The agency generally should be required to determine whether service providers subject to individualized complaints have adopted practices that present the threat of abuse of significant and non-transitory market power that should be constrained in some appropriately targeted way. Regulatory prohibitions and sanctions under the new statute generally would be accomplished through the conduct of focused adjudicatory proceedings following the filing of individual complaints containing specific allegations of abuse of market power.

Application of a marketplace competition standard would make it easier for broadband companies to engage in permission-less innovation. Commentators have long acknowledged that competition improves if entrepreneurs can develop ideas and bring new products to market without first needing to seek government approval. Unfortunately, an *ex ante* regulatory regime that operates mainly through rulemaking often inhibits permission-less innovation by suggesting that new products be submitted to the Commission for review or face the threat of litigation and sanctions over their lawfulness. An *ex post*, competition-based standard would clarify that entrepreneurs are free to introduce new ideas and products to the marketplace without prior regulatory approval, provided that the offering doesn't abuse market power in a way that causes consumer harm.

While the Commission should not necessarily be precluded from adopting rules that define, in advance, certain specific acts or practices that constitute threats of abuse of market power because they cause consumer harm, this rulemaking authority should be carefully circumscribed. And any such rules the Commission issues regarding competition should automatically sunset after an appropriate period of time, say, for example, in five years, unless the Commission affirmatively finds, again based on a showing of clear and convincing evidence, that there is a market failure necessitating continuation of the regulation in order to prevent consumer harm.

IV. The Structure and Jurisdiction of the FCC

The Committee asks, quite appropriately, about the structure and jurisdiction of the FCC, and how they should be tailored to address the systematic change in communications. To a significant extent, of course, the structure of the agency, in an institutional sense, should be strongly influenced by – or "follow" as in the saying, "form follows function" – the jurisdiction of the agency and the structure of the new act that defines the agency's exercise of its regulatory authority. In other words, in a new Digital Age Communications Act without silos, there likely should not be an FCC, institutionally, with separate Mass Media, Wireline, Wireless bureaus, as opposed to say, a Broadband Bureau. And in an FCC in which a marketplace competition standard replaces the public interest standard as the agency's regulatory lodestar, then from an internal agency organization perspective, the role of economic analysis – and the economists responsible for performing such analysis – should be institutionalized in an appropriate organizational manner that furthers the usefulness and effectiveness of such analysis.

Any new act should contain within it some of what, for present purposes, might be called "process reforms." As Free State Foundation President Randolph May has testified before this Committee twice in the last three years, these reforms should include a range of process improvements, ranging from additional analytical requirements for agency rulemakings to transaction process reforms, to the institution of "shot clocks" for completing agency proceedings and requirements for more input by all commissioners in controlling the Commission's docket.²⁰ These institutional process reforms are important to making the FCC the "model agency for the digital age" that then-FCC Chairman William Kennard envisioned in 1999, when the agency, under his direction, released a report entitled, "A Strategic Plan: A New FCC for the 21 Century." The plan's first four sentences read:

In five years, we expect U.S communications markets to be characterized predominately by vigorous competition that will greatly reduce the need for direct regulation. The advent of Internet-based and other new technology-driven communications services will continue to erode the traditional regulatory distinctions between different sectors of the communications industry. As a result, over the next five years, the FCC must wisely manage the transition from an industry regulator to a market facilitator. The FCC as we know it today will be very different in both structure and mission.²¹

Unfortunately, since 1999, there have been few meaningful changes regarding the structure and mission at the agency. The proposals contained in Chairman Walden's "Federal Communications Commission Process Reform Act of 2013" (H.R. 3675) and in Mr. May's testimony before the Committee certainly should be considered in conjunction with a new act.

²⁰ See [Testimony of Randolph J. May](#), Hearing on "Improving FCC Process," Subcommittee on Communications and Technology, July 11, 2013; [Testimony of Randolph J. May](#), Hearing on "Reforming FCC Process," Subcommittee on Communications and Technology, June 22, 2011.

²¹ FCC, "[A Strategic Plan: A Model Agency for the 21st Century](#)," August 1999.

With respect to the FCC's jurisdiction, as lines continue to blur across the Internet ecosystem among various providers of services that, from the consumer's perspective, are comparable – regardless whether they are facilities-based network service providers, "over-the-top" providers of VoIP services, or content and applications "edge" providers, or whatever – it will be important in drafting a new act to consider treating such services in a holistic way, at least for some purposes that relate more closely to consumer protection than to traditional economic regulation. For example, with regard to any regulatory oversight relative to the protection of privacy or data security, even though the FCC presently has some jurisdiction in these areas, for the most part, it would be preferable to consolidate such jurisdiction in the FTC. The types of consumer protection issues most likely to arise with regard to privacy and data security are at the core of the FTC's institutional expertise. If jurisdiction over these type of matters – matters outside of the purview of traditional economic regulation of service providers – is transferred to the FTC, it is much less likely that telecom and cable services providers, on the one hand, and, say, Facebook or Twitter, on the other, will end up subject to disparate regulations in these areas.

Finally, a new act must also address the role of state regulators in the 21st century telecommunications marketplace. The Communications Act of 1934 divided regulatory authority over telecommunications services between the federal government and the states. This distinction was appropriate when regulating twentieth-century telephone networks, which were primarily regional monopolies that distinguished between local and long-distance calls. But today's information service networks generally are national in scope. Neither providers nor consumers can distinguish easily, if at all, and certainly

not without incurring significant costs, between interstate and intrastate communications. The law should not require them to do so. State regulation of economic activity such as rates or conditions of market entry jeopardizes the economics of scale that flow from national networks. Many states recognize this and have reduced their telephone regulations while foreswearing any interest in regulating IP networks. The new act should similarly vest most regulatory authority in the federal government rather than the states.

But this does not mean states should play no role under a new act. States have a significant advantage over their federal counterparts regarding issues where local knowledge may be brought to bear, and sound policymaking should continue to leverage that advantage. For example, state and local authorities should retain primary jurisdiction over siting decisions, because they know best how specific projects will affect a local community. Similarly, state regulators are in a better position to understand the individualized needs of local communities and thus should retain a prominent voice regarding consumer protection issues, though subject to federal oversight to assure that parochial issues do not needlessly jeopardize broader national objectives.

Spectrum Inefficiencies Caused by FCC Renewal Policies in Spectrum Auctioned for Fixed Microwave

Radio spectrum is a limited resource that must accommodate burgeoning needs. Yet current laws and regulations use the resource inefficiently. Inconsistencies in the spectrum licensing and renewal processes are partly to blame—particularly as to renewal standards for spectrum auctioned on a geographic basis for fixed wireless use.

Auctions work well for wide-area applications such as broadcast and mobile phone service. The current scheme governing geographic-area auctions for fixed wireless services, however, can be problematic. Fixed wireless relies on point-to-point communications that do not require exclusivity. Multiple users can usually coordinate non-interfering point-to-point links in the same region using the same spectrum band. Geographic licensing, in contrast, limits use of the spectrum to only one licensee. In some cases, that licensee must attempt to recover its auction costs by selling service to others. Where demand exists, auctions have succeeded, and geographic licensing has allowed the licensee and its customers to deploy quickly and efficiently.



The problem arises with the FCC’s policies for renewal after the ten-year license term in areas where demand is light. To qualify for renewal, the licensee must show it is providing “substantial service,” a term that is not clearly defined. A “safe harbor” allows renewal if the licensee has constructed four point-to-point links per million population in the license area. This standard creates a perverse incentive for the licensee to build “links to nowhere” using obsolete and useless equipment merely to preserve its license rights. The spectrum remains functionally unused.

If the licensee lacks enough business to support the four-links-per-million standard, and does not play the game of constructing pointless links, the public-interest consequences are worse. The FCC has canceled hundreds of licenses for non-construction despite, in some cases, substantial investments by licensees to prepare the spectrum for offering service. The FCC has never attempted to re-auction that spectrum—although, given the renewal policy history, a rational bidder would be unlikely to offer much.

Rather than incentivize licensees’ efforts to serve the public interest, the present policy produces exactly the result the FCC most wants to avoid: out-of-service spectrum that no one can use.

An update to the Communications Act must remedy these problems. Certain changes to the current policies would be welcome improvements:

1. If Congress continues to favor area-wide auctions for fixed service spectrum, then license renewal standards should better evaluate whether spectrum is under development, using criteria calculated to discourage both competitive warehousing and the construction of useless links.
2. To promote construction, a licensee should be allowed to continue operating point-to-point links that have already been built, even if the rest of the license is cancelled.
3. After a license is cancelled and beyond all appeals, the affected spectrum should become available for shared licensing by anyone.

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January 31, 2014

Subject: Communications Act.. Television DMAs

Date: Friday, January 10, 2014 at 10:22:26 AM Eastern Standard Time

From: Todd Senter

To: CommActUpdate

To whom it may concern,

As a near thirty year veteran of the television industry, one item I feel is very important going forward is the restructuring the way that television DMAs are determined. Currently it's done through Nielsen's total television viewing, which includes viewing on cable, satellite and antenna. Although antenna homes are included, it's never going to be enough to swing some counties into the local DMAs to which they are geographically, economically and politically closer.

For example in my market, Gainesville, FL, DMA # 163, the community of Ocala, FL located in Marion county is 33 miles away from Gainesville, but it is assigned to the Orlando DMA # 18, which is 90 miles away. The Ocala, FL homes can receive the Gainesville stations via antenna, but cannot receive the Orlando stations via antenna. Yet because the Orlando stations were put on cable and satellite as per Nielsen's choice, the community of Ocala belongs to Orlando.

The main reason this is important is for the safety of these communities as it relates to the EAS system. I've attached the Florida EAS map, Gainesville is operational area 6 (in green). Two of the counties (Citrus & Marion) that the Gainesville market are responsible for are not in our DMA, so the Gainesville stations are not on cable or satellite in those counties. So we are sending out safety information that they are not receiving.

Another example would be Campbell and Johnson Counties in Wyoming. Even though they are hundreds of miles away from Denver, they are assigned to the Denver, CO DMA # 17, rather than one of the three surrounding DMA's of Casper, WY, Rapid City, SD or Billings, MT. Again big market stations getting on cable and satellite can swing a county into a big television market without even having an antenna signal available.

The alternative is to determine television DMA's by antenna coverage using the FCC filed coverage maps.

More and more surveys and polls talk about people going back to antenna viewing, especially younger people. This makes sense because the digital transition has made more stations available to the American people for free and by combining antenna viewing with internet viewing a lot of people don't feel the need to spend money on cable and satellite.

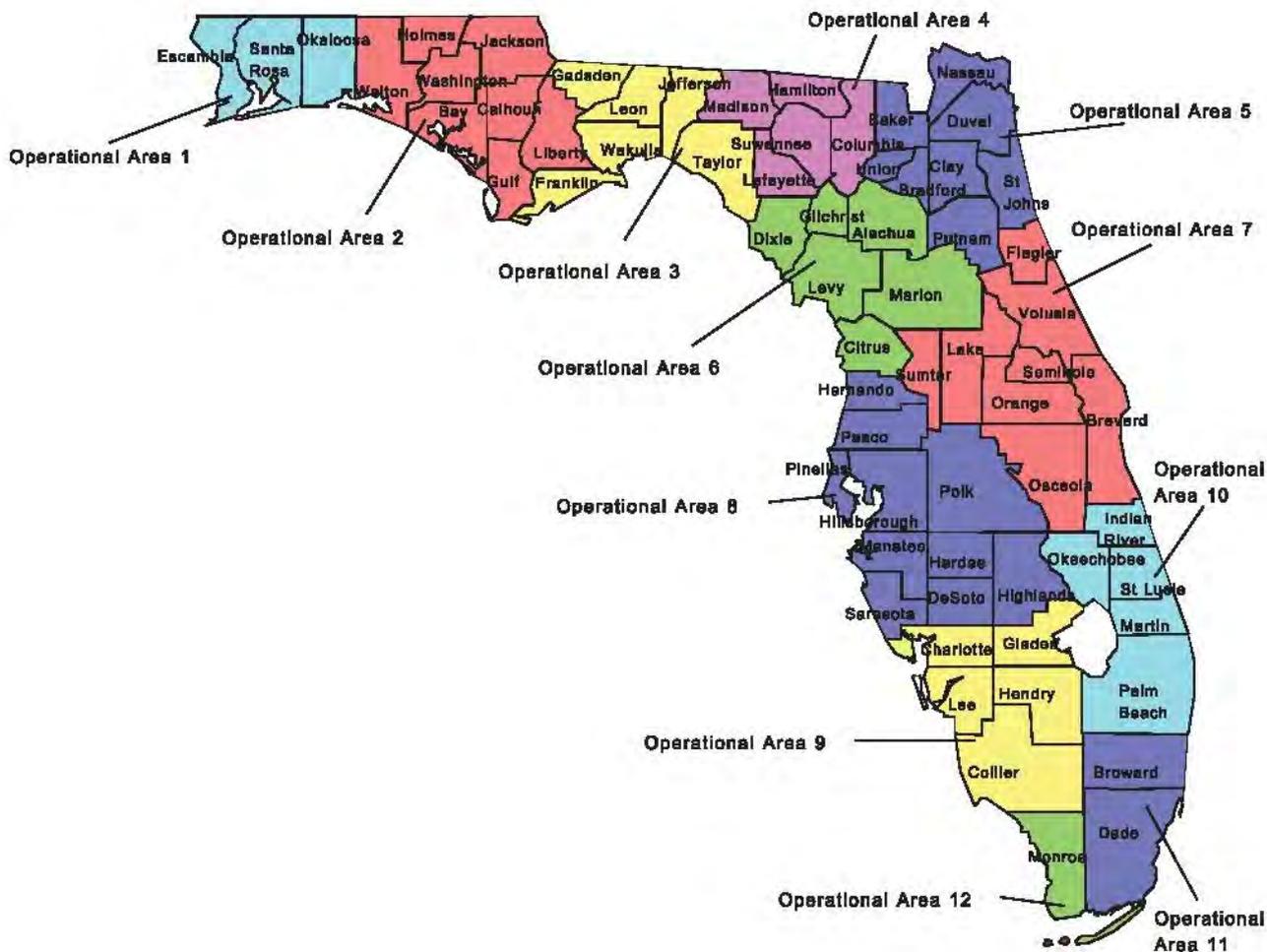
Television managers are not naïve, we know that Nielsen is going to serve their big city clients first because that's where their revenues come from, so the assignment of communities and counties needs to be taken out of the hands of the Nielsen Corporation. DMA's should be determined by the FCC, taking into account the EAS maps and the officially filed FCC antenna coverage maps. Longley Rice maps are still used and have been an accurate measurement for decades.

This change will help promote competition, diversity and localism within the marketplace and most importantly the safety of the American people.

Thank you for taking time to read this and feel free to contact me if you have any questions.

TODD SENTER
General Manager
Gainesville Television Network (GTN)
WGFL (CBS) – WNBW (NBC)
WMYG (MY) – WYME (ME)
1703 NW 80th Blvd.
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OPERATIONAL AREAS MAP





January 31, 2014

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Greg Walden
Chairman
Subcommittee on Communications and Technology
2125 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Upton and Chairman Walden:

General Communication, Inc. ("GCI") thanks you for this opportunity to comment on your efforts to modernize the laws governing the communications industry. GCI is a provider of every communications service across the wide array of services governed by the Communications Act, in every service environment imaginable in Alaska. We are deeply interested in contributing to the development of a smarter, more responsive, and effective body of law that results from your Committee's efforts. GCI's perspective is shaped by adherence to three core principles: universal service, technological and competitive neutrality, and transparency.

Universal Service is a bedrock principle under the current statutory regime that must remain in any successor regime. The FCC is currently undergoing the long process of reforming and strengthening the various Universal Service programs – E-rate for schools and libraries, Rural Health Care for telemedicine, Lifeline for low-income citizens, and High-Cost Support for areas where building infrastructure is especially expensive. It is vital that targeted Universal Service remains as a core principle as the Committee works to revitalize the Communications Act.

GCI has invested over \$1 billion in Alaska since 1979 and more than \$720 million since 2008. Significant private investment alongside and unleashed by the availability of universal service support has helped bring critical wireless and broadband services to locations throughout Alaska; however, services are still catching up in many spots, and continued support will be necessary to overcome and prevent future widening of the digital divide. USF makes it possible for GCI to bring wireless service to remote villages hundreds of miles from the nearest city.

The education gap that has plagued the children of these remote villages for generations, as rural Alaskan students lacked both the teachers and the resources to keep pace with their peers in other parts of the nation, has finally begun to close thanks to investments substantiated in part by anchor tenants funded by the E-rate program. Thanks to high-cost support for wireless deployment in remote Alaska, the resident whose snow machine broke down miles from his Alaska Native village was able to phone for help rather than risking the long hike back home in subzero temperatures, and a woman who was the victim of a devastating plane crash was able to reach rescuers and guide them to the wreckage to aid injured survivors.

It is only through Universal Service that companies like GCI can make the business case to expand wired and wireless broadband service to the most remote areas of the country. These investments have real-world benefits that have helped millions of consumers around the country.

As the Committee's first White Paper points out, **technological and competitive neutrality** is another core principle that the Committee must preserve as it moves forward. It should lie with the market, and not Congress or the FCC, to determine which technologies or companies succeed or fail. Both industry and consumers are better served by laws that do not choose technologies for them, but instead allow technologies to compete for customers on their own merits.

Alaska is the largest and least densely populated state in the Union, and even regional population centers like Bethel, Nome, Kotzebue, and Barrow are several hundred miles away from the main hubs of the state in Anchorage, Fairbanks, and Juneau. For many years, these far-flung locations had to depend on satellite backhaul for voice and data services. In addition to enormous replacement costs, satellite is hampered by limited bandwidth and high latency, making it far from ideal for modern communications platforms such as IP video or videoconferencing. Building fiber to all of these locations is logistically, technologically, and economically impractical, so GCI has turned to microwave technology to innovate terrestrial middle-mile broadband services in Alaska. In 2012, we turned up the first phase of our TERRA network, utilizing fiber extensions where appropriate and microwave repeaters to connect Southwest Alaska to the fiber backbone at true, low-latency broadband speeds. Last year, we extended the service in Nome, and will turn up in Kotzebue by the end of 2014. TERRA has brought true broadband to parts of Alaska where it was unthinkable only a few years ago, and it is in large part thanks to the ability to use new or different technologies to innovate. Had the laws or regulations disfavored the use of microwave, Bethel and Nome would still lack broadband access. Likewise, should other innovations enable new or even replacement technologies, then the opportunity for these advancements should flourish, as well.

Similarly, competitive neutrality must be central to any Communications Act modernization. Just as the market is the best selector of technologies, it is also the best method for consumer selection among providers. It should not fall to

legislators or regulators to pick winners and losers in the myriad hardware and service markets that make up the communications sector. Any rewrite of the Act must allow for a level playing field for competitors. Anything less would be a disservice to industry and consumers alike.

Transparency must also be at the heart of the modernization of the country's communications laws. We all expect the FCC to operate out in the open, as consumers and members of industry and civil society all deserve to participate in and have knowledge of the Commission's decision-making process. The same principle should be applied throughout the communications sector. The prices charged for channels on cable is an apt example of an area where the lack of transparency has failed all parties involved. As a cable provider and the owner of broadcast stations, GCI is in a position to see different sides of this issue. At present, typical nondisclosure provisions in retransmission and programming agreements shroud programming cost information from public view. This lack of transparency imbalances the competitive marketplace and leaves consumers in the dark about the source of increasing cable programming costs—but as the entity with the customer relationship, cable providers are left to face the ire of the public. This is one example where Congress and the Commission should put the concept of transparency into action for consumers, proscribing this sort of nondisclosure provision and others like it that create a cost-increasing black box.

GCI thanks you for the opportunity to comment on this effort, and we look forward to working productively with the Committee and Subcommittee over the coming months and years.

Sincerely,

A handwritten signature in blue ink, appearing to read "Tina Pidgeon", with a long horizontal line extending to the right.

Tina Pidgeon
General Counsel & Senior VP, Governmental Affairs

January 31, 2014

Dear Sir/Madam:

My name is John W. Mayo and I am a Professor of Economics, Business and Public Policy at Georgetown University's McDonough School of Business. In addition, I am also Executive Director of the Georgetown Center for Business and Public Policy. I have spent many years observing and analyzing the country's communications sector.

I understand that the Committee is undertaking an important endeavor in its quest to modernize the laws governing the communications sectors. It is critical that the Committee understand how changes to the current framework could impact both consumers and industry participants alike. In this regard, I have recently published a paper that you may find of interest as you begin to consider the many issues related to a successful rewrite of the Communications Act.

In my paper, "[The Evolution of Regulation: 20th Century Lessons and 21st Century Opportunities](#)," I explore the topic of regulatory reform by focusing on lessons learned from both the evolution of economic analysis and regulatory experiences during the past half-century. In this paper, I find that the most successful dimensions of regulatory and deregulatory policymaking in the past half-century are what I call "results-based" regulation ("RBR"). RBR draws upon the most successful aspects of both regulation and economic analysis over the past fifty years with the aim of establishing principles that can guide policymakers as they pursue regulatory policies in the twenty-first century.

There is significant urgency to establish a twenty-first century, results-based regulatory paradigm, and arguably nowhere is this more apparent than in the case of the communications industry. As I explain in greater detail in the paper linked above, history has revealed that there are five principles that can best guide policymakers in crafting a regulatory paradigm that strikes the right balance between protecting consumers and enabling private investment and innovation to occur in this critical sector of the US economy.

These principles are:

- Principle 1 – All market governance mechanisms for resource allocation are, in practice, imperfect.
- Principle 2 – Given the imperfections of alternative governance mechanisms, advances in technology, and presence of evolving legal institutions, regulators must be vigilant to the possibility of improved regulatory or deregulatory designs.
- Principle 3 – Wherever possible, regulators should engage in empirical counterfactual scrutiny of alternative market governance mechanisms.
- Principle 4 – In assessing the merits of alternative market governance mechanisms, policymakers should weigh granular empirical evidence collected from actual markets heavily.
- Principle 5 – When considering alternative governance structures for a market, policymakers should focus on tangible end-state economic metrics.

As you develop your own thinking on the impending rewrite, please feel free to contact me to discuss in greater detail my research and the principles identified herein.

Sincerely,



John W. Mayo
Executive Director
The Georgetown Center for Business and Public Policy

The Evolution of Regulation: Twentieth Century Lessons and Twenty-First Century Opportunities

John W. Mayo*

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What these rules should be is the principal question in human affairs; but if we except a few of the most obvious cases, it is one of those which least progress has been made in resolving.¹

John Stuart Mill
On Liberty, 1859

I. INTRODUCTION AND OVERVIEW

During the second presidential debate of the 2008 election, then candidate Barack Obama opined, with respect to financial markets, that “[t]he problem is we still have a[n] archaic, 20th-century regulatory system for 21st-century . . . markets.”² While the focus on regulatory reform in financial markets has subsequently been pronounced, an important set of questions remain regarding the applicability of this phrase to other traditionally regulated industries such as telecommunications. In this paper, I explore this issue by focusing on lessons that may be learned from both the evolution of economic analysis and regulatory experiences during the past half-century.

I find, *inter alia*, that while the trend toward deregulatory policies over the past half-century was nominally motivated by a push toward economic efficiency, policymakers were also attracted to deregulatory policies by deep-seated ideological desires to protect individual freedoms deemed to be infringed by regulation.³ With the emergence of the 2008 financial crisis in the United States, that simple ideology has receded, giving way to another equally crude ideology that calls for more government regulation and controls.⁴ This shift in ideological passions, however, is unlikely to provide proper guidance for any regulatory system that takes seriously the goal of promoting economic welfare.

Aside from ideological predispositions as guideposts for regulatory policy, the question remains whether there is an alternative, fundamentally sound foundation for guiding regulatory and deregulatory policies. In that regard, careful reflection on the evolution of regulation since the early 1960s reveals a subtle but potentially substantive and meritorious basis for calibrating regulatory and deregulatory policymaking in the twenty-first century. In particular, when stripped of the ideological drivers, the most successful dimensions of regulatory and deregulatory policymaking in the

1. JOHN STUART MILL, ON LIBERTY 7 (David Spitz ed., W. W. Norton & Co. 1975) (1859).

2. *October 7, 2008 Debate Transcript*, COMM’N ON PRESIDENTIAL DEBATES (Oct. 7, 2008), <http://www.debates.org/index.php?page=october-7-2008-debate-transcrip>.

3. *See, e.g.*, Richard W. Rahn, *Costs Without Benefits*, WASH. TIMES (June 15, 2010), <http://www.washingtontimes.com/news/2010/jun/15/costs-without-benefits/>.

4. *See, e.g.*, *Over-regulated America*, ECONOMIST (Feb. 18, 2012), <http://www.economist.com/node/21547789>.

past half-century can be seen as decidedly “results-based.”⁵ In this paper, I describe and document this set of more subtle regulatory developments and explain how they have provided for the soundest regulatory decisions over the past fifty years. Drawing on these developments, I then propose a set of principles that hold the potential to underlie a new results-based regulatory framework. Results-based regulation (“RBR”) draws upon the most successful aspects of both regulatory and economic analysis over the past fifty years with the aim of establishing principles that can guide policymakers as they pursue regulatory and deregulatory policies in the twenty-first century.

The potential for, and the urgency to establish, a twenty-first century results-based regulatory paradigm is significant. And, while the significance of a results-based regulatory framework is relevant to a wide swath of industries, it is particularly important in the case of the telecommunications industry. Specifically, the twentieth century regulatory infrastructure for telecommunications was designed for a monopoly, and while legislative reforms enacted in 1996 embraced competition, the regulatory infrastructure has remained fully entrenched.⁶ Even though the outdated regulatory structure has remained intact, the industry has evolved very rapidly, by the confluence of dramatic technological change, the easing of regulatory constraints on entry, and the significant broadening of telecommunications services from voice-only to voice, video, and data.⁷ As a result, it is widely believed that with an appropriate twenty-first century policy framework in place, the industry has the potential to significantly and substantively enable economic growth and enhance the quality of virtually all Americans’ lives beyond what it has already achieved.⁸

This rapid evolution of the telecommunications industry, together with the infrequent changes to the governing regulatory structure, creates the profound risk of a policy incongruity in which economic welfare is

5. See Phillip K. Howard, *Results-Based Regulation: A Blueprint for Starting Over*, COMMON GOOD (Dec. 2, 2011), <http://www.commongood.org/blog/entry/philip-k.-howard-on-the-need-for-results-based-regulation#extended>. The approach I outline here shares the same moniker as one proposed by Phillip Howard. A comparison of the principles identified here and those offered by Howard reveals some similarities, but also many distinct dimensions of each. See Phillip K. Howard, *Results-Based Regulation: A Blueprint for Starting Over*, COMMON GOOD (Dec. 2, 2011), <http://www.commongood.org/blog/entry/philip-k.-howard-on-the-need-for-results-based-regulation#extended>.

6. See Robert W. Crandall & Jerry A. Hausman, *Competition in U.S. Telecommunications Services: Effects of the 1996 Legislation*, in DEREGULATION OF NETWORK INDUSTRIES: WHAT’S NEXT? 73 (Sam Peltzman & Clifford Winston eds., 2000), for a critique of the 1996 Act.

7. See generally WORLD ECON. FORUM, THE GLOBAL INFORMATION TECHNOLOGY REPORT 2012: LIVING IN A HYPERCONNECTED WORLD (2012), available at http://www3.weforum.org/docs/Global_IT_Report_2012.pdf.

8. See, e.g., FCC, NATIONAL BROADBAND PLAN: CONNECTING AMERICA (2010), available at <http://www.broadband.gov/plan/> [hereinafter *National Broadband Plan*]; see also Sen. John Kerry, *The Future of Telecom is Now*, POLITICO (Feb. 10, 2011, 4:48 AM), <http://www.politico.com/news/stories/0211/49177.html>.

harmful by inert regulation. In this case, legislative policy reforms are likely to offer the most promising path forward. In an industry as complex as telecommunications, however, legislation is often years in the making.⁹ Accordingly, in the short run, economic welfare can be enhanced to the extent that regulators are willing to adopt rigorous analysis steeped in the principles of RBR. A core element of such a regulatory approach is addressing the question of whether proposed, or extant, regulations affirmatively can be shown to benefit economic welfare relative to the alternative of resource allocation that relies more heavily on market-based transactions.

Importantly, the foundation of RBR analysis is not built on speculative theorizing about potential dangers of alternative regulatory governance structures, but rather upon serious empirical analysis that seeks, in counterfactual fashion, to establish how economic metrics of the industry in question compare with those that would prevail in alternative states of the world. In some instances, such counterfactual benchmarks are difficult to come by, but in other often overlooked circumstances, benchmarks may readily arise within the industry over time. To highlight both the promise and challenge of the applicability of this approach, the paper closes with a “proof of concept” examination of the implications of RBR in the provision of modern telecommunications services.

II. BACKGROUND: THE EVOLUTION OF REGULATION

Today, regulatory policy is at an inflection point, complicated by financial market regulatory failures and a backlash against the prevailing ideology that has trended the United States toward less intrusive regulation of industries such as telecommunications, electricity, rail, airlines, and trucking over the past half-century.¹⁰ In the face of these complications, now is an ideal moment to pause and reflect on the basic lessons that can be culled from the practice of regulation and economic science once the clouds of ideology are stripped away. I begin this exercise by reflecting on the simple lessons that emerged from the past half-century of economic regulation.¹¹

9. See Lyria Bennett Moses, *Recurring Dilemmas: The Law's Race to Keep Up with Technological Change*, 2007 U. ILL. J.L. TECH. & POL'Y 239 (2007).

10. See, e.g., Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010) (reregulating parts of the financial industry).

11. This brief review is not meant to be comprehensive, but rather is designed to highlight developments in the practice of regulation that have bearing on the establishment of a regulatory framework that may be apt for the twenty-first century. Such reflections are especially important at times in which multiple voices emerge with alternative and conflicting advice. As noted by Justice Benjamin Cardozo, “[y]ou will study the wisdom of the past, for in a wilderness of conflicting counsels, a trail has there been blazed.” Edgar J. Nathan, Jr., *Benjamin Nathan Cardozo*, in 41 AM. JEWISH Y.B. 25, 29 (1939).

A. *The Rise of the Regulation*

There is a continuum of alternative governance mechanisms for allocating society's scarce resources.¹² These mechanisms may be extreme forms of fiat imposed by authoritarian rule, rely on free markets, or involve combinations of both market-based and rule-based governance mechanism.¹³

From the outset of the Republic, the United States' economy has been market-oriented.¹⁴ This affinity with market-based, rather than governmentally-imposed, decision making is deeply rooted in both a political philosophy that treasures individual freedom and compelling economic theory dating back to famed economist Adam Smith, who opined on the general superiority of market-based resource allocation.¹⁵ Against this backdrop, regulation of "public utilities" first arose during the 1800s in the form of municipal regulation and evolved into state and federal regulation during the twentieth century.¹⁶ This rise of a regulatory superstructure at the state and federal levels supplanted the more traditional reliance on private litigation as the mechanism for ensuring and promoting trade between economic entities.¹⁷

In their analysis of the rise of the regulatory state, Glaeser and Schleifer develop a model in which the merits of a deeper reliance on private litigation, rather than regulation, rely upon the underlying strengths of the legal institutions, which in turn are vital to ensuring the integrity of the litigation process.¹⁸ They demonstrate that, in general, the stronger legal institutions are, the more society may efficiently rely upon litigation rather than regulation as its governance mechanism.¹⁹ Their review of both private litigation and regulation in the United States in the years preceding the onset of the twentieth century "regulatory state" points toward the vulnerability of the legal foundations of litigation as a governance

12. Geoff Riley, *Government Intervention in the Market*, ECOUNLOCK, <http://ecounlock.blogspot.com/p/government-intervention-in-market.html> (last visited Jan. 13, 2013).

13. Robert Litan, *Regulation*, CONCISE ENCYCLOPEDIA OF ECON., <http://www.econlib.org/library/Enc/Regulation.html> (last updated Dec., 2007).

14. See TENCH COXE, A VIEW OF THE UNITED STATES OF AMERICA 429 (1794).

15. See generally ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS (Simon & Brown 2011) (1776). As recently observed by President Obama, "[f]or two centuries, America's free market has not only been the source of dazzling ideas and path-breaking products, it has also been the greatest force for prosperity the world has ever known." Barack Obama, Op-Ed., *Toward a 21st-Century Regulatory System*, WALL ST. J., Jan. 18, 2011, <http://online.wsj.com/article/SB10001424052748703396604576088272112103698.html>.

16. George L. Priest, *The Origins of Utility Regulation and the "Theories of Regulation" Debate*, 36 J.L. & ECON. 289, 296, 301 (1993).

17. See Edward L. Glaeser & Andrei Shleifer, *The Rise of the Regulatory State*, 41 J. ECON. LITERATURE 401, 401-08 (2003).

18. See *id.* at 413-14, 422.

19. See *id.*

mechanism during this period.²⁰ Thus, they see the rise of the regulatory state as an efficient response to the state of legal institutions during the late nineteenth century.²¹ An important implication of Glaeser and Schleifer's interpretation of the rise of regulation is that governance structures that arise efficiently in one period may be overtaken by the efficacy of alternative structures in a different period.²² For example, as competition policy and consumer protection agencies arose and matured in the course of the twentieth century, the relative merits of full-blown regulatory superstructures may reasonably be thought to fade relative to private litigation.²³

B. Stability of the Early Years

Between the 1880s, with its introduction of federal railroad regulation, and the beginning of WWII, a number of federal regulatory agencies were created to regulate the transportation, telecommunications, financial, and energy industries.²⁴ What emerged during this period was a remarkably stable set of regulatory institutions and industries.

For example, following the creation of the Civil Aeronautical Board in 1938, regulators quickly established comprehensive regulation of the airline industry.²⁵ The regulatory regime controlled virtually every economic dimension of air service including the entry of air carriers, authorization for service over specific routes, the ability to withdraw from specific routes, and rates.²⁶ Once these regulations were in place,

20. *See id.* at 413-15.

21. *See id.* at 413.

22. *See id.* at 401 (explaining that the subversion theory of law enforcement leads to "predictions as to what institutions [or regulations] are appropriate under what circumstances").

23. *See generally* Howard A. Shelanski, *Adjusting Regulation to Competition: Toward a New Model for U.S. Telecommunications Policy*, 24 YALE J. ON REG. 55 (2007) (providing supporting discussion of this point, specifically directed toward the telecommunications industry). Of course, this conclusion rests on both the ability and propensity of courts and regulatory agencies to enforce existing laws, rules, and regulations..

24. *See, e.g.*, Glaeser & Shleifer, *supra* note 17, at 407-08 (stating that the Interstate Commerce Commission was created to regulate railroad transportation in 1887, the Federal Reserve was created to regulate the financial industry in 1913, and the Securities and Exchange Commission was created to regulate the financial industry in 1934); *What We Do*, FCC, <http://www.fcc.gov/what-we-do> (last visited Nov. 1, 2012) (explaining that the FCC was created in 1934 to regulate the telecommunications industry); *History of the FERC*, FERC, <http://www.ferc.gov/students/ferc/history.asp> (last visited Nov. 1, 2012) (stating that the Federal Power Commission, the predecessor to the Federal Energy Regulatory Commission, was created in 1920 to regulate the energy industry).

25. Michael E. Levine, Comment, *Is Regulation Necessary? California Air Transportation and National Regulatory Policy*, 74 YALE L.J. 1416, 1416 (1964).

26. *See id.* at 1420 ("The 'economic' aspects of air transportation (*e.g.*, rates, routes, and market structure) are within the jurisdiction of the Civil Aeronautics Board, which was established by the 1938 Act . . .").

considerable inertia overtook the industry with very few changes to the regulatory structure occurring over a period of roughly four decades.²⁷

Similarly, in the years following the passage of the Communications Act of 1934, regulators created both a labyrinth of rules and regulations, and a stable monopoly.²⁸ During this period, payments between the various legal entities comprising AT&T were mandated under an arcane regulatory system known as “Separations and Settlements.”²⁹ Specifically, regulators required the firm to split the costs of providing local and long-distance services.³⁰ This system required uneconomic allocation of the costs to the long-distance sector that were actually associated with creating network access.³¹ Prices were then established to recover these costs, which led to artificially high long-distance rates.³² Long-distance revenues were then transferred as “Settlements” back to the local exchange operations of AT&T’s Bell operating companies as well as non-Bell local operating companies.³³ At both the state and federal levels, regulators seemed content with a monopoly structure and governance mechanism that regulated both local exchange companies and long-distance services as natural monopolies under rate-of-return regulation.³⁴ Noam notes that the policy framework of telecommunication regulation in between the 1930s and 1960s was

the traditional monopoly system, state owned, or tightly regulated. Technologically it was based on copper analog networks. Culturally it was shaped by an engineering and state bureaucracy. This arrangement lasted for a century and spawned a regulatory system, which focused on cooperation with the monopolist provider in spreading services across society, while constraining its market power.³⁵

27. Severin Borenstein & Nancy L. Rose, *How Airline Markets Work . . . Or Do They? Regulatory Reform in the Airline Industry* 1-2 (Nat’l Bureau of Econ. Research, Working Paper No. 13452, 2007), available at <http://www.nber.org/papers/w13452>.

28. See Crandall & Hausman, *supra* note 6, at 73 (“For more than fifty years the U.S. telecommunications sector was a regulated private monopoly . . . During most of that period the Federal Communications Commission (FCC) and a variety of state authorities controlled . . . prices . . . and restricted entry.”).

29. David L. Kaserman, John W. Mayo & Joseph E. Flynn, *Cross-Subsidization in Telecommunications: Beyond the Universal Service Fairy Tale*, 2 J. REG. ECON. 231, 233 (1990).

30. *Id.* at 233-34.

31. *Id.*

32. *Id.* at 233.

33. *Id.* at 233-34.

34. See generally GERALD R. FAULHABER, TELECOMMUNICATIONS IN TURMOIL: TECHNOLOGY AND PUBLIC POLICY (1987); Gerald W. Brock, *Historical Overview*, in 1 HANDBOOK OF TELECOMMUNICATIONS ECONOMICS: STRUCTURE, REGULATION AND COMPETITION (Martin E. Cave, Sumit K. Majumdar & Ingo Vogelsang eds., 2002) (providing detailed discussions of the history of the early telecommunications era).

35. Eli M. Noam, *Regulation 3.0 for Telecom 3.0*, 34 TELECOMM. POL’Y 4, 5 (2010).

C. Ideological and Intellectual Underpinnings of Deregulation

While the causes of economic processes as broad and complex as the deregulation movement that have occurred over the past fifty years are manifold,³⁶ careful reflection reveals two precipitating features worth highlighting. First, beginning in the 1960s, economists began to look upon the institution of regulation with newfound skepticism.³⁷ This skeptical inquiry revealed that regulation was an imperfect governance mechanism that could not be assumed to promote the public interest. A second, more subtle but potentially more profound driver came from policymakers who saw deregulation as a means to promote an ideological end, specifically to ease governmental coercion and promote economic freedoms. I take these up in turn.

Economic analysis of regulation in the twentieth century began with two seemingly innocuous assumptions. First, regulators were assumed to unwaveringly pursue the public interest in the conduct of their affairs.³⁸ Second, regulatory rules were inviolate.³⁹ Together, these assumptions resulted in the development of a number of fundamental insights that lie at the heart of regulatory economics today.⁴⁰ The assumptions also created an implication, which came to serve as a readily accepted feature of the practice of regulation, that the economic effects of regulation would uniformly promote economic welfare.⁴¹

It was against this backdrop that Stigler and Friedland took on the issue of the economic impact of regulatory governance, something that economists and policymakers had previously overlooked.⁴² The authors introduce the subject simply and powerfully:

The literature of public regulation is so vast that it must touch on everything, but it touches seldom and lightly on the

36. There are a number of thoughtful pieces that have reflected on other features of the deregulatory process. See, e.g., Sam Peltzman, *The Economic Theory of Regulation After a Decade of Deregulation*, in BROOKINGS PAPERS ON ECONOMIC ACTIVITY, MICROECONOMICS 1, 1-3 (1989) (describing the economic theory in the political market as a cause of the deregulation movement); ROGER G. NOLL & BRUCE M. OWEN, *THE POLITICAL ECONOMY OF DEREGULATION: INTEREST GROUPS IN THE REGULATORY PROCESS* 5-6 (1983) (exploring the political economy of deregulation by focusing on the history of the regulations themselves and interest groups that have had a hand in their creation).

37. See generally Edward Glaeser, Simon Johnson & Andrei Shleifer, *Coase Versus the Coasians*, 116 Q. J. ECON. 853 (2001).

38. See Paul L. Joskow, *Regulation and Deregulation After 25 Years: Lessons Learned for Research in Industrial Organization*, 26 REV. INDUS. ORG. 169, 182 (2005).

39. See George J. Stigler & Claire Friedland, *What Can Regulators Regulate? The Case of Electricity*, 5 J.L. & ECON. 1, 1 (1962).

40. See Harvey Averch & Leland L. Johnson, *Behavior of the Firm Under Regulatory Constraint*, 52 AM. ECON. REV. 1052, 1062-63 (1962).

41. See Stigler & Friedland, *supra* note 39.

42. See generally *id.* (exploring how regulations affect telecommunications economies).

most basic question one can ask about regulation: Does it make a difference in the behavior of an industry?

This impertinent question will strike anyone connected with a regulated industry as palpably trivial. Are not important prices regulated? Are not the routes of a trucker and an airline prescribed? Is not entry into public utility industries limited? Is not an endless procession of administrative proceedings aging entrepreneurs and enriching lawyers?

But the innumerable regulatory actions are conclusive proof, not of effective regulation, but of the desire to regulate.⁴³

The seminal work of Stigler and Friedland subsequently gave rise to a general economic theory of regulation developed by Stigler, Peltzman, Posner, and Becker.⁴⁴ This economic theory sought to recast regulation not as a governance structure that invariably promoted the public interest, but rather as a good that was subject to the standard forces of supply and demand.⁴⁵ The result was, in its crudest form, that “as a rule, regulation is acquired by industry and is designed and operated primarily for its benefit.”⁴⁶ As the principal architects of this economic theory were from the University of Chicago, it was quickly associated with what came to be known as “the Chicago School of thought.”⁴⁷

This view of regulation has provided a powerful general model for understanding regulatory outcomes, and has led to a fundamental shift in the research agenda directed toward regulation.⁴⁸ Specifically, in the decades that have followed the emergence of the economic theory of regulation, research has increasingly focused on the important role of interest groups in influencing regulatory outcomes.⁴⁹ While providing a general theoretical framework for understanding regulatory outcomes, the approach has created byproducts that unfortunately mask an opportunity as we look to the future of regulation. The framework highlights the general

43. *Id.* at 1.

44. See Peltzman, *supra* note 36, at 1 (discussing the evolution of the economic theory of regulation). For an enunciation of this theory in graphical format, see generally T. Randolph Beard, David L. Kaserman & John W. Mayo, *A Graphical Exposition of the Economic Theory of Regulation*, 41 *ECON. INQUIRY* 592 (2003).

45. See DAVID L. KASERMAN & JOHN W. MAYO, *GOVERNMENT AND BUSINESS: THE ECONOMICS OF ANTITRUST AND REGULATION* 519 (1995).

46. See George J. Stigler, *The Theory of Economic Regulation*, 2 *BELL J. ECON. & MGMT. SCI.* 3, 3 (1971).

47. See *Chicago School*, in 2 *GALE ENCYCLOPEDIA OF AMERICAN LAW* 353, 353 (Donna Batten ed., 3d ed. 2010).

48. H. Laurence Miller, Jr., *On the “Chicago School of Economics,”* 70 *J. POL. ECON.* 64, 65 (1962).

49. See, e.g., Noll & Owen, *supra* note 36, at 26-27; David L. Kaserman, John W. Mayo & Patricia L. Pacey, *The Political Economy of Deregulation: The Case of Interstate Long Distance*, 5 *J. REG. ECON.* 49, 51 (1993).

conclusion that regulatory outcomes are often the result of a competition among political interest groups.⁵⁰ This view of the regulatory process, while certainly true and amply demonstrated, served to focus attention on the political determinants of regulation rather than on its efficiency consequences.⁵¹ Yet quite apart from the political decision-making features of regulation, regulatory outcomes have efficiency consequences and, as seen below, evaluation of these consequences may provide influential input to decision-makers.⁵²

Additionally, the Chicago School's approach to regulation, while providing healthy skepticism, made it ripe to be co-opted by those who opposed regulation purely on ideological grounds.⁵³ The resulting conflation of legitimate academic scrutiny of the economic merits of an imperfect regulatory mechanism with arguments by those who philosophically opposed *any* regulation too easily permitted some to point to the "opposition" to regulation by leading scholars as grounds for deregulation.⁵⁴ This unfortunate development too often led to shortcuts in the regulatory and deregulatory decision-making process, permitting policymakers to support deregulatory policies based on the observed imperfections in regulation and the fact that the process for regulatory decision-making is in part determined by the strengths of political interest groups.⁵⁵

While economists have focused the preponderance of their attention on public interest group explanations of the evolution of deregulation, other more general drivers have also been at work in the deregulation process over the past decades. Indeed, a second underlying driver of the

50. See KASERMAN & MAYO, *supra* note 45, at 529.

51. Paul L. Joskow & Roger C. Noll, *Regulation in Theory and Practice: An Overview*, in STUDIES IN PUBLIC REGULATION 1, 36 (Gary Fromm ed., 1981). Apart from the Economic Theory of Regulation, another path of regulatory economics opened during this period and began to focus on regulation within the context of the principal-agent framework. In this context, the focus has been on the development of "optimal" regulatory regimes. See Mark Armstrong & David E. M. Sappington, *Recent Developments in the Theory of Regulation*, in 3 HANDBOOK OF INDUSTRIAL ORGANIZATION 1557, 1561 (Mark Armstrong & Robert Porter eds., 2007). Regardless of the theoretical progress, the practical importance of this literature for regulatory policymaking has been limited. See Jeffrey T. Macher, John W. Mayo & Jack A. Nickerson, *Regulator Heterogeneity and Endogenous Efforts to Close the Information Asymmetry Gap*, 54 J.L. & ECON. 25, 26 (2011).

52. Joskow & Noll, *supra* note 51, at 8-9. While the economic theory of regulation has provoked a focus on interest group strengths, the founders of the theory have themselves recognized the potentially important role of differences in observed economic efficiencies as a stimulant to changes in regulatory outcomes. *Id.* at 39. For example, in his reflection on the deregulatory process, Peltzman has observed that deregulation is "more likely to occur if regulation itself has generated inefficiencies, so that shedding the inefficiency through deregulation provides a potential source of benefits." See Peltzman, *supra* note 36, at 35.

53. See Clifford Winston, *Economic Deregulation: Days of Reckoning for Microeconomists*, 31 J. ECON. LITERATURE 1263, 1263 (1993).

54. See KASERMAN & MAYO, *supra* note 45, at 549.

55. *Id.* at 548-49.

deregulation movement stems not from intellectual skepticism of regulation as a governance mechanism but rather from an ideological critique of regulation as a fundamentally coercive institution that serves as an impediment to “freedom.”⁵⁶ This critique and its implications for policy are, of course, not new.⁵⁷ As noted by John Stuart Mill in his famous treatise *On Liberty*, “the [debate over the] nature and limits of the power which can be legitimately exercised by society over the individual . . . is so far from being new, that, in a certain sense, it has divided mankind, almost from the remotest ages.”⁵⁸ And while the issue of the degree to which society may properly impose governance over freedoms is “[a] question seldom stated, and hardly ever discussed, . . . [it] profoundly influences the practical controversies of the age by its latent presence.”⁵⁹ Thus, while not a central part of the explicit oratory regarding the desire to move toward a more market-oriented, deregulatory environment, the subtle sway of the ideological pendulum toward less governmentally coercive regulation over the past fifty years can be seen, at least with the benefit of hindsight, to have been a powerful driver of the deregulatory process.

For example, consider the political science research of swings in public opinion and policy formation. Stimson has created a multi-dimensional index of the “mood” of the American people toward government.⁶⁰ Stimson’s Mood Index is an indicator of aggregate U.S. public opinion over time.⁶¹ Specifically, the index is constructed using the results of survey research on public opinion over many decades. The underlying data in the index comes from over 200 questions gauging the mood of Americans on specific policy areas over numerous time periods.⁶² Using a factor analysis, Stimson discovered that a prominent underlying dimension to U.S. public opinion exists, which can be described simply as a “more government, less government” dimension.⁶³ The dimension is scaled between 0 and 100, with higher values indicating a shift in public

56. James Gwartney & Robert Lawson, *The Concept and Measurement of Economic Freedom*, 19 EUR. J. POL. ECON. 405, 407 (2003).

57. See MILL, *supra* note 1.

58. *Id.* at 3.

59. *Id.*

60. JAMES A. STIMSON, PUBLIC OPINION IN AMERICA: MOODS, CYCLES, AND SWINGS xvii, 20 (2d ed. 1999) [hereinafter STIMSON, PUBLIC OPINION IN AMERICA]; See generally JAMES A. STIMSON, TIDES OF CONSENT: HOW PUBLIC OPINION SHAPES AMERICAN POLITICS 1-172 (2004) [hereinafter STIMSON, TIDES OF CONSENT] (provides further analysis of Stimson’s studies regarding mood).

61. See STIMSON, PUBLIC OPINION IN AMERICA, *supra* note 60; STIMSON, TIDES OF CONSENT, *supra* note 60.

62. See STIMSON, PUBLIC OPINION IN AMERICA, *supra* note 60, at 143-49; STIMSON, TIDES OF CONSENT, *supra* note 60; E-mail from Mathew Hatfield, Member, Fed. Comm’n Law Journal to James A. Stimson, Raymond Dawson Professor of Political Science, Univ. N.C. Chapel Hill (Nov. 5, 2012) (on file with the Federal Communications Law Journal).

63. STIMSON, PUBLIC OPINION IN AMERICA, *supra* note 60, at 91; STIMSON, TIDES OF CONSENT, *supra* note 60, at 8; E-mail from Mathew Hatfield to James A. Stimson, *supra* note 62.

opinion in favor of greater government involvement in the affairs of private citizens and businesses.⁶⁴

Stimson's Mood Index of the American people is displayed in Figure 1.⁶⁵ Also shown in Figure 1 are major deregulatory events of the past fifty years.⁶⁶ As seen in Figure 1, policymakers have typically chosen moments for deregulatory events when the sentiments ("mood") of the American people are more sympathetic to the freedoms of individuals and less sympathetic to an active role for government. For example, airline, railroad, and interstate trucking deregulation all occurred during the 1978-1980 period in which the ideological Mood Index was at historically low levels. Similarly, both intrastate trucking and long-distance telecommunications deregulation occurred in 1984, another low point on the Mood Index.

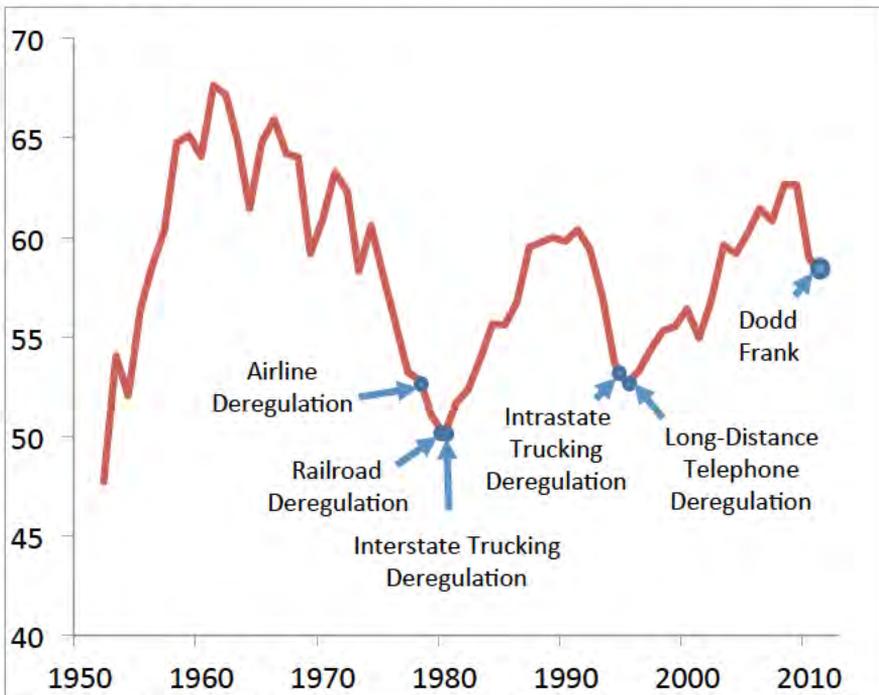


Figure 1: The Ideological Mood of the American People and the Deregulation Movement⁶⁷

64. E-mail from Mathew Hatfield to James A. Stimson, *supra* note 62.

65. K. Elizabeth Coggins, *Policy Mood*, UNIV. N.C., http://www.unc.edu/~coggins/Policy_Mood.html (last visited Jan. 14, 2013) (displaying graph of Stimson's Policy Mood).

66. See Airline Deregulation Act of 1978, 49 U.S.C. § 1301 (1978); U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-90-80, ECONOMIC AND FINANCIAL IMPACTS OF THE STAGGERS RAIL ACT OF 1980 2 (1990) [hereinafter GAO STUDY ON IMPACTS OF THE STAGGERS RAIL ACT]; U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-87-107, PROPOSED SUNSET OF ICC'S TRUCKING REGULATORY RESPONSIBILITIES 2 (1987) [hereinafter GAO STUDY ON TRUCKING REGULATORY RESPONSIBILITIES]; Thomas G. Kattenmaker, *The Telecommunications Act of 1996*, 49 FED. COMM. L.J. 1, 16 (1996).

67. See Airline Deregulation Act of 1978 § 1301; Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010); GAO STUDY ON

While both the Chicago School critique of regulation and the movements in the ideological mood of the American people have proven to be important drivers of the swings in the regulation-deregulation process that has unfolded over the past half-century, neither provides a reliable foundation for establishing a twenty-first century regulatory-deregulatory policy framework. Indeed, while each of these factors may inform the development of a twenty-first century regulatory policy framework, adoption of either without critical analysis creates the profound risk of regulatory policy failures.

Consider first the lessons from the Chicago School critique, which observes that regulation is an imperfect governance institution.⁶⁸ Adopted uncritically, this observation has led some to cast aspersions on *any* regulatory governance.⁶⁹ The fact is, however, that while regulation is an imperfect governance mechanism, there are levels of market failure that certainly can and do give rise to the merits of regulatory oversight of markets. Thus, while identifying an important consideration for future regulatory policy development, the Chicago School observation of imperfections in regulation cannot by itself reasonably be thought to provide the foundation for a twenty-first century regulatory policy.

Indeed, to solely use the Chicago School of thought to frame modern regulatory policy would be an ironic twist to a standard critique of the public interest theory of regulation. That critique stems from Joskow and Noll, who point out that the champions of the public interest theory of regulation often unduly extrapolate what is essentially a normative theory of (optimal) regulation by converting it into a positive theory of regulation.⁷⁰ Critiques of this “Normative Theory as Positive Analysis” interpretation of the public interest theory have been strident.⁷¹ However, note that any attempt to employ the essentially positive economic theory of regulation proffered by the Chicago School as a normative guide to policy development suffers from the same confounding of normative and positive theories; yet in this case, the error would be in adopting an essentially positive theory as a guide for normative policymaking.

Next, consider the role of ideological swings as a guide to regulatory policymaking. While any democracy can point toward the attractiveness of acceding to “the will of the people,” a careful reflection indicates that high-level ideological swings are likely to provide a particularly poor foundation for twenty-first century regulatory-deregulatory policymaking of specific

IMPACTS OF THE STAGGERS RAIL ACT, *supra* note 66; GAO STUDY ON TRUCKING REGULATORY RESPONSIBILITIES, *supra* note 66; Kattenmaker, *supra* note 66; Coggins, *supra* note 65.

68. See Miller, *supra* note 48, at 65-67.

69. *Id.*

70. Joskow & Noll, *supra* note 51, at 35-40.

71. See Winston, *supra* note 53, at 1266-69.

industries. Indeed, the perils of this approach to policy development were anticipated over 150 years ago by John Stuart Mill:

There is, in fact, no recognized principle by which the propriety or impropriety of government interference is customarily tested. People decide according to their personal preferences. Some, whenever they see any good to be done, or evil to be remedied, would willingly instigate the government to undertake the business; while others prefer to bear almost any amount of social evil, rather than add one to the departments of human interests amenable to governmental control. And men range themselves on one or the other side in any particular case, according to this general direction of their sentiments; or according to the degree of interest which they feel in the particular thing which it is proposed that the government should do; or according to the belief they entertain that the government would, or would not, do it in the manner they prefer; but very rarely on account of any opinion to which they consistently adhere, as to what things are fit to be done by a government. And it seems to me that, in consequence of this absence of rule or principle, one side is at present as often wrong as the other; the interference of government is, with about equal frequency, improperly invoked and improperly condemned.⁷²

Thus, the ideological swings over the past fifty years—initially toward less governmental involvement in business affairs and more recently toward more governmental involvement⁷³—fail to provide a strong foundation for a twenty-first century regulatory-deregulatory policy framework.

Beyond the problem identified by Mill, two additional fundamental shortfalls surface with ideologically-led policymaking. First, such high-level swings in ideology fail to discriminate between industries in which market-based resource allocations are enhancing economic welfare and those that are harming economic welfare. Second, to the extent that the general movement in some industries, such as telecommunications, toward less regulation over the past decades can be cast as a product solely of a political agenda driven by the ideology of the right,⁷⁴ the reaction from the ideological left may be a simple call for reversing the regulatory changes, independent of a serious examination of the marketplace consequences of those policy changes.

72. See MILL, *supra* note 1, at 12-13.

73. See *supra* Figure 1.

74. See e.g., Timothy Karr, *Speaker Boehner's Space Odyssey*, HUFFINGTON POST, Mar. 1, 2011, http://www.huffingtonpost.com/timothy-karr/net-neutrality-under-new_b_829612.html.

D. The Inklings and Promise of Results-Based Regulation

To this point, we have seen that two of the principal drivers of regulatory and deregulatory policies over the past fifty years fail to provide a sound foundation for twenty-first century regulatory policymaking. A third, subtle feature of the evolution of regulatory policies, however, holds significantly more promise as a basis for twenty-first century regulatory and deregulatory policymaking. In particular, it was during this period that regulators, perhaps motivated by the growing skepticism of regulatory institutions that arose from the Chicago School, began to employ rigorous empirical, counterfactual analysis that examined the results of natural experiments in the market to guide regulatory and deregulatory policies.⁷⁵ I refer to this methodology as Results-Based Regulation (“RBR”).

The origins of RBR may be traced to a 1965 article in the *Yale Law Journal* in which Michael Levine undertook a serious critique of regulation in the U.S. airline industry.⁷⁶ In the face of decades of stable and seemingly uncontroversial regulation of the airline industry, he audaciously concluded, “[t]he performance of the largest air transportation market in the world provides convincing evidence that fares are much lower and service more responsive to public needs where restrictions on entry are absent and control over fares is rarely exercised.”⁷⁷ What was remarkable, however, was not his conclusion that regulations in the airline industry should be eased, but rather the manner in which he came to this conclusion.⁷⁸ Specifically, his conclusion came not from an ideological consideration of the merits of deregulatory policies, but rather from practical considerations drawn from empirical scrutiny of airline markets that offered a natural experiment in which some routes (viz., interstate airline service) were extensively rate-regulated while the largest single city-pair market in the United States (between Los Angeles and San Francisco), was exempt from federal regulatory controls.⁷⁹ His empirical analysis led to the conclusion that regulation had the practical consequence of raising rates and harming economic welfare.⁸⁰ For instance, he found that the lowest airfare available on the regulated Washington-Boston route was over 215% higher than the prices paid by consumers flying in on the deregulated Los Angeles to San Francisco route.⁸¹ Subsequent to Levine’s analysis, a number of students of the industry began to see the policy move to relax price controls in the

75. See Miller, *supra* note 48, at 65 (noting an emphasis on “hypothesis-testing” in the Chicago School).

76. See Levine, *supra* note 25.

77. *Id.* at 1416-17.

78. See *id.*

79. See *id.*

80. *Id.* at 1441.

81. *Id.*

industry as meritorious, the ultimate result of which was the federal deregulation of airfares in 1978.⁸²

Another example of the emergence of RBR occurred between the mid-1980s and mid-1990s. Specifically, in 1984, AT&T was divested as a result of an antitrust consent decree between the company and the Department of Justice ("DOJ").⁸³ That divestiture separated the control of long-distance telecommunications, which remained under the control of AT&T, from local exchange telephone service, that was spun off to the Regional Bell Operating companies.⁸⁴ With that divestiture, AT&T lost any control over the local exchange facilities that were the source of its pre-divestiture monopoly power.⁸⁵ Simply because of regulatory inertia, however, AT&T remained regulated as a full public utility under rate-of-return regulation at both the state and federal levels.⁸⁶ In the years following the divestiture, and with the emergence of numerous competitors in the market for long-distance services, individual states began to deregulate the pricing of long distance services.⁸⁷ Nonetheless, AT&T was still fully regulated at the federal level. The emergence of different regulatory structures at the state level provided a natural opportunity for RBR analysis.⁸⁸

Mathios and Rogers offered the first study to analyze the effects of cross-state differences in long-distance governance mechanisms.⁸⁹ Drawing on data from across the states, they created an econometric model of the prices of intrastate long distances services.⁹⁰ In the model, they included a variety of demand-side and supply-side determinants of prices along with variables representing the presence of relaxed intrastate regulation of

82. See Stephen Breyer, *Analyzing Regulatory Failure: Mismatches, Less Restrictive Alternatives, and Reform*, 92 HARV. L. REV. 547 (1979); Joskow, *supra* note 38, at 169-93.

83. *United States v. Am. Tel. & Tel. Co.*, 552 F. Supp. 131, 141 (D.D.C. 1982), *aff'd sub nom.*, *Maryland v. United States*, 460 U.S. 1001 (1983).

84. *Id.* at 200-08.

85. *Id.* at 172.

86. Robert Kaestner & Brenda Kahn, *The Effects of Regulation and Competition on the Price of AT&T Intrastate Telephone Service*, 2 J. REG. ECON. 363, 364 (1990).

87. *Id.*

88. The opportunities for insights based on variations in the effects of state policies dates back at least to 1936, when Justice Brandeis noted that:

There must be power in the States . . . to remould, through experimentation, our economic practices and institutions to meet changing social and economic needs. . . . It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.

New Ice Co. v. Liebmann, 285 U.S. 262, 311 (1936) (Brandeis, J., dissenting).

89. Alan D. Mathios & Robert P. Rogers, *The Impact of Alternative Forms of State Regulation of AT&T on Direct-Dial, Long-Distance Telephone Rates*, 20 RAND J. ECON. 437, 437 (1989).

90. *Id.* at 437-38.

pricing.⁹¹ They found that after accounting for other determinants of intrastate long-distance prices, states that granted AT&T pricing flexibility enjoyed significantly lower prices than those states that retained full regulatory controls over pricing.⁹² The empirical results found that “the price of a five minute call, on average, is 7.2 percent lower in states that have allowed pricing flexibility.”⁹³ Other studies soon followed that consistently found that deregulation of the long-distance industry led to lower prices.⁹⁴ These empirical results, together with the general positive results of economic metrics in the long-distance sector ultimately provided comfort for the FCC in its decision to deregulate pricing in the interstate long-distance market.⁹⁵

Another dimension of RBR that has emerged over the past half-century is the rigorous use of “before-and-after” methods for assessing the merits of changes in regulatory policies.⁹⁶ Prominent among these was the examination of the economic impacts of the deregulation of the interstate and intrastate trucking industries. For instance, Blair, Kaserman, and McClave examined the effects of the sudden deregulation of intrastate trucking in Florida, which occurred on July 1, 1980.⁹⁷ While theoretical considerations suggested that comprehensive regulation of pricing, entry, and terms of service for intrastate trucking was actually elevating rates relative to a deregulated environment, the authors treated the ultimate effectiveness of either regulation or deregulation in this market as an empirical question.⁹⁸ Consequently, the authors developed a comprehensive model of the pricing per ton mile for intrastate trucking services, which they used to examine price and other market conditions both before and after deregulation.⁹⁹ Their results revealed that prices fell in the wake of the deregulation of intrastate trucking.¹⁰⁰ Moreover, by rigorously accounting for changes in market conditions over the period in question, they were

91. *See id.* at 440-45.

92. *Id.* at 447-50.

93. *Id.* at 447.

94. *See, e.g.,* Kaestner & Kahn, *supra* note 86, at 363, 371; Simran K. Kahai, David L. Kaserman & John W. Mayo, *Is the ‘Dominant Firm’ Dominant? An Empirical Analysis of AT&T’s Market Power*, 39 J.L. & ECON. 499, 512-13 (1996) (concluding that AT&T possessed very little market power compared to other firms in the U.S. economy). For a complete review of these studies and the divestiture, see generally David L. Kaserman & John W. Mayo, *Competition in the Long Distance Market*, in HANDBOOK OF TELECOMMUNICATIONS ECONOMICS (Martin E. Cave, Sumit K. Majumdar & Ingo Vogelsang eds., 2002).

95. *See* Motion of AT&T Corp. to Be Reclassified as a Non-Dominant Carrier, *Order*, FCC 95-427, 11 FCC Rcd. 3271, paras. 67-72 (1995).

96. *See, e.g.,* Joskow, *supra* note 38, at 185-87 (discussing the predictions of the effects of airline deregulation and studies analyzing whether these predictions were correct).

97. Roger D. Blair, David L. Kaserman & James T. McClave, *Motor Carrier Deregulation: The Florida Experiment*, 68 REV. ECON. & STAT. 159, 159-60 (1986).

98. *Id.* at 160.

99. *Id.* at 160-61.

100. *Id.* at 162.

able to isolate the effects of the change in market governance from regulation to deregulation, determining that “the deregulation of intrastate trucking in Florida led to a 14.62% average reduction in motor carrier rates.”¹⁰¹

Earlier, we saw that simple Chicago School critiques of regulation, or ideologically driven appeals to the deregulation process, fail to provide sound footing for guiding regulatory policymaking in the twenty-first century. In this section, I have described the more subtle emergence of RBR methods that rely upon detailed empirical analysis of counterfactual alternative governance mechanisms as guideposts for regulatory and deregulatory policymaking. Such methods have arguably provided the most successful vehicle to date for determining when policy should move more toward regulatory, or more toward deregulatory market governance mechanisms. In the next section, I will describe a principles-based framework that demonstrates how RBR analysis could provide a foundation for smart twenty-first century regulatory policymaking.

III. RESULTS-BASED REGULATION: A NEW FRAMEWORK FOR TWENTY-FIRST CENTURY POLICYMAKING

Both economic analysis and the practice of regulatory policy over the past fifty years reveals that there are industries in which economic welfare may be improved by altering the level of government regulation, either toward a market-oriented or a more government-oriented approach.¹⁰² The challenge is discerning which industries and sectors are ripe for moves toward a less intrusive set of regulations and which ones need more regulatory oversight. In this regard, a policy goal of the present administration is “to root out regulations that conflict, that are not worth the cost, or are just plain dumb.”¹⁰³ So the question naturally arises: how can we tell if a set of regulatory constraints are “just plain dumb”?¹⁰⁴

Unfortunately, the answer to this question has all too often been framed either by simple ideologies (all government regulations are “dumb” as they interfere with freedom of commerce), or have been determined by the strengths of opposing interest groups that economically gain or lose as a consequence of the existing or proposed regulatory regime. As seen in the previous section however, the unheralded emergence of serious, empirical counterfactual analysis of alternative regulatory governance structures has shown itself to provide a promising policy mechanism for discriminating industries in which market-based governance mechanisms are better able to promote economic welfare.

101. *Id.*

102. *See* KASERMAN & MAYO, *supra* note 45.

103. Obama, *supra* note 15.

104. *See id.*

These encouraging developments provide a basis for establishing a new twenty-first century regulatory decision-making framework. Specifically, a results-based regulatory framework would embody a set of governing principles drawn from the lessons of economic analysis and the practice of regulation as they have unfolded over the past fifty years.

*A. **Principle 1:** All market governance mechanisms for resource allocation are, in practice, imperfect.*

While seemingly obvious, the implications of adhering to, or ignoring, this principle are potentially profound for the evolution of regulatory policy in the twenty-first century. All too often, a perfectly competitive market structure is held as a standard against which to judge the merits of regulatory intervention in markets.¹⁰⁵ Implicitly, if not explicitly, such a comparison pits the merits of an ideal regulatory construct against an imperfect market-based governance mechanism. In that case, the costs imposed by shortcomings of market-based resource allocation are judged against an unobserved and unrealizable ideal regulatory mechanism.¹⁰⁶ Alternatively, others too often pit the real world imperfections associated with the practice of regulation against idealized market allocations that would occur in a perfect market mechanism.¹⁰⁷ Again, an ideal construct is unrealistically pitted against the reality of an imperfect governance mechanism.¹⁰⁸ The reality, however, is that in practice neither regulation nor markets will realize their ideal. Thus, policymakers in an RBR world must compare the realistic alternatives of how more market-oriented governance functions in practice with how more governmentally directed governance would work in practice. This comparison of *actual* governance mechanisms, as they occur in reality, is at

105. For a description of how this approach sprang from the earlier economic models, see Joskow, *supra* note 38, at 174-75.

106. The propensity for making the assumption of the costless and perfect imposition of governmental policies on firms in many cases springs from the static nature of analysis. This was anticipated by Adam Smith in his precursor to the *Wealth of Nations*, when he identified the perspective of government planners:

He seems to imagine that he can arrange the different members of a great society with as much ease as the hand arranges the different pieces upon a chess-board. He does not consider that the pieces upon the chess-board have no other principle of motion besides that which the hand impresses upon them; but that, in the great 'chess-board' of human society, every single piece has a principle of motion of its own, altogether different from that which the legislature might choose to impress upon it.

ADAM SMITH, *THE THEORY OF MORAL SENTIMENTS* 234 (D. D. Raphael & A. L. Macfie eds., Oxford Univ. Press 1976) (1896).

107. See, e.g., Richard W. Rahn, *Costs Without Benefits*, WASH. TIMES, June 15, 2010, <http://www.washingtontimes.com/news/2010/jun/15/costs-without-benefits/>.

108. See generally Joskow, *supra* note 38 (giving a realistic assessment of the empirical analyses of regulation).

the core of an RBR paradigm designed to provide a guidepost for improved regulatory and deregulatory decision-making.¹⁰⁹

B. *Principle 2:* *In the presence of advancing technology and evolving legal institutions, regulators must be vigilant to the possibility of improved regulatory or deregulatory designs.*

This principle cautions against inertia in the regulatory mechanism. Both industries and institutions evolve.¹¹⁰ The result is that while one market governance mechanism may be superior at one point in time, its ability to promote economic welfare relative to realistic alternatives may fade in other periods. For example, regulation of both electricity and telecommunications during the middle of the twentieth century was predicated on the economic notion that the industries were subject to vast economies of scale, effectively creating natural monopolies.¹¹¹ Over time, however, technological changes in various parts of these industries significantly have reduced the advantages of scale.¹¹² For example, electric power can now be efficiently provided at relatively small scale by combined-cycle gas turbines.¹¹³ Other small scale technologies such as solar, wind and geothermal technologies have also emerged with the result that that public-utility regulation of generation technologies will be inferior to more market-oriented governance of electricity supply.¹¹⁴ Similarly, in the telecommunications industry, technological changes that gave rise, first, to long-distance transmission via microwave and later by fiber optic cable drastically altered the cost structure for long-distance communications, helping facilitate the emergence of scores of new entrants into the market

109. In the context of competition policy, it is commonly recognized that comparisons among practical alternatives rather than ideal models of competition represent that point of departure for policy analysis. *See, e.g.*, Comments of the U.S. Dep't of Justice at 11, A Nat'l Broadband Plan for Our Future, FCC GN Docket No. 09-51 (rel. Jan. 4, 2010) [hereinafter Dep't of Justice Jan. 4 Comments] (noting that "[t]he operative question in competition policy is whether there are policy levers that can be used to produce superior outcomes, not whether the market resembles the textbook model of perfect competition.").

110. Anita M. McGahan, *How Industries Change*, HARV. BUS. REV., Oct. 2004, at 86, available at <http://hbr.org/2004/10/how-industries-change/ar/1>.

111. *See* Kira R. Fabrizio, Nancy L. Rose & Catherine D. Wolfram, *Do Markets Reduce Costs? Assessing the Impact of Regulatory Restructuring on US Electric Generation Efficiency*, 97 AM. ECON. REV. 1250 (2007) (examining the implications of alternative regulatory mechanisms in the electric utility industry through an RBR-oriented analysis); KASERMAN & MAYO, *supra* note 45.

112. *See* Dale N. Hatfield, Bridger M. Mitchell & Padmanabhan Srinagesh, *Emerging Network Technologies*, in 2 HANDBOOK OF TELECOMMUNICATIONS ECONOMICS 31-80 (Sumit K. Majumdar, Ingo Volgelsang, Martin E. Cave eds. 2005); David L. Kaserman and John W. Mayo, *The Measurement of Vertical Economies and the Efficient Structure of the Electric Utility Industry*, 39 J. INDUS. ECON. 483, 483-502 (1991).

113. Fabrizio, Rose & Wolfram, *supra* note 111.

114. *See id.* at 1250-77.

during the 1980s and 1990s.¹¹⁵ Again, the technological changes acted to alter the appropriate market governance mechanism.¹¹⁶

The evolution of legal institutions may also affect the design of market governance mechanisms. As noted by Glaeser and Shleifer, the rise of regulation in the United States occurred at a time when the nation's legal institutions were not fully developed.¹¹⁷ Both the reach and effectiveness of legal institutions in the nineteenth and early twentieth centuries were suspect.¹¹⁸ The result was that broader regulatory institutions, rather than private litigation, were meritorious.¹¹⁹ Society's institutions have evolved, however, and will continue to evolve. Such evolutions should properly provoke reflection among today's regulators regarding the appropriate market governance mechanism. Indeed, absent such reflections and evolution of regulatory mechanisms for an industry, the growth of rules, regulations, and laws may create both direct and indirect costs to society.¹²⁰ Direct costs may arise from firms' attempts to comply with overlapping, redundant, and conflicting regulations.¹²¹ These costs have aptly been the target of President Obama's ire.¹²² More subtly, inert regulation is likely to create indirect costs that arise through distortions to price, output, investment, and innovation relative to those that would occur in the event that market governance mechanisms were designed to comport with the evolution of institutions.

Perhaps most prominent among the institutional changes of the twentieth century that logically impact the design of twenty-first century regulation has been the maturation of the consumer and competition protections now afforded by the Federal Trade Commission ("FTC") and the Antitrust Division of the DOJ.¹²³ The statutes enabling these agencies provide them with wide-ranging authority to halt "unfair methods of competition,"¹²⁴ to block "contract[s], combination[s] . . . or conspirac[ies] in restraint of trade" and to halt "monopoliz[ation] or attempts to monopolize" in the conduct of interstate commerce.¹²⁵ Similar intrastate consumer and competition protection agencies have arisen over the twentieth century.¹²⁶ While debates can, and do, exist about the level of consumer protections afforded from these agencies relative to sector-specific regulation, there can be little doubt that intelligent design of sector-

115. KASERMAN & MAYO, *supra* note 45, at 604.

116. *Id.*

117. *See* Glaeser & Shleifer, *supra* note 17, at 402.

118. *Id.*

119. *Id.*

120. Obama, *supra* note 15.

121. *Id.*

122. *Id.*

123. *See* Federal Trade Commission Act, 15 U.S.C. § 45 (2006); Sherman Act, 15 U.S.C. §§ 1-2 (2006).

124. Federal Trade Commission Act § 45.

125. Sherman Act §§ 1-2.

126. *See e.g.*, Colorado Consumer Protection Act, COLO. REV. STAT. § 6-1-101 (2012).

specific regulation should account for the ability of these complementary, and, arguably, substitutable institutions to promote economic welfare.¹²⁷

C. ***Principle 3:*** *Wherever possible, regulators should engage in empirical counterfactual scrutiny of alternative market governance mechanisms.*

Psychological research has identified the ability to engage in counterfactual thought as a sufficiently high-ordered function that it is not possible in lower-ordered animals.¹²⁸ That is, lower-ordered animals simply have no capacity to imagine or envision an alternative state of the world.¹²⁹ The consequence is that these animals optimize within a particular environment over which they feel they have no control. Humans, however, have the ability to envision alternative environments. In the case of the establishment and evolution of regulatory and deregulatory policies, not only can regulators and policymakers more generally engage in higher-ordered counterfactual thinking, but such counterfactual thinking is critical to achieving improved twenty-first century policymaking.

Empirical scrutiny of alternative market governance mechanisms creates the prospect of observing—in practice—how these market governance mechanisms work or fail to work.¹³⁰ Opportunities for these empirical exercises may be created by the presence of different market governance mechanisms in different governmental jurisdictions. Differences may exist across municipalities or states. Similarly, differences may exist between states' regulatory structures and federal market governance. Differences in governance mechanisms may also exist across countries. And, the ability to rigorously examine the economic consequences of changes in policy measures over time also provides an opportunity to improve policymaking on a forward-going basis.

While Principle 3 provides a promising tool for twenty-first century regulatory and deregulatory policymaking, it evokes a critical corollary. Specifically, the empirical review of alternative governance structures must be constructed in the most careful and thorough manner to ensure that comparisons are valid. Indeed, the downsides from glib or inapt comparisons are well known.¹³¹

127. See, e.g., Shelanski, *supra* note 23.

128. See David Danks, *The Psychology of Causal Perception and Reasoning*, in THE OXFORD HANDBOOK OF CAUSATION 460-63 (Helen Beebe, Christopher Hitchcock & Peter Menzies eds., 2009) (examining counterfactual reasoning by humans in the context of causal cognition by comparing it with the causal cognition in non-human animals).

129. *Id.*

130. See Howard, *supra* note **Error! Bookmark not defined.**

131. See, e.g., Joskow, *supra* note 38, at 181-82 (noting the propensity of World Bank and other international financial organizations to inaptly draw inferences regarding the role of institutions and institutional change in developing and developed countries); Scott

*D. **Principle 4:** In assessing the merits of alternative market governance mechanisms, policymakers should heavily weight granular empirical evidence collected from actual markets.*

Economic theory can be especially useful in framing the outlines of economic behavior and policymaking, but when imposed at the highest level, the ability of the theory to discriminate between alternative regulatory governance mechanisms becomes attenuated. The result is that reliance on high-level theory alone creates the profound risk that well-intentioned policymakers will draw incorrect inferences regarding superior market governance mechanisms. A case in point is the propensity of some policymakers to point indiscriminately at variations in measures of industry concentration, such as the Herfindahl-Hirschman Index (“HHI”), and from this high-level observation draw conclusions regarding the need for heightened regulatory policies.¹³² While this proclivity is fraught with a number of economic errors, the one most relevant to RBR is that under the umbrella of relatively highly concentrated markets, competition may be either intense, distinctly pro-competitive, and consumer welfare enhancing; or less intense and lead to either coordinated or collusive behaviors that may harm consumer welfare. The point is that absent an empirical analysis of actual behaviors, the use of such high-level tools creates the profound risk of infinitely-lived regulatory superstructures for fear that behaviors may not comport with the benchmarks of perfect competition. In sum, a “boots on the ground” effort to scrutinize alternative governance structures will more reliably provide sound guidance to policymakers than higher-level theorizing about the potential consequences of potential policy changes.

*E. **Principle 5:** When considering alternative governance structures for a market, policymakers should focus on tangible, end-state economic metrics*

The best of regulatory and deregulatory policymaking over the past half-century has emanated from policymakers’ emerging proclivities to focus on the practical implications of alternative market governance mechanisms on “retail” economic metrics such as price, output, investment,

Wallsten & Stephanie Hausladen, *Net Neutrality, Unbundling, and their Effects on International Investment in Next-Generation Networks*, 8 REV. OF NETWORK ECON. 90, 107 (2009) (demonstrating that too-simple comparisons of broadband deployment rates across countries creates the profound risk of particularly poor policy extrapolations).

132. For a more apt use of the Herfindahl-Hirschman Index, see *Herfindahl-Hirschman Index*, DEP’T OF JUSTICE (last visited Jan. 14, 2013), <http://www.justice.gov/atr/public/guidelines/hhi.html>.

and innovation.¹³³ This external focus on retail economic metrics is in contrast to the historical appeals by some regulators to the vaguely—if ever—defined “public interest” standard which creates very difficult “in the eye of the beholder” possibilities that have no tangible link to governance mechanisms that promote economic welfare.¹³⁴ The focus on retail economic metrics also deviates from the historical tendency of regulators to seek to advance regulation by largely focusing on improving internal, incremental regulatory processes.¹³⁵ Thus, according to this principle, twenty-first century policymakers should focus more intently on comparisons of retail economic metrics than either elusive “public interest” standards or internal regulatory process improvements.¹³⁶

While focus on retail economic metrics provides a foundation for improved twenty-first century policymaking, this focus necessitates considerable care if it is to serve as a foundation for policymaking inferences. For instance, consider the economic focus on price. Lower prices typically improve economic welfare.¹³⁷ When making price comparisons though, inappropriate comparisons may readily arise. For example, consider the task of making price comparisons from the vantage point of a regulator in a traditionally regulated market. The regulation of rail rates in the United States prior to the passage of the Staggers Act (which largely deregulated the pricing of rail services) acted to keep rail rates low and stable.¹³⁸ Observing these low rates, however, did not provide a plausible basis for inferring that rail regulation advanced economic welfare relative to deregulation. The reason, in part, was that by squeezing rates down, the profitability of investments by rate-regulated railroads was substantially diminished.¹³⁹ The resulting failure of railroads to invest led to

133. Recall that, consistent with Principle 1, comparisons among retail economic metrics is not between a theoretical ideal and what is observed in practice, but rather between alternatives that are both observed.

134. See, e.g., Erwin G. Krasnow & Jack N. Goodman, *The “Public Interest” Standard: The Search for the Holy Grail*, 50 FED. COMM. L.J. 605 (1998). In some cases, the focus by regulators on “the public interest” is dictated by legislation. Under such umbrella language, however, regulators have the liberty to gather practical empirical evidence of the effects of alternative governance mechanism as focal indicia of the public interest rather than more speculative theorizing that introduces the considerable risk of inapt policymaking.

135. See *id.* Historically, major regulatory effort has been dedicated to the development of largely internal regulatory processes such as better development of accounting cost systems to determine rates; methods to identify the appropriate cost of capital for determining a “fair” rate-of-return for the firm; or attempting to develop sophisticated cost models for identifying firms’ incremental costs.

136. For a critique of the difficulties of implementing a “public interest” standard, see Breyer, *supra* note 82, at 566-69.

137. WALTER NICHOLSON & CHRISTOPHER SNYDER, *MICROECONOMIC THEORY: BASIC PRINCIPLES AND EXTENSIONS* 170-74 (11th ed. 2012).

138. B. Kelly Eakin et al., *Railroad Performance Under the Staggers Act*, 33 REGULATION 32, 32 (2010-2011).

139. See Beau B. Bump, *Held Captive: How Increased Regulation Arrests Railroads’ Ability to Serve the Nation*, 5 DEPAUL BUS. & COM. L.J. 731, 733-36 (2007).

a dramatic decline in the quality of the rail infrastructure.¹⁴⁰ The declines were so pronounced that a regulatory category of derailments was created for “standing derailment[s]” in which a rail car—not in motion—simply fell over due to the poor quality of the track or the car.¹⁴¹ In that instance, the removal of rate regulation created the incentive to invest in new rail infrastructure. In years following the deregulation of rail rates, investment in rail infrastructure increased dramatically.¹⁴² It also created dramatic incentives for cost reductions that led to rates that were lower than the pre-deregulated rates.¹⁴³ Thus, while Principle 5 calls for a focus on retail economic metrics, that focus must cautiously consider the potential for interrelationships among these metrics under alternative market governance mechanisms.

The potential for abuse of Principle 5 can also be seen in the history of telephone regulation. For most of the twentieth century, regulators priced local exchange telephone service “residually.”¹⁴⁴ That is, they used the Separations and Settlement system to establish prices for long-distance and access services to generate sufficient firm profits for AT&T that only residual revenues were required to be generated from local exchange telephone service.¹⁴⁵ The result was the perpetuation of extremely low local exchange telephone rates.¹⁴⁶ These low rates, however, were not proof of the success of the regulatory mechanism.¹⁴⁷ Indeed, many have pointed to these artificially low rates as evidence of regulatory failures.¹⁴⁸ The point here is not to reopen that debate, but rather simply to point out that while the regulatory focus on retail economic metrics can be a useful principle for twenty-first century policymaking, it should be exercised cautiously.

Finally, while some economic metrics such as price, output, and innovation are incontrovertibly central to the foundation of economic welfare, others are likely to prove more debatable. This then necessarily begs the question of *which* metrics are worthy of focus. The principle enunciated here purposefully does not answer this question. Indeed, the metrics that will be worthy of focus should be resolved through public debate and are not necessarily static. For example, retail economic metrics

140. *Id.*

141. Frank N. Wilner, *Railroads and the Marketplace*, 16 *TRANSP. L.J.* 291, 313 (1988).

142. See ASSOC. OF AM. R.R., *A SHORT HISTORY OF U.S. FREIGHT RAILROADS* 4 (2012), available at <https://www.aar.org/keyissues/Documents/Background-Papers/A-Short-History-of-US-Freight.pdf>.

143. See Mark L. Burton, *Railroad Deregulation, Carrier Behavior, and Shipper Response: A Disaggregated Analysis*, 5 *J. REG. ECON.* 417, 433 (1993).

144. See Kaserman, Mayo & Flynn, *supra* note 29, at 233-34.

145. See *id.*

146. *Id.*

147. See, e.g., Alfred E. Kahn, *The Road to More Intelligent Telephone Pricing*, 1 *YALE J. ON REG.* 139, 140-42 (1984) (discussing inefficiencies in telecommunications pricing systems).

148. See *id.*; see generally Kaserman, Mayo & Flynn, *supra* note 29, at 119.

that are seen in one light in one period may take on new and heightened importance in other times.

Consider, for instance, the role of investment by regulated firms. For the majority of the twentieth century, investment by regulated firms garnered relatively little attention, as most regulation was aimed at controlling regulated firms' prices and profits.¹⁴⁹ Indeed, in this environment, to the extent that regulators did focus on investment, their principal concern was that regulated firms were likely to over-invest.¹⁵⁰ Today, however, many of the industries that were intensively regulated in the twentieth century face unparalleled investment challenges. For example, it has been estimated that to accommodate the exploding demand for broadband telecommunications services, roughly \$300 billion in new investment will need to occur over the next two decades.¹⁵¹ In this context, the impact of alternative market governance mechanisms on the rate of private sector investment is likely to be a central consideration to twenty-first century RBR regulators.¹⁵²

While investment has risen in importance as a retail economic metric worthy of focus, regulatory use of profit metrics and profit regulation has withered in the past fifty years.¹⁵³ This move away from profit as a worthy economic metric developed from both economic research and regulatory practice.¹⁵⁴ Economic criticism of profit as a metric for regulation has been widespread, ranging from charges that profit regulation induces allocative inefficiencies,¹⁵⁵ to charges that profit regulation attenuates incentives for

149. See KASERMAN & MAYO, *supra* note 45.

150. This concern followed the publication of Harvey Averch and Leland Johnson who demonstrated that under rate-of-return regulation incentives were created for firms to over-intensively invest in capital. See generally Averch & Johnson, *supra* note 40. Blank and Mayo demonstrate that this propensity for over-investment continues, albeit in attenuated form, for hybrid regulatory mechanisms adopted in the latter part of the twentieth century. See Larry Blank & John W. Mayo, *Endogenous Regulation and the Emergence of Hybrid Regulatory Constraints*, 35 REV. INDUS. ORG. 233 (2009). Apart from theoretical concerns, twentieth century regulators also addressed concerns of investment that they saw as excessive and, therefore, uneconomic. See Thomas P. Lyon & John W. Mayo, *Regulatory Opportunism and Investment Behavior: Evidence from the U.S. Electric Utility Industry*, 36 RAND J. ECON. 628 (2005).

151. DAVID P. MCCLURE, U.S. INTERNET INDUS. ASSOC., THE EXABYTE INTERNET 14 (2007), available at <http://usiia-net.org/pubs/The%20Exabyte%20Internet.pdf>; John Earnhardt, *A National Imperative: Broadband Everywhere by 2010*, CISCO (Jan. 15, 2002), http://newsroom.cisco.com/dlls/ts_011502.html.

152. For an example of the recent focus on the impacts of alternative market governance mechanisms on investment, see Alberto Alesina et al., *Regulation and Investment*, 3 J. EURO. ECON. ASSOC. 791 (2005). For a description of the investment challenges facing the electric utility industry, see William W. Hogan, *Electricity Market Structure and Infrastructure*, in ACTING IN TIME ON ENERGY POLICY 128 (Kelly Sims Gallagher ed., 2009).

153. See KASERMAN & MAYO, *supra* note 45, at 460.

154. See *id.* at 463-70 (describing the effects of rate-of-return regulation on the electric utility industry, the surface transportation industry, and the cable TV industry).

155. See *id.* at 460, 470-71.

cost reductions.¹⁵⁶ Academic skepticism, together with generally poor economic performance of rate-of-return regulation led regulators in the past twenty years to increasingly abandon profit regulation.¹⁵⁷

IV. RESULTS-BASED REGULATORY POLICY: THE CASE OF TELECOMMUNICATIONS

Both the core principles of an RBR approach to market governance and the early successes with the approach are suggestive of a fresh and effective basis for twenty-first century regulatory and deregulatory policy formation. The approach is attractive because it is neither formulaic nor ideologically driven. RBR provides both structure, through the application of the RBR principles, and flexibility, as regulatory policies enacted as the product of RBR analysis inevitably differ with varying marketplace conditions across sectors of the economy.

While a number of sectors could benefit from an RBR framework for regulatory governance, arguably nowhere are the opportunities for economic welfare gains from RBR greater than in the telecommunications industry. The industry is both large and dynamic with a wide consensus that with an appropriate set of policy instruments in place, the industry has the potential to add immeasurably to both consumer welfare and America's economic competitiveness.¹⁵⁸ Given the immense size and complexity of the telecommunications industry, a complete RBR assessment of policymaking in this sector is beyond the scope of this paper. Nonetheless, in the spirit of a "proof of concept," two cases drawn from the telecommunications industry provide useful insights into the establishment of market governance policies from an RBR perspective.

Consider first the governance of the wireless telecommunication marketplace. Regulators initially envisioned that incumbent telephone companies would provision wireless services as a monopoly.¹⁵⁹ In the early 1980s, however, the formal introduction of cellular service was structured as a duopoly, with one provider being the local exchange company while the other was an unaffiliated provider.¹⁶⁰ Two contenders for the governance structure of this market emerged. One was to simply recognize the concentrated nature of the industry and engage in regulatory policies designed to constrain perceived market power through regulation of prices. The alternative, which was ultimately chosen by the FCC, was to fashion

156. For more detailed discussions, see *id.* at 480 and Armstrong & Sappington, *supra* note 51, at 1626-27.

157. KASERMAN & MAYO, *supra* note 45, at 546.

158. See *National Broadband Plan*, *supra* note 8, at 3; Kerry, *supra* note 8.

159. See Implementation of Section 6002(B) of the Omnibus Budget Reconciliation Act of 1993, *First Report*, FCC 95-317, 10 FCC Rcd. 8844, para. 3 (1995), available at http://fjallfoss.fcc.gov/edocs_public/attachmatch/FCC-95-317A1.pdf.

160. *Id.*

policy to alleviate governmentally induced constraints stemming from wireless firms' inability to secure sufficient spectrum for entry and investment in this market.¹⁶¹

The FCC's decision was informed by an RBR approach. In particular, some states (e.g., California and New York) initially chose to regulate cellular prices while others did not.¹⁶² This policy variation gave rise to the opportunity to engage in a serious, granular empirical inquiry into the effects of state-level regulation of wireless prices. After controlling for a variety of marketplace determinants of cellular prices, it was found that state-level regulation of cellular service led to increases in prices of between five and fifteen percent.¹⁶³ At the same time, it was pointed out that England had recently expanded its wireless configuration to include digital personal communications services ("PCS") with the effect that prices there had fallen.¹⁶⁴ In the end, the FCC denied petitions by the states to retain their authority to regulate wireless prices.

In the years since the price deregulation of the wireless industry, it has been in a constant state of flux.¹⁶⁵ Organic growth, mergers, and technological changes have profoundly altered marketplace conditions.¹⁶⁶ Today, policy oversight of the wireless industry continues.¹⁶⁷ To be sure, the wireless industry is not atomistically structured, and mergers among wireless providers have had the effect of adding to market concentration.¹⁶⁸ This has created calls for heavier regulation of the wireless industry to reign in perceived market power that is thought to emanate from that

161. *Id.* at paras. 83-84.

162. *See* Comments of the Cellular Telecomms. Indus. Ass'n, Affidavit of Jerry Hausman at paras. 8, 18, Petition of the People of the State of Cal. & the Pub. Utils. Comm'n of the State of Cal. to Retain Reg. Auth. Over Intrastate Cellular Serv. Rates, FCC PR Docket No. 94-105 (rec. Sept. 19, 1994) [hereinafter Affidavit of Hausman], available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=1354110003>.

163. *Id.* at para. 7.

164. *See* Comments of the Cellular Telecomms. Indus. Ass'n at 20 n.43, Petition of the People of the State of Cal. & the Pub. Utils. Comm'n of the State of Cal. to Retain Reg. Auth. Over Intrastate Cellular Serv. Rates, PR Docket No. 94-105 (rec. Sept. 19, 1994), available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=1354110001>.

165. Leonard J. Kennedy & Heather A. Purcell, *Wandering Along the Road to Competition and Convergence—The Changing CMRS Roadmap*, 56 FED. COMM. L.J. 489, 491 (2004).

166. *See id.*

167. Tricia Duryee, *FCC Officially Looking Into Wireless Industry Practices – Regulation May Be Coming*, PAIDCONTENT (Aug. 27, 2009), <http://paidcontent.org/2009/08/27/419-fcc-officially-looking-into-wireless-industry-practices-regulation-may/>.

168. *See, e.g.*, Comments of Consumer Fed'n of Am., Consumers Union, Free Press, Media Access Project, New Am. Found. & Public Knowledge at 30-31, Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, WT Docket No. 09-66 (rec. June 15, 2009), available at <http://apps.fcc.gov/ecfs/document/view?id=6520221076>.

market structure.¹⁶⁹ Others are quick to reply that the market is robustly competitive and ill-suited as a target of regulation.¹⁷⁰

The RBR principles, informed by an examination of the retail economic metrics of this industry, are likely to be a useful guide to policymakers today as they decide whether to move the wireless industry toward more regulatory governance or to maintain the lighter touch approach that has been the trademark of policy since the mid-1990s. First, Principle 1 reminds us that in practice, no governance mechanisms are perfect. This cautions against regulators pursuing market structure standards that mirror textbook models of perfect competition in the wireless industry.¹⁷¹ Rather the RBR-based question is whether—after recognizing and accounting for the costs of imposing additional regulation—industry performance will be improved as a consequence of any additional regulation. In the case of the wireless industry, the most relevant dimension of Principle 2 is that while market concentration and changes in market concentration brought about by mergers can give rise to competitive concerns, in the modern era the FCC can and should look to the complementary efforts of the antitrust authorities.¹⁷² Specifically, the DOJ and FTC have emerged as strong institutional forces to protect the integrity of markets. For instance, the DOJ is specifically charged with ensuring compliance with the Sherman Act's proscription of preventing "contract[s], combination[s] . . . , or conspirac[ies], in restraint of trade" ¹⁷³ Principle 2 indicates that in the presence of active antitrust enforcement agencies, the merits of sector-specific ex ante regulation to control market power is likely to prove inferior to ex post controls that govern firms.¹⁷⁴

Regulatory scrutiny of the wireless industry under Principles 3, 4, and 5 are also likely to provide considerably useful guidance to policymakers as they shape the future of regulatory and deregulatory policymaking in the wireless industry. In the absence of significant cross-state variations in regulatory policies, the most useful approach to examining the industry is likely to be inter-temporal. Specifically, how have retail economic metrics such as pricing, output, innovation, and investment evolved over time? In the case at hand, these statistics project a prima facie case that the existing, largely deregulatory approach to

169. *Id.*

170. John W. Mayo, *It's No Time to Regulate Wireless Telephony*, 5 ECONOMISTS' VOICE 1, 1 (2008).

171. In its comments on the development of the National Broadband Plan, the Department of Justice offers the similar position that "[t]he operative question in competition policy is whether there are policy levers that can be used to produce superior outcomes, not whether the market resembles the textbook model of perfect competition." Dep't of Justice Jan. 4 Comments, *supra* note 109, at 11, 29.

172. See *supra* note 123 and accompanying text.

173. Sherman Act, 15 U.S.C. § 1 (2006).

174. See Shelanski, *supra* note 23, at 57-58.

policymaking in this industry has been strikingly successful. Prices, which in the mid-1990s stood at forty-four cents per minute for a voice call, have now fallen to roughly five cents per minute.¹⁷⁵ These lower prices would appear to be creating significant value for American consumers, with the average American spending over ten hours on his or her cell phone every month.¹⁷⁶ In addition, the policy environment has led to an explosion of choices of wireless devices. By 2012, American consumers could choose from over 600 different wireless handsets and devices, with new devices arriving on the market regularly.¹⁷⁷ Indeed, the value created by wireless services has been so high as to prompt over one-third of American households to drop their wireline telephone connections entirely.¹⁷⁸

Detractors of these inter-temporal observations may logically raise the possibility of a more successful counterfactual scenario that may arise under an alternative set of policies directed at the wireless industry.¹⁷⁹ While such possibilities cannot be ruled out in this thumbnail analysis, what is important is that the policymaking effort under the RBR framework focuses policymakers on relevant results rather than on high-level speculation. In that regard, under an RBR approach the challenges to those who seek to scrap the current, light-handed regulatory framework include a demonstration that an alternative set of policies would demonstrably improve prices, output, innovation, and investment in the wireless industry relative to those that result from the current policies.¹⁸⁰

A second arena within the telecommunication industry that offers an opportunity to consider an RBR approach centers on the provision of high-capacity dedicated access services that are provided by local telephone companies to either large businesses or to wireless communications carriers for “backhaul” of their wireless traffic to landline networks.¹⁸¹ Competitive

175. See Annual Report & Analysis of Competitive Mkt. Conditions With Respect to Mobile Wireless, Including Commercial Mobile Servs., *Fifteenth Report*, FCC 11-103, para. 191, tbl. 20 (2011), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-103A1_Red.pdf; Affidavit of Hausman, *supra* note 162, at paras. 18-19.

176. CTIA—THE WIRELESS ASS’N, CTIA’S WIRELESS INDUSTRY INDICES REPORT: YEAR-END 2011 RESULTS, at 215, tbl. 87 (2012).

177. CTIA—THE WIRELESS ASS’N, CTIA WIRELESS INDUSTRY OVERVIEW 18 (2012), available at http://files.ctia.org/pdf/042412_-_Wireless_Industry_Overview.pdf.

178. STEPHEN J. BLUMBERG & JULIAN V. LUKE, CTR. FOR DISEASE CONTROL & PREVENTION, WIRELESS SUBSTITUTION: EARLY RELEASE OF ESTIMATES FROM THE NATIONAL HEALTH INTERVIEW SURVEY, JANUARY-JUNE 2012 (2010), available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201212.PDF>.

179. See also Affidavit of Hausman, *supra* note 162, at paras. 10-11.

180. Comparisons of the wireless industry structure with textbook models of perfect competition will inevitably prompt some to advocate a more regulatory approach in this sector. But as Principle 4 cautions, where granular empirical evidence regarding performance is available, this information is preferable to depictions of high-level economic theory standing alone.

181. See STEPHEN E. SIWEK, ECONOMIC BENEFITS OF SPECIAL ACCESS PRICE REDUCTIONS 5-7 (2011). For large firms that require dedicated access, access is provided as “transport” services while for wireless carriers that purchase special access the more typical

entry by firms offering these dedicated access service has been permitted since the 1980s.¹⁸² While competition was permitted, the fear of monopolistic pricing or behavior was sufficiently high during the 1980s and 1990s that the FCC maintained stringent regulatory controls over the so-called special access services provided by the incumbent local exchange carriers (“ILECs”) during this period.¹⁸³

Given the cost of deploying access facilities and the concentration of demand for high capacity special access services in large cities, new entrants initially focused their efforts in dense urban areas rather than making investments in less densely populated areas.¹⁸⁴ Given this observed variation in the geographic presence of competitors, the FCC moved in 1999 to establish a tailored, tiered approach to market governance for the provision of special access services.¹⁸⁵ Under the approach, local telephone companies are granted pricing flexibility within particular metropolitan areas upon a specific showing that competitors have made substantial investments in the specific geographic area.¹⁸⁶ The logic for this regulatory structure was that once competitors had sunk investments in a particular geographic market, firms would compete aggressively for the patronage of dedicated access customers.¹⁸⁷ In that case, the governance of pricing in that geographic area could more efficiently be provided by a more market-oriented governance mechanism.¹⁸⁸

The specific mechanism consists of three tiers.¹⁸⁹ In the absence of competitive indicators, a price cap mechanism is retained.¹⁹⁰ “Phase I”

arrangement is for dedicated facilities to extend from the wireless carrier’s facilities and terminate at the landline facilities of the local telephone company. This later “backhaul” service is referred to as “channel termination.” *Id.*

182. See Cox Cable Commc’ns, Inc., Commline, Inc. & Cox DTS, Inc. Petition for Declaratory Ruling, *Memorandum Opinion, Declaratory Ruling, and Order*, FCC 85-455, 102 F.C.C. 2d 110, para. 40 (1985), *vacated as moot*, 61 Rad. Reg. (P & F) 967 (1986).

183. See Florence O. Setzer, *Divestiture of AT&T and the Separate Subsidiary Requirement* (FCC OPP Working Paper Series, Paper No. 11, 1984), *available at* http://transition.fcc.gov/Bureaus/OPP/working_papers/oppwp11.pdf. The highest end dedicated access facilities of the ILECs, provided by fiber optic technologies are not regulated granted full pricing flexibility in 19XX. This left access facilities provided over DS1 (also called T-1) and DS3 b (also called T-3) facilities as the special access services that were, and are, the subject of regulatory scrutiny. DS-1 and DS-3 carry 1.544 and 45 megabits per second, respectively.

184. Access Charge Reform: Reform of Access Charges Imposed by Competitive Local Exch. Carriers, *Seventh Report and Order and Further Notice of Proposed Rulemaking*, FCC 01-146, para. 65 (2001), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-01-146A1.pdf.

185. See Access Charge Reform: Price Cap Performance Review for Local Exch. Carriers, *Fifth Report and Order and Further Notice of Proposed Rulemaking*, FCC 99-206, paras. 1-6 (1999) [hereinafter *Special Access Price Flexibility Order*], *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-99-206A1.pdf.

186. *Id.* at paras. 24-25.

187. *See id.* at para. 26.

188. *Id.* at para. 61.

189. *Id.* at para. 11.

relief from the default regulatory regime (viz., price caps) is granted upon a showing that competitors to incumbent local exchange carriers have made irreversible investments in the facilities needed to provide dedicated access.¹⁹¹ Under the FCC's regulatory structure, the showing that this threshold has been reached requires that certain "triggers" be met that demonstrate in concrete terms the presence of competitors' irreversible, sunk cost investments.¹⁹² Under Phase I relief, ILECs are permitted to offer volume and term discounts, while requiring them to maintain their generally available price cap constrained tariffed rates, thereby protecting those customers that lack competitive alternatives.¹⁹³

To obtain "Phase II" relief, ILECs must show that competitors have established a sufficient market presence such that the incumbent telephone company is precluded from exploiting any individual market power over a sustained period.¹⁹⁴ The "triggers" for Phase II regulatory relief are more stringent than for Phase I relief, requiring a greater showing of competitive presence in specific metropolitan areas. Under Phase II relief, ILECs are granted full pricing flexibility.¹⁹⁵

In recent years, this regulatory structure has come under attack and calls for the re-imposition of pricing and profit controls for these services have arisen.¹⁹⁶ Some have gone so far as to assert that "special access market is an Economics 101 textbook example of a market failure."¹⁹⁷ Others contend that the regulatory structure is flexible enough to permit incumbent telephone companies to respond to competition as it arises, and, as more competition emerges, more pricing flexibility is appropriately granted.¹⁹⁸ As regulators ponder the future of the governance of this market, a number of lessons emerge from the RBR framework.

Consistent with Principle 1, the FCC approach to establishing the current regulatory regime explicitly recognized that its use of triggers was adopted, in part, in recognition that alternative market governance

190. *Id.* at para. 154.

191. *See id.* at paras. 24-25.

192. Specifically, the FCC requires that competitors who are unaffiliated with the incumbent LEC have established operational collocation arrangements in a certain percentage of the incumbent LEC's wire centers in an MSA, or have established operational collocation arrangements in wire centers accounting for a certain percentage of the incumbent LEC's revenues from the services in question. *See id.*

193. *Id.* at paras. 68-69.

194. *Id.* at paras. 25-26.

195. *Id.* at paras. 204-06.

196. SIWEK, *supra* note 181.

197. Comments of Sprint Nextel Corp. at i, Special Access Rates for Price Cap Local Exch. Carriers, FCC WC Docket No. 05-25 (rel. Aug. 22, 2012).

198. This approach to easing regulatory controls in response to emergent competition was outlined by the FCC in 1999, stating that it envisioned an approach that "would enable it to give carriers progressively greater flexibility to set rates as competition develops, until competition gradually replaces regulation as the primary means of setting prices." *Special Access Price Flexibility Order*, *supra* note 185, at para. 2.

mechanisms would impose greater administrative regulatory burdens with little or no assurance of superior outcomes.¹⁹⁹ As when this market governance methodology was adopted, Principle 1 today requires regulators to continue to recognize that criticisms of the triggers-based regulatory approach cannot, in and of themselves, justify scrapping this approach. Proposals to scrap the current approach in favor of either price or profit regulation cannot be made under idealized notions of how these alternatives might work in an ideal setting. Rather, these alternatives can only be evaluated in light of their imperfections and costs in practice. That is, the question is not whether the current regulatory regime is perfect, but rather whether the proposed alternative creates the assurance that economic metrics of interest can be improved sufficiently to warrant the change in regulatory regimes.

On this matter, a careful historical assessment of the performance of these alternatives elicits skepticism. Profit regulation is notoriously difficult and costly in practice, and has shown itself to create a number of economic distortions.²⁰⁰ Indeed, various economic studies widely criticized the performance of profit regulation in the twentieth century and called for price regulation.²⁰¹ Such calls for price regulation raise at least two concerns. First, price regulation of markets in which firms compete creates the profound risk of distortions to the incentives for much needed investment.²⁰² Second, the determination of the appropriate price, often yoked to the economic concept of marginal cost, has proven to be an especially elusive and costly exercise in practice.²⁰³

199. *See id.* at paras. 89-91 (declining to adopt the proposed requirement that incumbent LECs prove market non-dominance as a prerequisite to pricing flexibility because the process of so doing is “neither administratively simple nor easily verifiable,” and because the results of which “generate considerable controversy that is difficult to resolve”).

200. *See, e.g.,* Breyer, *supra* note 82, at 562-65 (discussing how a “competitive regime” differs from “cost-of-service ratemaking,” i.e., profit regulation, in that the latter creates “prices [that] remain stable for fixed periods of time,” that do “not yield the expected revenue because of demand change,” and that “do not change to reflect changes in efficiency or market condition,” all of which make “it difficult [for firms] to experiment with different price structure”).

201. *See generally* Armstrong & Sappington, *supra* note 51, at 1557 (analyzing government regulation of industries, including profit regulation, using theoretical and empirical economics; discussing the benefits and costs of different kinds of regulation in various contexts; and citing previous economic studies that found different negative effects of profit regulation to the market, consumers, and competition).

202. This disincentive to invest can arise simply because the regulated price is too low, or, in the event that the price regulated service is made available at wholesale to competitors, those competitors simply purchase from the regulated firm rather than making their own investments. *See* Crandall & Hausman, *supra* note 6, at 75-76, 109-10 (reasoning that price regulation limits the “ability [of incumbent LECs] to exploit the value of their own networks, stunt[s] the incentives to invest in new facilities by existing carriers, and delay[s] investments by entrants as they wait for regulators to provide them with access to the full complement of incumbents’ facilities at below-cost prices”).

203. *See id.* at 88-89 (arguing that regulators are not in the best position to determine marginal cost because they “generally [are] the last to know the level of costs, particularly in

Principle 2 is especially relevant to the governance of the provision of special access services. That principle highlights the important pro-competitive reinforcement and backstops afforded by the antitrust authorities in markets such as telecommunications where mergers have altered the structural landscape of the market. In the case at hand, in the face of recent telecommunications mergers, the DOJ drew upon the standard competitive assessment tools from the antitrust arena to evaluate whether the mergers would give rise to competitive concerns.²⁰⁴ To ensure that the mergers did not have the effect of substantially harming competition in the provision of special access services, the DOJ required certain divestitures of dedicated facilities owned by the merging parties.²⁰⁵ Similarly, any attempts by ILECs that provide dedicated access to employ any extant market power to enhance or maintain that market power through anticompetitive contractual restrictions on customers will fall directly within the reach of the antitrust enforcement officials that are charged with preventing attempts to monopolize.²⁰⁶ The competitive protections afforded by the antitrust enforcement agencies can then give comfort that consumer interests are being served under the existing regulatory regime.²⁰⁷

Principle 3 also speaks to the regulation of special access. In the case at hand, the regulatory construct of three separate tiers of regulation might seem to afford the potential for meaningful comparisons across these tiers, with the result that one could compare the effects of each tier on relevant economic metrics. In the case of the provision of special access services, however, this cross-sectional analysis is not possible. In particular, a substantial portion of special access contracts is for large enterprises with multiple locations, including both Phase 1 and Phase 2 metropolitan areas.²⁰⁸ Due to the large, multijurisdictional nature of special access customers, discounts are typically specified as a percentage off tariffed prices and are by contract rather than by regulatory area.²⁰⁹ Thus, because price cap regulation dictates lower tariffed prices, the discounted prices in

a dynamic industry such as telecommunications with its abundance of joint and common costs”).

204. See U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-07-80, FCC NEEDS TO IMPROVE ITS ABILITY TO MONITOR AND DETERMINE THE EXTENT OF COMPETITION IN DEDICATED ACCESS SERVICES 25 (2006) [hereinafter GAO STUDY ON FCC AND COMPETITION], available at <http://www.gao.gov/new.items/d0780.pdf> (discussing the DOJ Antitrust Division's review of the mergers between AT&T and SBC and between Verizon and MCI, the process used, and the findings and conclusions after that review).

205. See *id.*

206. See *Special Access Price Flexibility Order*, *supra* note 185, at 69-70.

207. *Id.*

208. See PETER BLUHM WITH ROBERT LOUBE, COMPETITIVE ISSUES IN SPECIAL ACCESS MARKETS 6 (2009), available at http://nrri.org/pubs/telecommunications/NRRI_spcl_access_mkts_jan09-02.pdf.

209. See *id.* at 20 (noting that firms selling special access do not typically differential the price by regulatory jurisdiction but rather offer a single set of prices across their respective footprints).

these areas nominally appears to be lower than in Phase 2 areas.²¹⁰ This confounds any value in a cross-sectional comparison of prices.

While cross-sectional analysis is not useful in this instance, it is possible to utilize a before-and-after approach, guided by Principles 4 and 5, to address the question of the effectiveness of the current special access governance mechanism. In particular, although somewhat speculative at the time of the 1999 decision to adopt the current regulatory regime for special access, the FCC proffered that “regulatory relief will increase the efficiency of the interstate access market and reduce prices to end-user customers.”²¹¹

With the passage of time, it is now possible to assess the consequences of the FCC’s triggers as a market governance mechanism. Because special access services are most typically sold to large firms, it is normal that these customers do not pay the tariffed or so-called “rack” rates, but rather negotiate among vendors for discounted payments.²¹² The result is that the most meaningfully measured prices are in the form of average revenue per unit.²¹³ In the case of special access, several studies have examined the evolution of these prices over time.²¹⁴ In each case, the result-based conclusion is that consumers have benefited by price reductions after implementation of the current market governance mechanism.²¹⁵ For instance, the Government Accountability Office studied the evolution of the pricing of special access services in the wake of the 1999 establishment of the triggers framework and concluded that “the decrease [in prices] appears to be consistent with the prospect of competition that FCC predicted.”²¹⁶ Such RBR benchmarks should provide useful input to regulators as they consider the merits of alternative market governance of the special access market.²¹⁷

Similarly, other economic metrics also provide the opportunity to gauge the merits of the current FCC approach to governing special access. While a number of factors—including the rapidly expanding demand for wireless telephony—have led to growing demand for special access, it appears that the current regulatory regime has readily facilitated that expansion. Special access circuits have expanded in recent years by annual growth rates of sixteen percent.²¹⁸ I should emphasize that the goal here is not to engage in a full-blown RBR analysis, but rather to simply point to

210. *See id.* at 2, 20, 27-28.

211. *See Special Access Price Flexibility Order*, *supra* note 185, at 42.

212. *See* PATRICK BROGAN & EVAN LEO, HIGH-CAPACITY SERVICES: ABUNDANT, AFFORDABLE, AND EVOLVING 42 (2009).

213. *See id.*

214. *See* GAO STUDY ON FCC AND COMPETITION, *supra* note 204, at 13; BROGAN & LEO, *supra* note 212, at 3, 42; BLUHM WITH LOUBE, *supra* note 211, at 58.

215. *Id.*

216. *See* GAO STUDY ON FCC AND COMPETITION, *supra* note 204, at 13.

217. Peter BLUHM WITH LOUBE, *supra* note 208211, at Bluhm with Dr. Robert Loube, Nat’l Regulatory Research Inst., *Competitive Issues in Special Access Mkts.*, Revised Edition 86-87 (2009).

218. *Id.* at 8.

the sorts of economic metrics that can be employed by regulators under such an approach.

V. CONCLUSIONS AND CAVEATS

Concurrent with issuing an Executive Order to review and ferret out unnecessary regulations that are acting to hamper economic welfare and growth in the United States, President Obama recently observed that

[t]his is the lesson of our history: Our economy is not a zero-sum game. Regulations do have costs; often, as a country, we have to make tough decisions about whether those costs are necessary. But what is clear is that we can strike the right balance. We can make our economy stronger and more competitive, while meeting our fundamental responsibilities to one another.²¹⁹

The aim of this paper has been to provide a new lens and fresh perspective for regulators as they seek that balance. Importantly, the RBR framework offered here relies neither on simple appeals to ideology nor on the ability of regulators to simply balance the strengths of opposing interest groups. Rather, the RBR framework identifies a set of principles that have proven themselves in practice to be useful in discerning how to move the policy lever in a way that promotes economic welfare.

I wish to emphasize that while the framework of RBR is offered in the spirit of a fresh approach, I do not seek to make claims of excessive originality. The concepts presented here do not arrive entirely *de novo*, but rather draw from and build upon the work of numerous others. As early as 1989, Alfred Kahn spoke of the importance of a “Demonstration Effect” that was at work as the airline industry moved through its deregulatory phase.²²⁰ More recently, Paul Joskow has identified the growing adoption of natural experiments in industrial organization research of regulated industries as a vehicle for improved insight into the effects of regulation or deregulation.²²¹

219. Obama, *supra* note 15. Note that such calls are not new. President Bill Clinton once observed that,

[w]e all want the benefits of regulation . . . But let's face it, we all know the regulatory system needs repair. Too often the rule writers here in Washington have such detailed lists of dos and don'ts that the dos and don'ts undermine the very objectives they seek to achieve, when clear goals and operation for cooperation would work better.

See President William J. Clinton, Remarks at the Regulatory Reform Event (Feb. 21, 1995) (transcript available at <http://govinfo.library.unt.edu/npr/library/speeches/265e.html>).

220. See Peltzman, *supra* note 36, at 59.

221. See Joskow, *supra* note 38, at 182, 190.

The emergence of RBR also parallels developments in administrative law. In particular, beginning with President Reagan and continuing under Presidents Bush, Clinton, and now Obama, a number of presidential Executive Orders have been promulgated that require federal agencies to engage in a determination of the likely benefits and costs of rules that they consider promulgating.²²² A dispassionate reading of such a call for assessing the benefits and costs of regulatory measures would appear to be unobjectionable. Nonetheless, a number of critics have asserted that requirements for administrative agencies to engage in a cost-benefit assessment of potential regulatory requirements are not meant to advance sound economic policies. Rather, the cost-benefit assessment requirement is a tool of those ideologically opposed to regulation. In this instance, the inability to separate the tool from a larger ideological push will undermine the credibility and effectiveness of what would otherwise be a viable regulatory assessment tool. Hahn offers a recent discussion of the available mechanisms to improve the viability of cost-benefit analysis.²²³

Perhaps most akin to the framework presented here, Professor Breyer offers an approach that is “built upon a simple axiom for creating and implementing any program: determine one’s objectives, examine the alternative methods of obtaining those objectives, and choose the best method for doing so.”²²⁴ Indeed, Breyer observes:

Whether reform should take place . . . depends on a detailed examination of the actual effect of the regulatory program at issue. A detailed empirically based inquiry is necessary because, regardless of the regulatory program’s basic objective (and the possible inability of regulation to achieve that objective), any existing program will in fact serve a host of subsidiary objectives.²²⁵

Thus, his approach, like mine, is less driven by philosophical arguments about the merits of free markets or government regulation, but rather is rooted in an assessment of practical alternatives and their outcomes.

I necessarily close with an uncomfortable, but logical, observation. Principle 1 of the RBR framework for twenty-first century regulatory and deregulatory policy observes that in practice all market governance mechanisms are imperfect. This principle is no less true for a RBR approach to market governance than it is for the prominent twentieth century mechanisms of rate-of-return regulation, price controls, or hybrids

222. See, e.g., Exec. Order No. 12291, 46 Fed. Reg. 13,193 (Feb. 17, 1981).

223. Robert Hahn, *Designing Smarter Regulation with Improved Benefit-Cost Analysis*, 1 J. BENEFIT-COST ANALYSIS 1, 1 (2010), available at <http://www.bepress.com/jbca/vol1/iss1/5>. In this vein, see also CASS R. SUNSTEIN, *THE COST-BENEFIT STATE: THE FUTURE OF REGULATORY PROTECTION* (2002).

224. See Breyer, *supra* note 82, at 550.

225. *Id.* at 604.

thereof. Moreover, as Smith warned over 250 years ago, it is difficult to fully anticipate the dynamic reactions of firms or regulators in the wake of adhering to the RBR principles that I have enunciated.²²⁶ That caveat notwithstanding, empirical, granular focus on the actual outcomes of economic metrics within an RBR framework creates the opportunity to differentiate industries in which deregulatory policies have been successful from those where they may have failed. In so doing, the realistic prospect arises for RBR as a foundation not of perfect market governance for the twenty-first century but of the more realistic prospect of better regulatory and deregulatory policymaking

226. SMITH, *supra* note 106.

Subject: Comments for the House Energy and Commerce Committee to update the Communications Act
Date: Wednesday, January 29, 2014 at 4:27:16 AM Eastern Standard Time
From: Gianluigi Negro
To: CommActUpdate
CC: 'Roslyn Layton'

Dear Representatives of the House Energy and Commerce Committee:

I submit my comments for your process to update the Communications Act.

I study internet governance in China, and there are some learnings which may be helpful for the USA. I am currently assistant editor at China Media Observatory <http://www.chinamediaobs.org/> you can find my papers here <http://chinamediaobs.academia.edu/GianluigiNegro>. These comments were prepared based upon a discussion my colleague Philip di Salvo, web editor at The European Journalism Observatory <http://it.ejo.ch/>, you can find his papers here <https://unisi-ch.academia.edu/PhilipDiSalvo> and Prof. Gabriele Balbi <https://unisi-ch.academia.edu/GabrieleBalbi>. We are based at Università della Svizzera italiana (USI), at the Institute for Media and Journalism <http://www.imeg.com.usi.ch/en/index> under the Faculty of Communication, the only the only one in Switzerland and among the few in Europe to offer an all-round education in communication, with a fully interdisciplinary approach. <http://www.com.usi.ch/en/index.htm> USI is Switzerland's most international university. It is distinctive in the Swiss university system because of the originality of its degree curricula and areas of research. Its relatively contained size and numbers assure direct interaction between the members of the academic community. The result is a collegiate, dynamic, and multicultural atmosphere, a powerful magnet for motivated students and talented researchers. <http://www.usi.ch/en/index.htm>

It's true the current Communication Act is structured around the service providers (telephone, cable, radio etc). Looking at the world of communication and the internet today, these silos can no longer be justified. Voice, video, and messaging services are no longer confined to a network provider.

However one of the most important issues in the near future will be the relationship between mobile service providers and mobile applications. The necessity of a new business model is becoming more and more evident because of the mushrooming of over the top (OTT) services. OTT services are pass-through services which exist on-top of infrastructure (e.g. Skype, Netflix, WhatsApp). While OTT services are an important form of competition and innovation, they depend on telecom/cable companies to invest in underlying infrastructure.

Traditionally a customer purchased a package of voice and text from a mobile operator. With OTT services, the customer instead purchases a data package (generally at a lower rate) and accesses an OTT service such as Skype for long distance calling and WhatsApp for text. Telecom operators are losing key sources of revenue to provide the infrastructure on which the OTT services depend. In countries such as China, the leading telecom operators asked the Ministry of Industry and Information Technology to charge WeChat, the most popular mobile application. WeChat has also launched a video chatting feature which takes an increasing amount of bandwidth versus the cost of user subscription (See a relevant article here [link](#)). This trend is not limited to the Chinese context. WeChat, a competitor to WhatsApp, is growing in the US as well. Both OTT and telecom services can exist together, but the business models that allow telecom operators to recover cost of operations need to be developed.

When making laws about these services, it's important to keep in mind that consumer will benefit from a new framework that creates a level playing field for all service provider. A modern framework will provide

innovators and entrepreneurs the ability to find new and better serve consumers with greater choice and options. Additionally consumers should receive some conditions for privacy, safety, security, and fair treatment from all players in the Internet ecosystem – the law should reflect this consumer-centric paradigm.

To be sure, it is quite difficult to forecast the future, and as a result, legislation and regulation tend to lag behind technology and cultural issues. Additionally the information to make such laws often comes late in the process. For example, the debate on convergence that started in the EU at the beginning of 1990s did not capture the dimension and extent of this change and it's still ongoing after 3 decades without a precise path.

Regarding the flexibility of laws, it is important to highlight that in the most of cases technological changes react in a very unexpected way. The history of communication has been always characterized by some gray zones which affected the original constitutive choices.

Concerning your last question, “Does the distinction between information and telecommunications services continue to serve a purpose? If not, how should the two be rationalized?”, we’d like to stress the role of AGCOM in Italy and its recent decision regarding the administrative enforcement of IP rights.

<http://www.jdsupra.com/legalnews/agcom-and-the-administrative-enforcement-56601/> Regarding the distinction, it is our impression that also in the near future will serve as a purpose based on a compromise.

Sincerely,
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House Energy and Commerce Committee
Subcommittee on Communications and Technology

Modernizing the Communications Act

COMMENTS OF GILA RIVER TELECOMMUNICATIONS, INC.

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February 5, 2014



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Gila River Telecommunications, Inc. (“GRTI”) hereby submits these comments in response to the request by the United States House Committee on Energy and Commerce (“Committee”) for comments on January 8, 2014.¹ GRTI, a telecommunications carrier wholly-owned and operated by the Gila River Indian Community (“GRIC”), appreciates this opportunity to offer the Committee its perspective on three issues: (1) recognition of tribal sovereignty and the federal trust relationship, (2) formalization of tribal consultation, and (3) a reaffirmation of the nation’s historic commitment to universal access to communications services for all Americans. As detailed below, codifications of these measures would help promote access to modern communications across tribal lands, which have historically lagged well behind other segments of the population.

I. Background on GRTI

Formed in 1988 for the purpose of providing affordable telephone services to the Gila River Indian Community, GRTI today provides voice and broadband services to residents and businesses on the community, which is located on approximately 372,500 acres in rural southern Arizona and is home to approximately 20,000 enrolled members. Native American and GRIC members make up more than 60% of GRTI’s workforce. GRTI currently has approximately 3,200 access lines, of which approximately 2,000 are residential lines.

Since acquiring the Gila River local telephone exchange and related network from US West over twenty-five years ago, GRTI has increased the wireline telephone penetration rate among tribal households in the community from approximately 20% to more than 80% today. The FCC’s universal service programs have been indispensable in enabling GRTI to achieve such progress. For example, a

¹ HOUSE SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY OF THE ENERGY AND COMMERCE COMMITTEE, MODERNIZING THE COMMUNICATIONS ACT (Jan. 8, 2014), *available at*: <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/CommActUpdate/20140108WhitePaper.pdf>



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substantial majority of GRTI's local telephone subscribers traditionally qualify for Lifeline and Link Up, including 91% of those subscribers 65 and older.

GRTI also makes broadband service available to residences and businesses throughout the GRIC. The broadband adoption rate in the GRIC is approximately 23%, which is higher than the National Broadband Plan's estimate of less than 10% broadband availability for residents of Indian country,² but well below the national average of over 72%.³ GRTI attributes this low adoption rate largely to the high cost of service and equipment, but also to low digital literacy among community members.

In addition, the GRIC has worked to provide wireless service on the reservation in partnership with Verizon Wireless. The GRIC's input and engagement with Verizon Wireless has been critical to ensure that mobile services are deployed in a culturally-appropriate manner that addresses the needs of the community. As a result, residents of the GRIC enjoy better access to mobile services than the vast majority of Indian country.

It is with these experiences in mind that GRTI provides these comments.

II. Efforts to Modernize the Communications Act Should Include Formal Recognition of Tribal Sovereignty And Federal Trust Responsibility

In Question 2 of the White Paper, the Committee asks about adaptations to existing law to reflect today's communications environment. One significant change in the communications marketplace is the increasing role tribal governments are playing in ensuring the delivery of communications services to their members, who have historically been underserved.⁴ In 2000, the Federal Communications Commission ("FCC" or "Commission") issued a historic policy statement reaffirming the principles of

² Federal Communications Commission, *Connecting America: The National Broadband Plan* (rel. Mar. 16, 2010), at 152 ("National Broadband Plan").

³ Household Broadband Adoption Climbs to 72.4 Percent, National Telecommunications and Information Administration, <http://www.ntia.doc.gov/blog/2013/household-broadband-adoption-climbs-724-percent> (June 6, 2013).

⁴ *Lifeline and Link Up Reform and Modernization et al.*, WC Dkt. No. 11-42 et al., Report and Order and Further Notice of Proposed Rulemaking, 27 FCC Rcd 6656 (2012) ("2012 Lifeline Reform Order").



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tribal sovereignty and the FCC's trust responsibility to tribes.⁵ Based on these principles, the FCC has taken a number of positive steps to facilitate the delivery of communications services to residents of tribal lands and the ability of tribal governments to play a role in the provision of these services to their members.⁶ Codification of these principles will allow tribes and the FCC to continue to work together to improve the delivery of communications services to tribal lands.

III. Efforts to Modernize the Communications Act Should Include Formalized Recognition of the Importance of Tribal Consultation

Over the years, the FCC has had varying levels of consultation with tribal representatives. Most chairmen and commissioners have taken seriously the special relationship that exists between the Federal government and tribes and have advanced policies at the Commission that have had meaningful impacts on tribal lands and in our communities.

In the 2000 *Tribal Policy Statement*, the FCC committed to “consult[ing] with tribal governments prior to implementing any regulatory action or policy that [would] significantly or uniquely affect tribal governments, their lands or resources.”⁷ Over the next 13 years, the Commission continued its work with tribal representatives, adopting other regulatory policies aimed at promoting access to communications services on tribal lands.⁸ However, as expressed by the National Conference of American Indians in a

⁵ *FCC Statement of Policy on Establishing a Government-to-Government Relationship with Indian Tribes*, 16 FCC 4078 (2000) (“*Tribal Policy Statement*”).

⁶ See *Federal-State Joint Board on Universal Service; Promoting Deployment and Subscriberhip in Unserved and Underserved Areas, Including Tribal and Insular Areas*, CC Dkt. No. 96-45 et al., Twelfth Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, 15 FCC Rcd 12208 (2000) (adopting enhanced Lifeline support for low-income residents of tribal lands); *Policies to Promote Rural Radio Service and to Streamline Allotment and Assignment Procedures*, MB Dkt. No. 09-52, First Report and Order and Further Notice of Proposed Rule Making, 25 FCC Rcd 1583, (2010) (adopting a bidding priority for federally-recognized tribes).

⁷ *Tribal Policy Statement*.

⁸ Federal Communications Commission, Office of Native Affairs and Policy, 2012 Annual Report 8-13, available at: <http://transition.fcc.gov/cgb/onap/ONAP-AnnualReport03-19-2013.pdf> (discussing the Commission's tribal agenda before the creation of ONAP).



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2008 resolution, the Commission had not fulfilled the terms of its policy statement regarding consultation.⁹

In a move to address those shortcomings, the FCC formally established the Office on Native Affairs and Policy (“ONAP”) in 2010 to promote consultation with tribal nations and native communities as they exercise their sovereignty and self-determination.¹⁰ The establishment of ONAP is indeed a very positive one that has brought about tangible benefits. Codification of tribal consultation in the Communications Act will help ensure that the FCC continues to promote consultation in the future.¹¹

IV. Efforts to Modernize the Communications Act Should Continue our Nation’s Historic Commitment to Promote Universal Access

As FCC Chairman Wheeler has stated, there exists a network compact between providers and Americans that has certain key values and the most fundamental one is accessibility – “there is nothing more fundamental to the FCC’s work than ensuring every American has access to our wired and wireless networks.”¹² GRTI agrees with Chairman Wheeler’s statement and as a provider that has worked to bring modern communications technology to its customers in the GRIC, we cannot stress enough how critical the universal service funding mechanisms are to achieving universal access. In defining universal access, any revisions to the Communications Act must recognize that deployment and adoption are interlaced.

⁹ National Conference of American Indians, Ensuring Tribal Telecommunications and Broadcast Priorities are Included in the 2009 Federal Government Transition Prerogatives, http://www.ncai.org/attachments/Resolution_RYQIOKVTtJKDJyvEaxihceNIYarahoakmMmOFrIhNFvkrstLxo_PHX-08-070cFINAL.pdf (2008).

¹⁰ *Establishment of the Office of Native Affairs and Policy in the Consumer and Governmental Affairs Bureau*, Order, 25 FCC Rcd 11104 (2010).

¹¹ This statutory consultation requirement will benefit Tribes and their members in countless ways. As just one example, Section 257 of the Telecommunications Act of 1996 instructs the FCC to review and remove market entry barriers. Consultation between tribes and the FCC as part of this review may help the two sides identify market entry barriers that are not needed on tribal lands.

¹² Tom Wheeler, Chairman, Federal Communications Commission, Remarks at The Ohio State University, Columbus, Ohio, (Dec. 2, 2013), *available at* <http://www.fcc.gov/document/remarks-fcc-chairman-tom-wheeler-ohio-state-university>.



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High build out costs of the infrastructure necessary to provide communications services to residents in the GRIC are one of the greatest challenges facing GRTI. For example, as part of its commitment to providing state-of-the-art services to the GRIC, GRTI began wiring a select number of residences with fiber-to-the-home in 2009. However, the GRIC, like most tribal lands, is located in a rural, sparsely populated area, which significantly raises the cost per subscriber incurred by GRTI. As a result, GRTI was forced to deploy fiber-to-the-home in small increments in order to account for these high build-out costs.

As GRTI evaluated deployment of fiber, one critical concern was the limited financial resources of many Native Americans living in the GRIC. This inhibits infrastructure deployment because it lowers the amount of revenues that can be earned from undertaking such deployment. A look at the GRIC is instructive in understanding the need to address both the high cost of deployment and the cost barrier to adoption.

According to the 2010 census, approximately 48% of families living in the Gila River Indian Community had incomes below the federal poverty line and more than 50% of the population was unemployed. That is three times higher than the rate of poverty for Arizona as a whole. Yet, the wireline telephone penetration rate on the GRIC traditionally exceeds 80%, a significant increase from the 20% telephone penetration rate that existed when GRTI acquired the exchange in 1988. GRTI attributes this increase to both an investment in its network, made possible with the assistance of the FCC's USF high cost program, and to support provided by the enhanced tribal Lifeline program. Only by addressing both the cost of deployment and the cost barrier to adoption were we able to finally break the under-subscribership to telephone service that has persisted on reservations through the last century.

We are seeing similar issues emerge in the deployment and adoption of broadband. In December 2012, GRTI was selected by the FCC to participate in its Lifeline Broadband Pilot Program. The project



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is designed to study the effects of varying support amounts and choices for speed over a 12 month period that ends later this year.

As part of the Lifeline Broadband Pilot Program, GRTI is testing the effect of reduced monthly subscription costs, reduced broadband-related equipment prices,¹³ and varying broadband speeds on broadband adoption among its low-income subscribers. Each such subscriber was randomly assigned into five groups, four of which are offered a different package of incentives for adoption and the fifth serving as the control group. The monthly subscription costs for participants ranges from \$23.24 to \$38.24 for varying broadband speeds. GRTI is tracking which incentives are most likely to encourage broadband adoption among its low-income subscribers. Based on our preliminary assessment of participation, the two key cost barriers to adoption on the reservation are the cost of broadband service and the cost of broadband-related equipment such as computers.

Consequently, in order to overcome these barriers and accelerate broadband adoption among the Native American population, the Lifeline program must support broadband for low income residents. Further, as Congress reviews the scope of the universal access goals, GRTI urges the Committee to consider expanding universal access to include provisions that take into account the high cost of acquiring equipment, such as computers, laptops and tablets that can also present barriers to adoption. As the Commission noted in the *Lifeline/Link Up Reform NPRM*, closing the broadband adoption gap is more difficult than closing the gap in telephone penetration in part because of the costs of broadband capable equipment.¹⁴ As GRTI is learning through its participation in the FCC's Lifeline Broadband Pilot program, many of the residents of the GRIC are not be able to afford computers without significant support.¹⁵

¹³ GRTI alone is bearing the cost of such discounted equipment.

¹⁴ See 2012 *Lifeline Reform Order* at ¶268.

¹⁵ Importantly, Indian country also needs support for the deployment and maintenance of broadband networks on tribal lands. Many such lands lack the necessary infrastructure capable of providing terrestrial



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V. Conclusion

As the Committee looks at updating the Communications Act, we urge you to ensure that tribal sovereignty, the federal trust relationship and tribal consultation are codified in statute to recognize the important role Native Nations play in fulfilling the Congressional directive to promote universal access to communications. We further urge you to continue the policy of having the FCC promote universal access to broadband. As the National Broadband Plan observed, “Like railroads and highways, broadband accelerates the velocity of commerce, reducing the costs of distance. Like electricity, it creates a platform for America’s creativity to lead in developing better ways to solve old problems. Like telephony and broadcasting, it expands our ability to communicate, inform and entertain.”¹⁶ Nowhere is the impact of broadband more profound than in rural areas such as tribal lands.¹⁷ However, as access to affordable broadband increases at disparate rates among different groups of Americans, America faces an increase in an already wide technological divide.¹⁸ The Committee has an opportunity to take concrete steps to close that divide now to ensure that the abysmal gap we witnessed in the last century for telephone service on tribal lands is not repeated for broadband service on tribal lands in this century. We appreciate this

broadband services. While support for service and equipment will help address the cost barriers to adoption, support for the deployment and maintenance of broadband networks will help address the access barriers to adoption that plague many tribal lands.

¹⁶ *National Broadband Plan* at 19.

¹⁷ See Nat’l Cong. of Am. Indians, *Congress and the Federal Agencies Must Create the Native Broadband Fund, and Devote and Prioritize Funding and Resources to Provide Broadband in Native Communities and Include Native Governments in All Native Telecommunications Infrastructure and Broadband Policy Initiatives*, Res. #ABQ-10-061 (Nov. 14-19, 2010) (“[A]ccess to broadband service in poorly served areas will help bridge the technological divide, increase economic growth, and improve education, health care and the quality of life in these areas...”).

¹⁸ See *Improving Communications Services for Native Nations*, CF Docket No. 11-41, 26 FCC Rcd 2672 at ¶1 (2011).



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opportunity to share our perspective with the members of the Committee and look forward to being a resource for the Committee as it undertakes this effort.

Respectively Submitted,

Gila River Telecommunications, Inc.

By: /s/ Gregory Guice
Gregory W. Guice, Esq.
Akin Gump Strauss Hauer & Feld LLP
1333 New Hampshire Avenue, NW
Washington, DC 20036
[REDACTED]

Its Attorney

February 5, 2014

THE TELECOM ACT REWRITE
(COMMACTUPDATE@mail.house.gov)

COMMENTS OF THE
NATIVE TELECOM COALITION FOR BROADBAND (NTCB)¹

To: Chairman Fred Upton, House Energy and Commerce Committee
Ranking Member Henry Waxman

Chairman Greg Walden, Communications and Technology Subcommittee
Ranking Member Anna G. Eshoo

Distinguished Members of the Committees

Communications Act and Universal Service

There will always be a need for a specific “Universal Service” provision within the language of the Communications Act. Consider the reality today, 80 years since the Act’s passage. One of its key provisions, that is to achieve competition among communications providers, has been achieved on a global level and is pervasive in American urban markets. Yet, the remote rural and insular areas of America continue to represent a significant challenge for capital investment and the deployment of broadband communications infrastructure and services.

The writers of the Communications Act of 1934 clearly understood the importance of communications technology to the nation. The concept of Universal Service was embodied in the language of the Act, ensuring that the intent of Congress was clearly understood to mean all Americans should have access to technology and services that enable communications to take place rapidly and efficiently, anywhere in the nation. Punctuating the growing importance of communications over the last 8 decades, our nation’s commerce, education, healthcare, personal and public safety have all expanded to more communities and more Americans as progressive communications technology advanced – telegraph/voice/data/video/imaging; cord-board/dial/digital TDM/packet IP.

Over the years with advancing technology has come more affordable communications for American consumers. In addition, the marketplace has become more competitive, as communications technologies have converged. Today in many urban areas of the country, cable operators, wireline carriers, and wireless carriers all vie for the same consumer’s “bundle” of services. So it seems proximity to major urban population centers has proven, thus far, to be the primary determiner of communications accessibility – communications “haves and have-nots.” The “digital divide” is about the cost challenge of deploying advanced technology and services

¹ The NTCB is comprised of tribally-owned and small, rural local exchange carriers interested in improving the availability, quality, and adoption rates of voice, mobile, broadband and Internet access services on Tribal lands, including Indian country, Alaska Native regions, and the Hawaiian homelands.

for rural Americans in remote, sparsely populated areas. The need for a congressional mandate to drive “Universal Service” is still alive and well.

In the last update of the Communications Act of 1996, we find fundamental “Universal Service Principles” in Section 254 (b)(3) and (b)(5) as follows:

Consumers in rural, insular, and high cost areas should have access to advanced communications and information services at reasonably comparable rates that are charged for similar services in urban areas. And there should be specific, predictable, and sufficient Federal and State mechanisms to preserve and advance universal service.

Regulators continue to need this directive from Congress. And do not misinterpret the message needed in legislation – it is not simply, “more regulation,” but it is “regulation must work” to achieve “Universal Service.” All Americans must be assured that the Federal Communications Commission will take steps to assure the fulfillment of Section 254 of the ’96 Act, which language must be preserved in the rewrite of the Communications Act of 1934.

Native Americans Are Most at Risk

As a Class, Native Americans are most at risk of being left behind in the “Broadband Revolution.” A little fact gathering performed for the FCC during the writing of the National Broadband Plan, released April 2010, and during subsequent reform proceedings of the FCC’s universal service programs, revealed that communities on Tribal lands have historically had less access to telecommunications services than any other segment of the population.

- Approximately 98% of the households in the United States presently have basic telephone service. On Tribal lands, however, barely 67% of households have basic telephone service.
- As the FCC has found, 65% of Americans living off Tribal lands – but less than 10% of residents on Tribal lands – have access to broadband in their homes.
- Many tribal communities face significant obstacles to the deployment of broadband infrastructure, including high build-out costs, limited financial resources that deter investment by commercial providers, and a shortage of technically trained members who can undertake deployment and adoption planning.

The record clearly shows that service penetration for both voice and broadband on Tribal lands lags far behind that for other Americans. Parity of communications services remains a distant goal. This result is due to a lack of communications infrastructure, which in many cases is linked to a lack of business focus and motivation to serve these remote Tribal land areas. Geographic isolation, sparse population, and poverty level income are real barriers prohibiting Native Americans from experiencing the quality-of-life enhancements and economic opportunities that have become available to most Americans through advanced communications.

Since passage of the Telecom Act of 1996, only three new tribally owned telecommunications providers have been formed. The lack of new carriers speaks to the challenges of serving Tribal lands.

To turn this situation around, in the rewrite of the Act² Congress should direct the Commission to adopt a universal service program unique to the specific needs³ of Native Americans, including creation of a Tribal Broadband Fund⁴, as recommended in the National Broadband Plan. The program should adequately recognize and address Native challenges and enable deployment of broadband infrastructure on Tribal lands. Tribes need substantially greater financial support than is presently available to them, and accelerating broadband deployment will require increased funding. Additional funding is also required to maintain the day-to-day financial viability of tribally owned carriers and other small broadband service providers that have built out Tribal lands.

The Genachowski FCC regime recognized this need, but did not follow through in providing the needed support. The Commission's November 18, 2011 Order⁵ purported to comprehensively reform and modernize the universal service and intercarrier compensation mechanisms. The new Connect America Fund would ensure that robust, affordable voice and broadband service, both fixed and mobile, would be available to Americans throughout the nation. But it failed to provide for adequate and reasonable remaining support mechanisms for Native Americans. Tribal lands are remote, sparsely populated, and generally do not represent markets that can be financially sustained without significant universal service funding.

A new universal service program unique to the specific needs of Native Americans must also encourage expansion of broadband networks through access to capital markets, particularly the Rural Utilities Service of the U.S. Department of Agriculture, as well as other lenders. One of the primary deterrents to additional broadband investment today has been the lack of access to capital, due to the regulatory uncertainty prevalent under the Genachowski regime.

² As a starting point, Section 254 (b)(3) of the Act should be amended to read, "Consumers in high-cost to serve rural, insular, and Tribal land areas . . ."

³ Fulfilling the promise of a better way of life for Native Americans begins with making it easier to communicate. Communication is directly linked to preserving native languages and cultures. Conversely, history has shown that the surest way to destroy a culture is to deny the use of the language. Experts have found that the true understanding of a native culture is only achieved by understanding the language. One can tell what is important in a culture by the number of different words used to describe a person, place, or thing.

⁴ The National Congress of American Indians and the Alaska Federation of Natives recognize the importance and need for expanded broadband service on Tribal lands. Both organizations have passed Resolutions supporting the creation of a Tribal Broadband Fund for that purpose (See attachments).

⁵ In this Order the FCC did not address the inadequacy of the current universal service collections mechanism to fund the broadband needs of America. All broadband services available to residential users should incur a connection fee that is technology neutral, i.e. does not disadvantage competitively any service provider group, whether wireline, wireless, cable, or ISP service provider. Business users should continue to pay into the fund based on percentage of service revenue billed or bandwidth capacity subscribed.

For over 100 years in various treaties formed with American Indian tribes and other natives, Congress has promised Native Americans an opportunity to experience a quality-of-life similar to that of other Americans. The broadband technology available today offers help in achieving that goal. It can erase critical economic, educational, healthcare, and personal and public safety challenges affecting Native Americans. In the rewrite of the Act this Congress must give special consideration to improving broadband deployment and adoption levels on Tribal lands. And Congress should also affirm the sovereign right of American Indian Tribal governments to construct broadband networks, which include preferential access to broadband wireless spectrum on Tribal lands.

This Congress and our industry recognize the promise of broadband communications. It is critical to the survival of the nation. Native Americans are significantly behind the communications curve and are struggling to obtain quality-of-life and economic opportunity equivalent to non-Native communities. Parity of broadband service will help create an equal footing for Native Americans. A "Native American" USF program will denote a significant step toward fulfilling the many treaties and acts of Congress that were intended to establish the means by which Native Americans can become self-sufficient and self-sustaining on their Tribal lands.

Respectfully submitted,
Native Telecom Coalition for Broadband

By Alan W. Pedersen
GVNW Consulting, Inc.

January 20, 2014

Attachments



NATIONAL CONGRESS OF AMERICAN INDIANS

The National Congress of American Indians Resolution #REN-13-064

TITLE: Support for the Establishment of a Tribal Broadband Fund and for Other Related Purposes

EXECUTIVE COMMITTEE

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Chickasaw Nation

FIRST VICE-PRESIDENT
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Panama Band of Miscom Indians

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Fawn Sharp
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PACIFIC
Don Arnold
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ROCKY MOUNTAIN
Ivan Posey
Shoshone Tribe

SOUTHEAST
Larry Townsend
Lumbee Tribe

SOUTHERN PLAINS
George Thurman
Sac and Fox Nation

SOUTHWEST
Joe Garcia
Ohkay Owingeh

WESTERN
Ned Norris, Jr.
Tobacco Ojibwa Nation

EXECUTIVE DIRECTOR
Jacqueline Johnson Pata
Tlingit

NCAI HEADQUARTERS

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WHEREAS, we, the members of the National Congress of American Indians of the United States, invoking the divine blessing of the Creator upon our efforts and purposes, in order to preserve for ourselves and our descendants the inherent sovereign rights of our Indian nations, rights secured under Indian treaties and agreements with the United States, and all other rights and benefits to which we are entitled under the laws and Constitution of the United States, to enlighten the public toward a better understanding of the Indian people, to preserve Indian cultural values, and otherwise promote the health, safety and welfare of the Indian people, do hereby establish and submit the following resolution; and

WHEREAS, the National Congress of American Indians (NCAI) was established in 1944 and is the oldest and largest national organization of American Indian and Alaska Native tribal governments; and

WHEREAS, tribal communities face significant obstacles to the deployment of broadband infrastructure, including high build-out costs, sparsely-populated areas, limited financial resources that deter investment by commercial providers, and a shortage of technically trained tribal members who can assist tribes in broadband deployment and broadband adoption planning in these areas; and

WHEREAS, decades of geographic isolation on tribal lands and related income disparity are real barriers that prohibit the adoption of broadband, quality of life enhancements, and deterrence of economic opportunities that are available to other Americans, which led to the adoption of the National Broadband Plan (NBP) by the Federal Communications Commission (FCC) in April of 2010, thereby affirming the sovereign rights of tribal governments to construct broadband networks, wireline and wireless, on tribal lands, and recommended that Congress establish a Tribal Broadband Fund to incentivize and support sustainable broadband deployment and acceptable broadband adoption levels on tribal lands; and

WHEREAS, the NBP acknowledges the low broadband penetration rate in tribal communities and states unequivocally that, “tribes need substantially greater financial support than is presently available to them, and accelerating tribal broadband deployment will require increased funding”; and

WHEREAS, the NCAI adopted previous Resolutions, RAP-10-006 and ABQ-10-061, calling upon Congress to create a Tribal Broadband Fund; and

WHEREAS, the FCC *Universal Service Fund/Intercarrier Compensation Transformation Order* (Order) is intended to spur wired and wireless broadband build-out to rural Americans; and

WHEREAS, the Order fails to provide sufficient and predictable support mechanisms for tribes or tribally-owned telecommunications providers to deploy, maintain and improve broadband communications infrastructure and to conduct maintenance, engineering and other related and necessary functions in tribal communities; and

WHEREAS, the adverse impacts of the Order have led to unfortunate results in which some tribes and tribally-owned telecommunications providers have had to halt plans to build-out broadband capable networks, cease upgrades on existing networks and reduce workforce; and

WHEREAS, tribes and tribally-owned telecommunications providers may not be eligible to participate in the FCC Tribal Mobility Fund, and future Mobility Fund, auctions because certain requirements for the Tribal Mobility Fund and Mobility Fund are too restrictive, thereby limiting support available to tribes and tribally-owned telecommunications providers for mobile voice and broadband services on tribal lands; and

WHEREAS, on June 6, 2013, the President announced the ConnectED initiative to bring high-speed broadband and wireless service to 99 percent of America's students within five years, and directs the FCC modernize and leverage funding for the Universal Service Fund E-Rate program.

NOW THEREFORE BE IT RESOLVED, that the promulgation of new regulations at the FCC requires an updated tribal telecommunications policy stance on these issues, and that NCAI urges the Congress, the FCC, and other relevant federal agencies to consult with tribal governments and tribally-owned and operated carriers regarding issues with access to spectrum, irrevocable letters of credit, Census block determinations, data produced in studies that illustrate inaccurate coverage on tribal lands, to ensure accurate mapping on tribal lands, or to consider waivers of certain requirements to increase tribal opportunities for participation in future Tribal Mobility Fund and Mobility Fund auctions; and

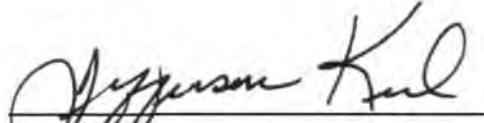
BE IT FURTHER RESOLVED, that the FCC must, 1) Establish alternative mechanisms so that tribes and tribally-owned telecommunications providers can participate fully in the Tribal Mobility Fund and Mobility Fund auctions, 2) Enhance current Lifeline programs to make broadband services more affordable to low-income households in tribal communities, and 3) To call upon the FCC, and relevant federal agencies participating in the President's ConnectED initiative, that the highest priority should be given to tribal schools and libraries, and any efforts to modernize the E-Rate program should not adversely affect funding levels for current and future tribal participation; and

BE IT FURTHER RESOLVED, that the Congress must support legislation to establish a Tribal Broadband Fund to support sustainable broadband deployment and acceptable broadband service adoption levels in tribal communities; and

BE IT FURTHER RESOLVED, that this resolution shall be the policy of NCAI until it is withdrawn or modified by subsequent resolution.

CERTIFICATION

The foregoing resolution was adopted by the General Assembly at the 2013 Midyear Session of the National Congress of American Indians, held at the Atlantis Casino from June 24 - 27, 2013 in Reno, Nevada with a quorum present.



President

ATTEST:



Recording Secretary

ALASKA FEDERATION OF NATIVES, INC.
2013 ANNUAL CONVENTION
RESOLUTION 13-31

- TITLE: ACCESSIBLE AND AFFORDABLE FIXED AND MOBILE BROADBAND
- WHEREAS: The Alaska Federation of Natives (AFN) is the largest statewide Native organization in Alaska and its membership includes 118 federally-recognized tribes, 133 village corporations, 13 regional corporations, and 11 regional nonprofit and tribal consortiums that contract and run federal and state programs; and
- WHEREAS: The mission of AFN is to enhance and promote the cultural, economic, and political voice of the entire Alaska Native community; and
- WHEREAS: Accessible and affordable fixed and mobile broadband is a significant driver of economic development with the potential for positive impact to nearly every challenge facing Alaska Tribes; and
- WHEREAS: Access to health care, education and social services increasingly relies on dependable broadband; and
- WHEREAS: Rural Alaska communities have some of the poorest broadband penetration rates in the nation and rely on relatively expensive, low-bandwidth access; and
- WHEREAS: Unique factors such as the Interior Alaska climate, terrain and remoteness, the cost to provide mobile and fixed broadband services per household are cost prohibitive or at a minimum, require substantial subsidization by state and federal funding programs; and
- WHEREAS: marginal availability continues to widen the 'digital divide' across Interior Alaska, resulting in fewer modern economic development opportunities, prolonged unemployment rates, socioeconomic instability, and a gradual out-migration and decline of Interior Alaska village-based populations; and
- WHEREAS: In November 2011, the Federal Communications Commission reformed the Universal Service Fund (USF) for high-cost rural areas by adopting new rules targeted toward improving efficiency of the program and implementing policies to incentivize and stimulate build-out and/or preserve rural telecommunications infrastructure; and

WHEREAS: High Cost Loop System (HCLS) reforms, adopted in April 2012, could ultimately lead to the degradation or elimination of services in those rural Alaska communities; and

WHEREAS: The 2011 FCC Transformation Order requires telecommunications providers that received USF support to meaningfully engage with the tribal governments to ensure open dialogue and communication.

NOW THEREFORE BE IT RESOLVED by the delegates to the 2013 Annual Convention of the Alaska Federation of Natives, that AFN recommends that the intent of the Universal Service Fund should be preserved and new reforms presented under the National Broadband Plan and subsequent Universal Services and Intercarrier Compensation Transformation Orders will ultimately drive advanced telecommunications investment and services into rural Interior Alaska.

BE IT FURTHER RESOLVED that this resolution shall be the policy of AFN until it is withdrawn or modified by subsequent resolution.

SUBMITTED BY: TANANA CHIEFS CONFERENCE

COMMITTEE ACTION: DO PASS

CONVENTION ACTION:

Subject: Communications Act Revision

Date: Thursday, January 9, 2014 at 11:32:14 PM Eastern Standard Time

From: Harold Hallikainen

To: CommActUpdate

I'd like to comment on a couple of the questions you've raised.

1. I believe the distinction between "information services" and "communications services" is arbitrary and unjustified. So called "information services" are in the communications business, but are using packet switched networks instead of circuit switched networks. Typical communications services are moving towards packet switched networks (and cellular telephone is already using packet switching on the radio link). Companies that move bits should face the same regulation.

2. "Auctioning of spectrum" is very convoluted under current law. I wrote an article on this many years ago with a suggestion that spectrum leases be auctioned. That article is available at http://louise.hallikainen.org/ijclp/ijclp_webdoc_6_5_2000.pdf .

I look forward to any comments and to seeing how this revision of the communications act goes.

Thanks!

Harold

--

FCC Rules Updated Daily at <http://www.hallikainen.com> - Advertising opportunities available!

Not sent from an iPhone.



January 30, 2014

Congressman Fred Upton
Chairman
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

Congressman Henry Waxman
Ranking Member
Committee on Energy and Commerce
2322A Rayburn House Office Building
Washington, D.C. 20515

Congressman Greg Walden
Chairman, Subcommittee on Communications
and Technology
2125 Rayburn House Office Building
Washington, D.C. 20515

Congresswoman Anna Eshoo
Ranking Member, , Subcommittee on
Communications and Technology
2322A Rayburn House Office Building
Washington, D.C. 20515

Dear Chairmen Upton and Walden and Ranking Members Waxman and Eshoo:

Health IT Now is a broad based coalition of patient groups, provider organizations, employers, and payers that support incentives to deploy health information technology to improve quality, health outcomes, and patient safety and to lower costs.

Health IT Now commends the Committee for addressing the need for a 21st century Communications Act. Considering the breadth and depth of new consumer technologies in the past two decades, such an update is overdue.

The convergence of medical advances, health IT, and a nation-wide broadband network are transforming the delivery of care, making it more accessible, affordable, and effective. We no longer live in an era where office visits are required – now patients can connect with healthcare providers virtually, leverage their smartphone or tablet for the latest health information or track their care plan using any number of broadband Internet enabled applications. Estimates indicate that the number of smartphone consumers using mobile medical apps will grow to 500 million by 2015. Furthermore, 62 percent of doctors are using tablets -- Apple iPads still being the favorite -- compared to only 35 percent a year ago.

Technology and healthcare have become permanently intertwined and mutually reliant as we move toward a technology enabled health system. This new paradigm makes your modernization effort critical to the future advancements of Health IT and the health care sector at large.

While communications law has remained rooted in the monopoly telephone era, the pace of converging communications capabilities with technology innovations has accelerated in all areas of the economy, creating tremendous potential in sectors like health IT. In order to transform our nation's healthcare system, we must leverage the latest technological innovations and tools and the foundation for achieving that is ensuring the laws that govern our advanced communications networks adequately reflect the technological landscape we live in. A modernized communications

framework will encourage innovation in new technologies, allow for network prioritization on both wired and wireless networks, provide flexibility for Internet service providers and health care providers to experiment with new business models, and incent investment in new broadband networks which are becoming the foundation of modern healthcare delivery.

Our members have testified to the Energy and Commerce Health Subcommittee on creating a new regulatory framework for health IT. Specifically, we have noted the lack of inter-agency coordination between the FCC, FTC, ONC and FDA as a regulatory burden and barrier to innovation and enhanced patient safety.

We believe any new framework should break down the silos that lead to a lack of coordination across agencies and regulatory requirements. These silos lead to confusion and uncertainty in the market, which inhibits investment and, ultimately, new technologies that benefit patients. We have suggested, specifically in the realm of health technologies, that a coordinated role for agency enforcement and jurisdiction is desirable. We believe ONC can play this role, particularly in mobile medical applications that increasingly rely on the Internet for data hosting and for running cloud based applications.

We also believe that, for low risk technologies, Congress could authorize the use of private, expert contractors with expertise in evaluating software as a way to promote greater flexibility in regulating new technologies that can change, via updates, on a daily basis.

Congress's willingness to begin the process of modernizing the Communications Act for the 21st century is extremely encouraging. With exciting new technologies permeating even more aspects of our lives, from healthcare to education, it is crucial that the pioneers of these advancements and the consumers who will benefit have an adaptable framework to foster success and prosperity. For patients and healthcare providers across the country, this bipartisan endeavor is the first step towards a system that will improve outcomes, save money, and bolster quality of life.

We look forward to working with the committee on this important initiative.

Sincerely

A handwritten signature in black ink, appearing to read "Joel White", written in a cursive style.

Joel White
Executive Director
Health IT Now



December 19, 2013
The Hon. Tom Wheeler
Chairman
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Re: Economic Evidence on Competition in Communications Markets and Implications for Key Policy Issues

Dear Chairman Wheeler,

We at Information Age Economics (IAE) offer our congratulations on your confirmation as Chairman of the Federal Communications Commission. We also appreciate the energetic tone that you have established and the optimism that you have generated in seeking the resolution of key issues before the Commission that will have major impacts on the future of the telecommunications-information-entertainment industry in the U.S.

However, in every respect except welcoming your appointment, we disagree with, and would like to draw your attention to the fundamental flaws in, the contents of the recent Economists' Letter of December 11, 2013 addressed to you in Docket WT 12-269 (*Policies Regarding Mobile Spectrum Holdings*)¹. The Letter is a compendium of misleading lobbying messages and propaganda of the largest U.S. operators that are pursuing a persistent strategy with the aim of achieving an essentially unregulated environment for their businesses. In pursuit of this goal, these operators ignore some verifiable facts ("errors" of omission) while they simply make up others ("errors" of commission) to support claims and arguments that fly in the face of real-world evidence.

We can identify major misrepresentations and flaws in the mix of unsupported assertions and claims advanced by these economists that can only be perceived as valid if verifiable facts are ignored. We now present a selection of their direct quotes with rebuttal comments and evidence that exposes why their positions are unjustified and should be rejected as an outcome of an honest, fact-based, transparent debate about the best way forward to ensure the healthy future of the

¹ <http://apps.fcc.gov/ecfs/document/view?id=7520961468>

² In the second footnote of their letter the economists state, "... as individuals we each reserve the right to use different wording or characterize particular points differently and, of course, to change our opinions on the basis of new facts which may present themselves in the future." We believe that they should change their opinions based on existing facts some of which we present in this letter.

³ Rewheel - especially the section "Debunking GSMA & ETNO claims (echoed by some



U.S. broadband market for the benefit of our economy and all members of our society.

This debate is long overdue.

The misrepresentations in the economists Letter² include:

1. “The Communications Sector Is Vigorously Competitive.”

Two other quotes in the economists Letter are especially relevant to this assertion:

1a. *“American wireless networks are unarguably the most advanced in the world, and more than 85 percent of U.S. households are passed by wireline networks capable of download speeds in excess of 100 Mbps. Competition in all of these markets is dynamic and intense. In many areas of the United States, less than one third of all households are still connected to the traditional wireline telephone infrastructure –i.e., the “natural monopoly” the FCC was created to regulate.⁴ Three of out of four households, on the other hand, have broadband Internet connections, which have been virtually exempt, up until now, from economic regulation.”*

1b. (in footnote 4) *“We acknowledge that there are pockets of the country where residents have limited choices in wireline broadband networks capable of achieving speeds in excess of 6 Mbps. But with the coming advances in wireless and satellite broadband services, the opportunity for any targeted exercise of market power is remote.”*

If the economists believe 1a then evidently they live on a different planet. There is ample evidence that in terms of performance, prices, and consequently usage of mobile data, the U.S., while not a laggard, is not the leader. Not only widely recognized leaders in Asia (notably South Korea that has a much higher current penetration of LTE than the U.S.), but also several European countries, can be shown to have superior wireless networks to those in the U.S.³ Furthermore, none of these other countries suffer from the anti-competitive effects of LTE non-interoperability, an unauthorized phenomenon initiated by AT&T and Verizon that will be confined to the U.S., Canada, a few Caribbean islands, and a couple of smaller Latin American countries (Nicaragua, Bolivia), but not the

² In the second footnote of their letter the economists state, “... as individuals we each reserve the right to use different wording or characterize particular points differently and, of course, to change our opinions on the basis of new facts which may present themselves in the future. “ We believe that they should change their opinions based on existing facts some of which we present in this letter.

³ Rewheel - especially the section “Debunking GSMA & ETNO claims (echoed by some Commission officials) that EU is falling behind the US,”

http://www.rewheel.fi/downloads/Rewheel_contribution_EP_ITRE_public_consultation_Nov_2013_Merged.pdf



larger ones such as Brazil, Argentina, Colombia, and even Mexico the southern neighbor of the U.S. As an illustrative example of the obfuscation or disregard of facts that characterize the representations of the largest U.S. operators, the trade association, the CTIA, which they dominate, persists in publishing a metric of spectrum efficiency that purports to demonstrate the superior efficiency of U.S. operators, even though this metric has been shown conclusively to be spurious. This fact has been brought to the attention of the CTIA, and of AT&T and Verizon, on several occasions over at least the past 18 months. They have paid no attention to demonstrations of the need for a different and credible metric of spectrum efficiency founded upon sound network engineering principles. They have continued to update the misleading values of their metric and present them to the FCC⁴.

As for 1b, the “pockets’ referred to dismissively by the economists include areas such as Boston proper, and Albany, Syracuse, and Buffalo in upstate New York, among others, where there is effectively a cable multiple system operator (MSO) monopoly for the supply of fixed broadband services at speeds above basic DSL levels. The economists notably make no mention of the sales and marketing agreements between Verizon and major cable MSOs that erode the idea that broadband competition will be assured through rivalry between powerful telephone and cable companies. Furthermore, the non-expert reader might easily be misled into thinking that wireless broadband is an effective and acceptable substitute for fixed broadband in the same way (as the economists point out) that wireless or mobile voice services are truly substitutes for fixed voice services. However, the inherent limits of shared wireless capacity make this impossible (wireless and fixed access broadband are more complementary to each other than substitutes) since their limited spectrum cannot deliver enough capacity, expressed as Mbps (megabits per second) per unit area, in order to meet the needs and demands of users in any but the less densely populated areas of the country. Wireless users experience degradation rapidly as the number of simultaneous users in the same cell increases. In other words, the presence of mobile operators in most areas does not provide competitive alternatives to a fixed broadband operator.

2. “...the communications sector has now converged so thoroughly with the rest of the Internet ecosystem that it has become difficult to draw clear boundaries.”

⁴ We have demonstrated for example that according to the CTIA metric China Mobile is more than three times as efficient as Verizon, a comparison that is (conveniently?) omitted from those that the CTA chooses to publish - see for example, Martyn Roetter and Alan Pearce, “The Mystery of the Spurious Spectrum Efficiency Metric: Why Are America’s Wireless Leaders Promoting a Meaningless Measure?” Bloomberg BNA Daily Report for Executives, May 31st, 2013. The latest update of the CTIA’s misleading metric of which we are aware is included in a June 2013 submission to the FCC in Docket WT 13-135 at <http://apps.fcc.gov/ecfs/document/view?id=7520920372> (the so-called flag chart on p. 67).



This statement is nonsensical! If accepted, which is the motivation behind it, then the legitimate idea that the development of Internet applications and services should not be subject to substantive, sector-specific regulation would be justifiably extended to cover and include the communications sector and network operators.

However, even a cursory examination of the Internet ecosystem reveals that the supply structure and constraints of network transport services, especially at the access level, are different from those of Internet applications and services. The one (network transport) is still an inherent oligopoly because the scarcity and limitations of key resources or inputs (such as the public resources of rights-of-way and spectrum, as well as space within buildings) and enormous capital intensity apply equally to digital broadband IP (Internet Protocol) networks (wireless and fiber-based) as they have to analog narrowband, circuit-switched copper-based access networks. In contrast other services and applications delivered over the Internet have been and remain a rich field for innovation and start-ups, characterized by a large number and diversity of participants. The barriers to entry for many of these opportunities are much lower than they are for the launch of a new network. In any generation a handful of these hopeful entrants may grow into world leaders in their respective and sometimes overlapping spheres, as Google, Amazon, Facebook and Twitter have done. We note also that the majority of valuable innovative network-dependent applications and services, from voice mail in the previous era of narrowband communications, to the services offered by Google, Apple, Facebook, Netflix, etc., have come from sources other than the small community of network operators⁵. These innovations have been able to flourish because third parties enjoyed access to networks that, thanks primarily to the actions of the FCC and the Department of Justice (DOJ) in the 1970s and 1980s, was guaranteed by regulation and was not under the control or subject to the “voluntary” discretion or commitments of the leading network operators.

Remember that the basis of today’s Internet was created outside the purview of these network operators and owes much of its success to the U.S. Government. Indeed, AT&T turned down the opportunity to take over the Internet’s technological predecessor the ARPAnet. The historical record, or the “real-world” experience cited by the economists, does not justify giving the largest network operators full discretion over the direction of the uses of their networks, such as would be the situation and their prerogative in the unregulated environment that they urgently seek to create.

The economists also ask a series of questions in their Letter as if the answers should be self-evident, *“Where does a content delivery network stop and the “telecommunications infrastructure” begin? What is a “telecommunications service” in a world in which more traffic travels over Skype and FaceTime than over the Public*

⁵ Traffic generated by these services constitutes the majority of today’s traffic over their networks from which operators drive their revenues.



Switched Telephone Network⁶? How much monopoly power does a wireless carrier have in a world in which consumers' choices are driven at least as much by devices, operating systems and applications ecosystems as by coverage and pricing plans?"

Their respective answers are presumably: (a) Impossible to tell, so telecommunications services should not be regulated since these other services (e.g., content delivery platform providers such as Akamai) are not; (b) Should not be classified as a telecommunications service subject to FCC regulation; and (c) None.

We offer the following alternative questions, *"If people are communicating with each other remotely by exchanging voice signals (real-time dialog or non-real time voice mail), text messages, and video images or moving video pictures, using a range of network technologies, does it matter for the purpose of defining a communications service, what transport technology is use? In other words, does the technology used to transport content make the difference between what is a communications service and what is not, or is it the content, purpose and role of the service that counts? Are the economists aware of the increasing prevalence of carrier-specific LTE devices in the U.S. market and the problems encountered by small operators in securing devices for their 700 MHz frequencies because of non-interoperability introduced into the 700 MHz band by the two largest operators AT&T and Verizon⁷ – and might these phenomena be indications of their duopoly power in the wireless world?"*

Our answers are that (a) The classification of a telecommunications service is independent of the technology platform over which it is delivered and remains distinguishable from other services delivered over or associated with the network, even if there are legitimate differences of opinion about where the boundaries lie, or should be drawn, and (b) The large wireless operators have substantial market power which they can - and do - assert in anti-competitive and customer-hostile actions and behavior.

We conclude that the economists are confusing convergence at the network layer (all forms of traffic are carried over the same network, a phenomenon of the broadband IP world in contrast to service-specific networks) with vertical convergence, in which the different layers in the OSI (Open Systems Interconnection) Model (Table 1) from physical media to services become so

⁶ Skype is now owned by Microsoft and FaceTime is Apple's video call application that can be used between users with Mac computers, iPads, iPhones, or iPod Touch devices over Wi-Fi connections or over cellular mobile broadband networks with iPhones or iPads.

⁷ The impact of 700 MHz non-interoperability – coupled with spectrum assignments that lead to globally unusual outcomes in the U.S. of one-carrier bands - in creating increasingly isolated customer silos based on carrier-specific devices will be extended very soon (in 2014) into other bands for LTE deployments. For example AT&T is about to introduce inter-band carrier aggregation technology between 700 MHz (its unique Band 17) and its AWS and PCS spectrum (both interoperable bands), and will do so later with its WCS (2.3 GHz) frequencies, a band that no other U.S. operator has in its portfolio.



intertwined with each other that it is not possible to distinguish meaningfully between them for the purposes of regulation or the analysis of business models.

Table 1: OSI Model

THE 7-LAYER MODEL	DATA UNIT	LAYER
HOST LAYERS	Data	<i>Application (network process to application)</i>
	Data	<i>Presentation (data representation and encryption)</i>
	Data	<i>Session (inter-host communication)</i>
	Segments	<i>Transport (end-to-end connection and reliability)</i>
NETWORK LAYERS	Packets	<i>Network (path determination and logical addressing (IP))</i>
	Frames	<i>Data Link (physical addressing)</i>
	Bits	<i>Physical (media, signal and binary transmission)</i>

Just because network operators also offer higher level services and some networks are being deployed by non-traditional operators (i.e., examples of vertical integration) does not mean that there are no reasonable and sensible distinctions that can, and indeed must, be drawn between facilities-based transport services and other major parts of the Internet ecosystem.

There are legitimate questions and differences of opinion about where and how best to draw these distinctions, but the extreme proposition that there are no distinctions that are feasible or justifiable is an abdication of responsibility and common sense. One logical but ridiculous extension of the economists’ characterization of the Internet ecosystem is that the cultures and priorities of companies as diverse as AT&T and Verizon on one hand, and Google, Twitter, and Apple on the other, are so similar that there should be no distinction between the ways in which they are perceived and treated by the FCC and DOJ, as well as the Federal Trade Commission (FTC).

5. “POTS-style Interconnection Regulation Should Not Be Imposed on IP Networks.”

We agree that the specifics of interconnection regulation should take account of network technologies. Yet concerns about the fairness of interconnection agreements between entities of vastly different sizes, and the consequences of interconnection for competition, are as relevant in the Internet era, if not more so,



given the description of the Internet as a network of networks, as they have been in the previous era of circuit-switched telephony. The economists find the idea of any mandatory aspect of IP interconnection to be abhorrent and to open the door to involvement by foreign regulators, who are allegedly naturally inclined to favor mandates. It is easy to paint a horror scenario of incompetent regulators imposing innovation-stifling interconnection rules, and setting inappropriate prices. It is also possible to paint an equally terrible scenario of major operators imposing outrageous prices, i.e., costs, on some other operators and services providers in a discriminatory and innovation-inhibiting fashion. Real world examples of this behavior can be found in the wholesale roaming charges, levied by the largest U.S. wireless operators on some of their roaming partners, as well as by several of their European and other foreign counterparts with respect to international roaming.

The issue of IP interconnection deserves and requires serious attention. In this context, there are legitimate questions, and differences of opinion, about how, and to what extent, IP interconnection should be regulated. Nonetheless, the idea that IP Interconnection should be left up to the discretion of the largest operators, or their “voluntary” commitments, is naïve and unrealistic. It ignores these operators’ DNA and their long pattern of anti-competitive behavior in the real world, whenever it lies in their financial interest.

6. “The Commission Should Continue to Expand the Role of Markets in Allocating Spectrum.”

While the economists do not make this point explicitly, their use of language in favor of a greater role for “markets” in allocating spectrum is typical of the largest wireless operators when they argue that they should be allowed to acquire as much spectrum as they want thanks to their enormous financial resources. They assert that under no circumstances will unrestricted spectrum aggregation have an adverse impact on competition in the wireless sector. This assertion disregards the laws of physics (electromagnetic propagation) that both limit the capacity that can be delivered by a given amount of scarce bandwidth, and entail substantial variations in the costs of coverage of rural areas as a function of the frequency band(s) in which an operator is able to deploy its networks. In other words, if some operators are unable to obtain a reasonable portfolio of frequencies (in quantity and across low and high bands) then, due to that circumstance alone, regardless of any other possibly superior merits and capabilities, they will be unable to compete.

Many regulators across the world recognize this inescapable reality. The laws of physics apply everywhere. Hence these regulators strive to achieve outcomes in which no one or two operators hold disproportionately large quantities of bandwidth overall and/or dominate the critical sub 1 GHz region in which spectrum is less abundant or more scarce than it is in high bands.

It is also noteworthy that the largest U.S. operators are happy to claim that their



performance is superior to that of foreign operators, allegedly because the latter labor under stricter (i.e., more effective) regulation. But they are also quick to dismiss or disparage any unfavorable comparisons between the U.S. and foreign countries on the grounds that these comparisons are either based on merely “anecdotal” information, or that conditions in the U.S. are so different from other countries that the comparisons are irrelevant or unfair.

7. “The Internet Should Not Become a “Regulated Industry”.”

We agree with this sentiment and recommendation, but as explained above under Quote 1, this is neither the intent nor the inevitable consequence of ensuring intelligent, effective regulation of the communications sector. To the contrary, innovative competition at the level of Internet applications and services – that benefits from there being no or only minimal regulation of the Internet at these levels – will be threatened if there is no effective regulation of the communications sector, while it will be protected and preserved if there is regulation.

Absent regulation, network operators of bottleneck access facilities will be in a powerful position, and will have powerful motivation, especially but not solely because they are vertically integrated, to manage the conditions of third parties’ usage of, or even access to, their networks in ways that reflect their own interests. They will do so even when these interests conflict with those of other stakeholders, including customers and other non-facilities-based providers of services. Indeed, it may be argued that, as for profit companies, network operators have a fiduciary responsibility to act in this manner on behalf of their shareholders, even if their actions should also be influenced by their roles as stewards of significant public resources, such as spectrum and access to rights-of-way, while they are in addition subject to public interest obligations included in the franchises they have been awarded that accompany the rights thereby granted to them. Therefore, these conflicts of interest must be “refereed” by a regulatory body such as the FCC, which is legislatively required to promote policies that are in the public interest.

8. Vertical Practices Should Be Addressed on a Case-by-Case Basis

The economists argue that, *“The Open Internet Order applies an ex ante approach to the regulation of vertical conduct by effectively prohibiting priority delivery arrangements. A better approach would be to permit new forms of contracting, and to police any abuses after the fact.”*

The problem with this approach lies in the proven observation that, “Justice delayed is often justice denied.” In the real world, it can take years for abuses of power to be corrected and, as the economists rightly note, communications technologies and markets are evolving rapidly. By the time regulators and the legal system can respond to a potential abuse, irrevocable damage has been done and new opportunities for abuse have arisen.



The devil or hopefully the genius of *ex ante* approaches lies in their construction. It is neither the purpose nor the place in this submission to present an exhaustive review or recommendations about how an Open Internet Order should be constructed or modified. However, this can be done in several ways (for example not necessarily prohibiting all priority delivery arrangements) that avoid the perils of trying to micromanage allowable conduct, and thereby possibly frustrating initiatives that improve consumer welfare, while still also laying the basis for preventing harmful abuses of power. We are aware of examples of approaches in this context in some foreign jurisdictions that may provide useful insights for the U.S. By arguing that there should be no *ex ante* restrictions on the actions and behavior of the largest U.S. operators, the largest operators and their supporters, such as the economists who signed the Letter, are in effect arguing that the Government should pick them – the current winners – as the future winners.

We agree that it is neither the job nor within the competence of Government to pick some companies as winners over others. It is, however, within the Government's purview to create and sustain an environment in which new winners can emerge while some of today's winners may decline or even disappear. This flow and ebb of companies in the U.S. has been one of its strengths and sources of innovations that have, in multiple instances, truly led the world. Effective and intelligent regulation of the communications sector is an essential contributor to sustaining this competitive, pro-innovation environment.

The need and opportunity for revising and reformulating regulations originally promulgated in, and for, a different technological and market environment to be more intelligent and suited to the broadband IP era, is self-evident. But the answer or desirable outcome does not reside, as the economists advocate, in the abandonment of existing regulations with, for all practical purposes, no effective replacement.

Respectfully,

Alan Pearce, Ph.D



and

Martyn Roetter, D. Phil.



PRACTITIONER CONTRIBUTIONS

November 7, 2012

Telecom Act Rewrite Is Needed to Return Real Competition to Broadband Sector, *By Alan Pearce, Martyn Roetter and Barry Goodstadt*

The authors are independent management consultants. Alan Pearce, Ph.D. (IAEpearce@aol.com) a former chief economist of the FCC helped launch an FCC investigation of Western Electric and the Bell System in 1972 that led to the antitrust suit that broke up AT&T in 1984. In 2004, Pearce assisted Cingular Wireless in its record \$41 billion acquisition of AT&T Wireless.

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The approval this past summer of an integrated set of partnering arrangements (in effect a cartel) between Verizon and four major cable operators, who had been major competitors and have suddenly become collaborators, signaled the beginning of the end of sustainable, effective competition in the U.S. broadband market. This outcome may soon create dire consequences for the public interest, for the U.S. economy, and for customers in their personal, social, and business contexts.

The historically regulated telecommunications-information-entertainment sector has failed to check the march of the largest network operators (LNOs) towards removing all substantial constraints on their ability to do whatever they please in their own interests. In fact, the largest operators appear to act as non-regulated entities, without regard to impacts on the choices and rights of consumers. Furthermore, these large operators have disregarded the freedom and fairness of access of their competitors to large bases of customers by controlling access to broadband bottleneck facilities.

The precipitous decline in broadband competition has been caused in part by flawed interpretation and enforcement of the current legal regime established by the 1996 Telecommunications Act. A further substantial factor involves the '96 Act's failure to anticipate major changes in technology that have made the competitive model employed by the Act outdated.

In order to ensure that effective competition does not disappear from the U.S. broadband market, other influential economic players, such as Internet and Web companies along with major businesses, must ally with public interest groups to counter the well-financed lobbying efforts of the largest operators. LNOs' efforts that seek to weaken the Federal Communications Commission's (FCC) ability to exercise a strong pro-competitive influence over their priorities and decisions must be curtailed by this alliance. The ultimate aim of such a coalition of internet companies, web companies, and major businesses should be the passage of a new Federal Telecommunications Act. This Act should re-affirm the traditional principles and goals that made the U.S. an admired world leader and pioneer throughout most of the 20th century. In particular, this new Telecommunications Act needs to support the principle that network services and applications should be universal, ubiquitous, interoperable, and available and affordable to everyone on an equal and non-discriminatory basis.

The new Act should establish a well-resourced regulatory structure that is adapted to the era of digital broadband converged networks. This structure should be focused on ensuring competition at the level of services and applications independent of the transport technologies exploited to deliver them. It should be robust and not easily made obsolete in the face of significant changes in the technological environment which are inevitable and often unpredictable.

'Free' Markets Versus Fair and Open Markets

Broadband is universally acknowledged to be a key component of the nation's 21st century telecommunications-information-entertainment (T-I-E) infrastructure. Affordable, widespread and powerful broadband services support a healthy economy, generate new opportunities for employment, and enable the efficient delivery of a wide range of critical services, from health care and education, to public safety and social welfare. It is also widely accepted that effective competitive markets are the best means to ensure that broadband services will be available to all at affordable and attractive prices thanks to the stimulus provided by vigorous new entrants who offer imaginative, innovative services and applications.

It is disturbing to witness the largest operators' attempts to eliminate competitive forces in the name of an extreme "free market" ideology that labels virtually any regulation oppressive and outdated. Their version of the "free market" is highly asymmetric. It means complete freedom of action for them to take advantage of their limited "bottleneck facilities."

This anti-competitive movement has been steadily gaining ground since the turn of this century. It has achieved notable successes, most recently in the creation of a cartel between the leading telephone company, Verizon, and four of its major competitors in the cable TV sector. Reversing this trend will require coordination and cooperation among other influential stake-holders, both in the telecommunications sector itself and outside, that have been quiescent or ineffectual until now. These stakeholders must now marshal convincing, comprehensive and cohesive, fact-based evidence for U.S. lawmakers and policymakers to refute the misleading claims from the LNOs.

The '96 Act is Outdated and Unenforced

The 1996 Telecommunications Act was a rare example of bipartisan legislative reform during the Democratic Clinton Administration. Indeed, one of its principal authors was then-Sen. Larry Pressler, a Republican. The goal of the law, as stated in its first paragraph, was to "let anyone enter any communications business—to let any communications business compete in any market against any other." The Act sought to foster competition between companies that use similar underlying network technologies, e.g., circuit-switched telephone networks, to provide a single category of service, e.g., voice. Thus the Act created separate regulatory regimes for carriers providing voice telephone service and providers of cable television, and a third for information services. The aim of the regulatory structure that was established was to foster intra-modal competition within each of these three regimes. The Act did not anticipate the inter-modal competition that has subsequently developed, such as the competition between: (1) mobile voice and fixed voice services; (2) VoIP (Voice over Internet Protocol) and traditional voice service (both fixed and mobile), and (3) Broadband services over telephone company facilities and broadband services delivered via cable TV modems.

Since 1996, there have been two major changes in the regulatory structure foreseen in the Act. First, provisions for intra-modal competition based on so-called "unbundling" of monopoly telephone company access networks to make them available to other services providers in a wholesale regime have been removed by the FCC. The change was justified on the grounds that competition was about to thrive through inter-modal competition, most notably that between telephone companies and cable TV companies. Since cable operators, unlike telephone companies, were not subject to unbundling obligations it was seen as illogical and unfair to continue to impose obligations on one group of companies but not on another in a market where they had become direct competitors. However, approval of the extensive partnering arrangements between Verizon and four major cable operators is now putting the basis of this intermodal competition in peril. In the absence of effective competition of either an intra- or inter-modal type there can be no effective competition in the U.S. broadband market.

The second critical change since 1996 was the FCC's premature decision in 2005 to categorize "broadband" as an "information" service, thus effectively removing it from any regulatory obligations, such as those to which the major providers of telecommunications services have been subject ever since the original Communications Act of 1934. It was AT&T's abuses of its regulatory obligations under this earlier Act that led to its divestiture in 1984, specifically for the purpose of upholding the principle of effective competition by restructuring the market and establishing rules to prevent large players from abusing their market power in anti-competitive and customer-hostile ways.

Today the inexorable and already well-advanced trend in telecommunications is toward integrated networks in which ALL forms and modes of traffic—from very narrowband text to narrowband voice to broadband video, image and "Big Data" files—are carried over the same broadband infrastructure. In light of this trend, it makes no sense to try to regulate some traditional telecommunications services while broadband access services are unregulated.

If the 1996 Telecommunications Act had been properly implemented to adhere to its pro-competitive intent in both letter and spirit then:

- Broadband would never have been declared as unregulated (FCC Decision of 2005);
- Cable modem services and capacity and fiber local loops would be subject to a wholesale regime;
- Interoperability of wireless broadband devices and applications would be mandated and enforced;
- The United States would take the lead in maximizing the amount of internationally harmonized spectrum, instead of acting as a "rogue" nation with the most disharmonious structure of spectrum for mobile broadband of any major market;
- Financial penalties for anti-competitive behavior by major operators would amount to a sizable proportion of their profits with a corresponding effect on their stock price and the compensation of their senior executives; and
- Operators would not be allowed to include and enforce clauses in their contracts with customers that, in the event of a dispute, only allow them to submit to arbitration or go to small claims court to obtain compensation.

The U.S. Market Is Falling Behind

There are at this point two fundamentally different views of the U.S. broadband market. The first asserts that the U.S. broadband market is effectively competitive. If this were true, then only minimal regulation would be required; competitive forces, would ensure that the public interest and access to customers of smaller often more innovative competitors—including new entrants—would be well served.

The alternative view is that the U.S. broadband market is not truly competitive and is becoming less so. Supporting this latter view is data showing that the United States has been falling behind other countries in terms of the capabilities of the services available to and the prices paid by customers.

In either of these scenarios it is clear that the 1996 Telecommunications Act has become outdated. The Act is no longer credible as a policy and as a legal and regulatory structure on which the FCC can base its regulatory decisions. Even in the illusory first scenario of allegedly effective broadband competition, the Act should be gutted in favor of a new version that would ratify the current status quo. In the second scenario of ineffective and decreasing broadband competition, of course, a new Act must be enacted to restore healthy competition.

A guiding tenet in the formulation and evaluation of such a new structure is that there has been until now, and must and should be in future, a substantially greater number of competitors at the level of services than the number of operators of broadband networks upon which all these competitors depend for access to customers. These services providers include the network operators themselves, unless as in some countries it is decided to exclude them from services markets other than transport. It is important to keep in mind that the vast majority of new services and applications delivered over networks, from voicemail to web services, have originated outside the network sector itself. Hence

it is vitally important, as a matter of national economic and societal interest, to ensure that services providers and innovators with no connections to network operators are not unfairly inhibited in their access to, and use of, the latter's broadband facilities. A new Act would have to establish a regulatory structure that stimulates and sustains intra-modal or/and inter-modal competition in the provision of network or transport services to meet and enforce this condition.

How the Verizon/Cable Cartel Slipped Past Regulators

The approval of the Commercial Agreements (CA) and Joint Operating Entity (JOE) between Verizon and four cable giants (Comcast/NBC-Universal, Time Warner, Bright House & Cox) with minor, ineffective conditions was due in significant measure to the failure of opponents in the industry to coordinate their arguments and present a fully "dots connected" set of arguments and evidence that laid out clearly and unequivocally the long term, as well as the imminent harm, to broadband in the United States that will ensue from their implementation. Opponents also failed to present alternative approaches to market structure and regulation that can produce better outcomes for U.S. customers, help reinvigorate the U.S. economy, and sustain the competitive health of the U.S. broadband market.

Each opposing interest group—other mobile operators, other fixed telephone companies, satellite services providers, over-the-top (OTT) players (third party services suppliers who depend on broadband facilities to reach their customers)—tended to focus on its own specific and often short-term concerns. Each group ignored the overlaps and intimate connections with other affected interests that underlie forward-looking, cohesive, comprehensive and irrefutable arguments in opposition to Verizon and its cable TV allies. The result was that neither the FCC nor the Justice Department (DOJ) were presented with convincing evidence from third parties that they could rely on to justify rejection of the transactions.

In contrast, Verizon and its allies were able to pursue an approach of "divide and conquer." This approach became most visible in their success at persuading one of their key opponents, T-Mobile USA, to change its position and support the transactions (abandoning its allies in the Alliance for Broadband Competition a mere six weeks after its formation) once it was offered additional spectrum that it needed as part of the overall set of deals which Verizon was orchestrating.

The FCC and DOJ ultimately received ineffective rebuttals from the organizations with the most to lose in the face of relentlessly repeated claims by Verizon and its allies about the benefits that would flow from the transactions, as well as Verizon's urgent need for access to the spectrum assets involved. These claims were largely unsupported and often were internally contradicted by other evidence from Verizon itself.

One of the most egregious claims was Verizon's assertion that its alleged superior spectrum efficiency would mean that it soon would exhaust all available means to exploit its existing spectrum to meet rapidly rising demand for network capacity. The metric used to support this claim was spurious, as we showed in a May 2012 [filing](#) to the FCC that Verizon never attempted to rebut. Moreover if this metric were valid Verizon would be less than one-third as efficient in its use of spectrum as China Mobile, a calculation that was also submitted to the FCC and ignored by Verizon.

A second statement, belied by Verizon's own marketing material and plans for new product development, concerned the alleged independence of Verizon's wireless services from its wireline operations. This was asserted in order to support the proposition that the set of spectrum and commercial arrangements between Verizon and the cable TV operators were separate transactions and not complementary aspects of an integrated strategy. But there is such a strategy, which involves cooperation between major competitors in both wireless and wired broadband markets and in developing integrated wireline and wireless services. Such conduct raises obvious and legitimate concerns about antitrust violations.

Ironically, because there is widespread agreement that U.S. broadband performance is lagging (see the National Broadband Plan Report), and that spectrum availability in particular is a major concern, a loud, consistent call to action, however unfounded, is likely to win against incoherent and divided opposition. So, the very problems that Verizon and its allies have caused help them to drown out a fragmented set of objections to their transactions. Verizon's opponents did not present a convincing or cohesive positive alternative beyond either "just say no" or a range of proposals for conditions for approval that were uncoordinated and only addressed the specific, self-serving individual interests of each opponent.

The Cartel Will Finish Off Broadband Competition

There are two bases of competition to support the goals of the 1996 Act: (i) Intra-modal competition, which has already been eliminated by the removal of unbundling or wholesale access obligations on the telecommunications companies in 2005, and (ii) Inter-modal competition, between telecommunications companies and cable TV operators, which will be eliminated by their collaboration now that these transactions have been approved by the DOJ and the FCC subject only to ineffectual conditions.

The conditions imposed for approval of the Verizon/Cable transactions are supposed to ensure that they will not lead to any significant harm to broadband competition. But in the real world it is certain that the conditions will be ineffective. For example, one of the key conditions for approval of the Verizon/Cable transactions is the sunset clause on the parties' development joint venture (JOE). The JOE will be shut down after 2016, unless the parties request and receive permission for its continuation, under conditions which are not now clearly established. But it will be easy for JOE members to launch development initiatives whose schedules will extend beyond 2016 and then claim it is unfair and too costly and harmful to innovation to shut these programs down prematurely. Even if the JOE ceases to exist after 2016 the parties will have had ample time to introduce new proprietary standards, technologies and products, available ONLY to their members and so will be able to build high walls around their customer bases. These technologies will be exploited by the JOE members to exclude other innovators from reaching their customers, which these third parties can only do over the access networks that the JOE members operate.

These broadband access networks are today essentially unregulated. They are therefore not subject to any effective supervision regarding the conditions under which competitors of the JOE members may connect to them, as they must, in order to communicate with customers who depend on them for access to the Internet and other online services.

The approval of the Verizon/Cable transactions, with ineffective conditions, is tantamount to giving the green light to cartels. Approval of this cartel creates a precedent that will make it impossible to stop other major players with the greatest market power, most notably AT&T, from forming their own cartels.

The threat to effective competition posed by the cartel is not a distant prospect but an immediate consequence. There are already duopolies (combined market shares of 90 percent) of one telecommunications company and one cable operator for the supply of fixed broadband services to U.S. customers. A significant number of these duopolies involve Verizon and one of its four proposed cable TV partners, while others involve AT&T and a cable operator, and CenturyLink or another local telephone company franchise and a cable operator.

Monopolies of cable operators—most notably Comcast and Time Warner Cable—in the provision of broadband services at speeds above the basic levels of which DSL is capable, already exist in areas where Verizon has decided not to deploy FIOS and AT&T has decided not to deploy U-Verse. In these areas, as well as most of the areas served by other telephone companies, competition with the cable operators' broadband services is ONLY slower DSL, which has been characterized as "obsolete" by the CEO of AT&T. Absent a major rapid program of expansion of fiber-to-the-home deployments, which none of these telephone companies is planning, it is likely that over half of U.S. households (depending on the source, the United States currently contains between 120-130 million households) will only have one source for broadband access even at the global average fixed broadband speed, let alone at higher speeds. Cisco's Visual Networking Index (VNI) Forecast (2011-2016) predicts that this average speed will increase from 9 Mbps in 2011 to 34 Mbps in 2016 whereas DSL can only support 3-6 Mbps depending on the length of the copper pair from the DSL multiplexer or in the case of U-verse up to 12 Mbps (or 24 Mbps if the customer does not subscribe to a bundle that includes U-verse TV service) thanks to its mix of fiber-to-the-node with short copper extensions to users' locations.

Among the existing cable monopolies for broadband speeds above basic or DSL speeds are cities such as Boston, Baltimore, Albany, Syracuse, and Buffalo, including affluent as well as low-income neighborhoods. Now that the CAs and JOE have been approved, Verizon will not expand its FIOS coverage further in order to establish even a duopoly market for high speed broadband. If AT&T chooses to establish similar arrangements with cable MSOs, the coverage of these two cartels will cover an array of markets that include the majority of U.S. households. The FCC's recently released [Eighth Broadband Progress Report](#) reported that fewer than 20 percent of U.S. households are passed by fiber access facilities.

Hence, absent major investment programs in new fiber deployments that, as of November 2012, are nowhere in sight, about 80 percent of U.S. households will soon find themselves in a monopoly supply situation for broadband services at speeds above a basic and increasingly inadequate level.

In light of this analysis, whose findings are easily verifiable, the complaints and pressure from the LNOs to oblige the FCC to declare the broadband market as "effectively competitive" cannot be justified. It is vitally important that the FCC receive inputs and information from as many sources as possible about the true state of broadband in the United States, including comparisons and benchmarking with other developed economies, to refute the misleading and inaccurate statements and claims of the leading U.S. operators about their achievements and the allegedly superior price/performance of broadband services in the United States.

The reverberations and harm resulting from the elimination of competition in the U.S. broadband market will be felt throughout the entire U.S. economy. The new cartel, or cartels combining a major U.S. telecommunications company and cable TV companies will be free to act as unassailable gatekeepers in the effectively unregulated broadband market to choose unilaterally which applications and services are to be made available to U.S. customers (residences and businesses) and under what terms, timing, conditions, pricing and performance. The members of the cartel will be able to set prices at their sole discretion and as unregulated entities implement traffic management schemes that favor their own services or the services of their preferred partners over those of direct competitors who depend unavoidably on their broadband facilities to reach customers.

This situation will be harmful for U.S. innovation. In their own interest, the gatekeepers will control and restrict opportunities for companies such as those in Silicon Valley and other centers of U.S. entrepreneurship, as well as frustrate the legitimate business ambitions and goals of other network operators outside the cartels, who will have no recourse against their actions.

No Competition Without Interoperability

Broadband platforms represent the future of all telecommunications-information-entertainment services and applications for the foreseeable future (including voice, data and video services). It is therefore critical that broadband remain a competitive, rather than a duopoly or even worse a monopoly/cartelized service. Interoperability is a key characteristic of telecommunications services and networks, if they are to promote effective competition. The principle of interoperability that is embedded in the traditional fabric of U.S. telecommunications is that everyone should be able to use whatever terminal device they wish and enjoy access to whatever services, applications and content they are interested in, subject to minimum constraints imposed by considerations of safety, disruption to the interests of others, and the prevention of illegal activities.

Many legitimate interests are involved in sustaining this principle, including network operators, multiple small and large services providers and applications developers, content owners, and equipment and device suppliers, as well as (last and definitely not least) all of us as consumers. It is therefore unacceptable and profoundly dangerous for any one interest or set of interests to be able to decide unilaterally what constitutes and justifies limits on interoperability and what does not. Yet that is precisely the situation that has arisen in the mobile broadband arena, where AT&T and Verizon have decided and continue to argue on technical grounds in favor of the need for and even the value of non-interoperability between them and other wireless networks in the very important 700 MHz or "digital dividend" band which they dominate.

In the wireless arena claims of "interference" are frequently little more than a cover for attempts to shut out competition. Interference is a fact of life for wireless systems that does need to be managed efficiently in the best and balanced interest of all stakeholders. But the solutions proposed should be formulated and assessed objectively and openly, not imposed by one party with a strong vested interest in a specific outcome that, as in the 700 MHz band, is harmful to its competitors and even in the long run to its own customers.

Non-interoperability is one of the conditions that monopolies or duopolies can exploit to establish and continue to reinforce their anti-competitive hold over the market and customers. Non-interoperability of devices between networks enables operators to create high switching costs to inhibit customers who may wish to choose another provider but then find—in contrast for example to PC users who have been able to connect to multiple networks with the same standardized Ethernet interface—that they have to acquire new devices in order to make the switch.

Establishing non-interoperability is an especially powerful tactic to reinforce the stranglehold of the largest wireless operators over the wireless or mobile broadband market. All wireless operators rely on critical fixed facilities largely supplied by the companies that own the two largest wireless players, Verizon Wireless and AT&T Mobility, with the cable operators (Verizon's new partners) also becoming more important factors with their fixed assets. All other wireless competitors depend on their larger competitors' cooperation to survive and compete effectively, a situation recognized in antitrust law as ripe for potential abuse. The creation of a cartel between owners of facilities that are essential for cartel-members' competitors will broaden the scope of this abuse. This trend will be exacerbated by the emerging addition of Wi-Fi facilities and Wi-Fi-equipped sites to the roster of essential facilities for mobile operators, which need to offload their rapidly growing data traffic in the most congested areas. Next generation carrier Wi-Fi, which the members of the Verizon/Cable cartel are involved in developing, will expand the importance of Wi-Fi even further.

Abuse of their bottleneck power over critical facilities by members of the Verizon/Cable cartel, added to the non-interoperability barriers they are erecting around their customer bases will harm the quality and capabilities of the services that customers of competing wireless operators will experience. This will drive customers into the embrace of the LNOs, even if they are reluctant to switch. The power of the largest operators to increase prices and impose restrictive contractual conditions on consumers with impunity will be increased.

Balanced Pro-Competitive Approaches to Broadband

Other countries and economies, from France and Sweden in Europe, New Zealand and South Korea in Asia-Oceania, and Brazil and Chile in South America, are tackling broadband issues with a more even set of checks and balances among all the participants (such as network operators, third party services providers, regulators and other government agencies, and consumers). These approaches are in sharp contrast to the unilateral power of the emerging anti-competitive cartel of a handful of large operators that is gaining dominance in the United States. These other countries seem to be more aware than the United States of the necessary foundations for effective competition (facilities-based and/or wholesale) in broadband. They have not fallen into the trap of regarding broadband as an effectively competitive "information services" market that should therefore be deregulated, as if it is a distinctly different market from telecommunications. By any standard of logic and commonsense it is not different, since all telecommunications services from narrowband voice and texts to broadband video and "Big Data" are increasingly and eventually will be entirely delivered over broadband channels.

Broadband is not different or distinct from telecommunications. Basic broadband has become the basis and lifeblood of early 21st century telecommunications, and higher speed broadband will become its basis over the next ten years. The extent and urgency of the problem created by AT&T's and Verizon's introduction of non-interoperability into the U.S. mobile broadband market is highlighted by the conservative estimate that by the end of 2012 there will be at least 30 million non-interoperable mobile broadband devices in service in the United States, fueled by the recent launch of non-interoperable, i.e. operator-specific models of Apple's iPhone 5.

While the circumstances and traditions of the United States preclude its replication of a broadband model of governance, regulation and competition in exactly the same forms adopted in other countries, the principle of checks and balances and countervailing power that is being applied in many of them in different forms is one that should be reaffirmed in the United States. The notion that unregulated and unbridled LNOs should be exempted from effective regulation must be rejected. Checks and balances are profoundly and historically even exceptionally American in spirit and practice. Their effective presence must be one of the core criteria against which proposed broadband policies and regulations should be judged.

No Effective Competition Without Regulation

Regulation can be pro-competitive, as was proved in the late 20th century when the internet emerged. Furthermore, the absence of, or freedom from, regulation creates the environment that leads to monopolies and cartels. The kind of deregulation or no regulation espoused by LNOs in the United States, i.e., affording them the freedom to act in any way they choose, will have the effect of stifling innovation and competition and harming U.S. customers. The foundations of U.S. telecommunications policy, which espouse the virtue and value of affordable access to networks for all Americans and the benefits of effectively competitive markets to achieve and sustain this goal are being systematically and determinedly undermined by the short sighted and selfish strategies and aggressive lobbying of the most powerful U.S. operators, in particular Verizon, AT&T, and Comcast.

Most outrageously, Verizon is now in federal court (Verizon v. FCC, D.C. Cir., No. #11-1355) invoking the First (speech rights) and Fifth Amendments ("... nor shall private property be taken for public use, without just compensation") to justify a completely unregulated status for its business, free of any public interest obligations. In this status it will be able to pursue the objectives of maximizing market share and profits in the United States with an agenda that has nothing to do with the goals and ideals embodied in the 1934 and 1996 Communications Acts. These ideals and their implementation in practice made the United States the envy of the world and an undisputed global leader in telecommunications throughout most of the 20th century.

The policies promulgated by these LNOs and their political and ideological supporters are not forward-looking in a 21st century context as they like to proclaim by dismissing the principles and practices of regulation they have been trying to dismantle as so "20th century." To the contrary, they seek to revert to a more distant past with visions and recommendations favoring unregulated and untrammelled oligopolies that are reminiscent of the 19th century.

Telecom is Too Important to Leave to Network Operators

The fragmented responses of the traditional telecommunications sector to the proposed creation of a cartel between Verizon and four cable operators gave insufficient ammunition to the FCC and DOJ to reject it. They have to be augmented by actions from other powerful forces in the U.S. economy. These forces must realize that the imminent concentration of bottleneck power over broadband in the hands of a few major operators is profoundly inimical not only to the broad economy and the public interest but also to their own business prospects.

The remarkable surge of internet- and web-related innovation in applications and services and the world-beating U.S.-based companies that have been able to flourish—from Google and Facebook to Apple and eBay—would not have been possible without the pro-competitive regulations introduced from the 1970s into the 1990s that broke up earlier long-established network monopolies in the U.S. telecommunications sector. Moreover, those earlier telecommunications monopolies were under legislatively mandated and regulated public obligations in exchange for their protected monopoly status. In contrast, today's emerging oligopolies deny that they should have any such obligations on the basis of an extreme form of a "free market" ideology, i.e., freedom for them, even at the expense of freedom of choice for customers and freedom of access for other competitors. According to this theory, either miraculously or through some "invisible" law of nature, the decisions of these oligopolies or cartels will always be consistent with the public interest. In other words, what's good for Verizon (or AT&T or Comcast) can only be good for the United States.

The open, interoperable Internet first developed as an outcome of a productive combination of initial government support and private entrepreneurial initiatives. The development of the fundamental technology of packet switching was funded by the Department of Defense, while the first browser emerged from CERN, the Swiss-based multi-government funded consortium European Organization for Nuclear Research or Organisation Européenne pour la Recherche Nucléaire. These developments, among others, were then exploited commercially by entrepreneurial organizations, primarily by U.S.-based companies, with a few exceptions (e.g. Skype).

The large U.S. network operators followed only later. Fortunately they were not in a position to impede the flourishing of the Internet thanks to a series of decisions by regulators and the courts to make sure that large established network operators could not exert and assert unilateral or unchallengeable bottleneck control over the innovative devices, applications, and services that the Internet delivers to customers from many sources.

The Internet has been a marvelous vehicle for the application of true free market principles that have allowed a plethora of new firms to succeed, whose origins lie both within, and for the most spectacular of them, outside the traditional sphere of telecommunications. It is time for these companies, some of which have become world-renowned household names to come to the defense of the principles and practices of the open Internet in the new broadband era for all network access technologies, wireless and wired (copper and fiber).

Large U.S.-based businesses constitute another potentially influential, albeit disparate group of companies that has so far been quiescent in debates about the future of broadband, and the danger of allowing large operators to act as they please with no effective regulation. Their own competitiveness and efficiency against foreign competitors, and the relative attractiveness of alternative locations, domestic and globally, for their investments increasingly are a function of the costs and capabilities of the broadband services that they can exploit in the United States throughout their operations, both to implement new business strategies and to enhance the productivity and meet the expectations of their most valuable individual employees.

These two groups of influential companies—over-the-top services providers and applications developers, and major U.S. corporations in all sectors of the economy—must work with public interest groups to turn back the well-financed tide of anti-competitive, pro-oligopoly, cartel-friendly policies being promulgated by the major U.S. broadband network operators.

LNOs Misrepresent the State of Broadband in the U.S.

The leading U.S. network operators argue that they are in some respects still world leaders, e.g., with respect to the efficiency with which they exploit the spectrum allocated to them. The metric used and repeated by Verizon to “prove” this claim is spurious, however, a finding we have demonstrated in a filing to the FCC as referenced earlier. Verizon’s metric claims to show that U.S. mobile operators are between two to eight times more efficient in this respect than their counterparts in Western Europe and Asia as well as Canada and Mexico. “Facts” such as these are a major source of the confusion about and lack of awareness of the dangerous direction in which the U.S. broadband market is headed. We also noted in our filing to the FCC that the application of this metric to China, a country not included in the comparisons that should surely be covered in a forward-looking perspective, yields the result that China is more than three times as efficient as the United States.

Leading U.S. network operators also argue that where they fall short they are being held back primarily by outdated regulations imposed by the FCC. We agree that the regulatory structure under which the FCC is operating needs a fundamental overhaul, but it is disingenuous to claim that these huge companies with their vast resources are not at least in part to blame for the relative decline of the United States with respect to the performance and price levels of broadband services compared to other countries. Solid evidence of the less than stellar performance of broadband pricing in the U.S. compared to other countries can be found in the Google-sponsored work on International Broadband Pricing at <http://googleworldwide.blogspot.com/2012/08/international-broadband-pricing-study.html>.

In a forward-looking broadband perspective it is irrelevant for AT&T and Verizon to continue to point to the price of a mobile voice minute in the “buckets” of minutes they offer that include hundreds or even well over 1,000 minutes per month as being among the lowest if not the lowest in the world. The proper metric for today and the future, is the price of mobile broadband data where other countries such as Sweden, which is not otherwise known for its low cost structure and low retail prices, offers substantially lower pricing than U.S. operators (see <https://wirelessintelligence.com/analysis/2012/08/european-lte-operators-look-to-new-pricing-strategies-to-boost-mobile-broadband-revenues/345/>).

Restoring Core Principles of U.S. Telecom Policy

Until the present time, the United States has had an impressive and enviable record of leadership in telecommunications, in establishing globally adopted standards from Ethernet and the Internet Protocol to Wi-Fi and DOCSIS (the standard for broadband cable modems), and indeed the fundamental structure of cellular networks. The United States also historically set the standard in making affordable telecommunications services available to as many residents as possible, while demonstrating the value of competitive markets and the role of rules, i.e., regulations, in sustaining competition.

This hard-won legacy is now being repudiated, and the bases of global U.S. leadership dismantled, by the actions of a handful of leading U.S. operators, who invoke a discredited “free market” ideology. This ideology proclaims that government and regulators can only do harm and the private sector can only do good and that this thesis will inevitably benefit customers and the economy, while private enterprise focuses solely on maximizing “shareholder value.” These operators reject the idea that they have any other responsibility or special obligation to serve the public interest, even though their businesses depend upon the exploitation of public resources, such as spectrum and rights-of-way, and involve franchises awarded by public authorities, such as the FCC, state and local governments.

It is time to re-affirm and protect the basic principles and goals enshrined in previous eras of telecommunications in order to ensure that the U.S. regains and sustains a position, which is now slipping away, as a global leader in the quality, performance, affordability and innovativeness of universally available and affordable broadband services for all its citizens, residents, and businesses.

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Modernizing the Communications Act: Comments to the U.S. House of Representatives Committee on Energy and Commerce

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Introduction

We welcome and applaud the initiative of the House of Representatives Committee on Energy and Commerce to initiate an investigation into the necessary updating of the Communications Act, along with the modernization of the sector-specific regulatory structure, and existing regulations, in the Telecommunications-Information-Entertainment (T-I-E) ecosystem. A vibrant competitive T-I-E industry has played a vital role in, and as a contributor to, the U.S. economy and society for many decades. The importance of the T-I-E industry is even more important today, and its influence even more pervasive in the 21st century era of digital broadband networks, than it was in the previous analog narrowband era that brought universal, ubiquitous and affordable communications services to all Americans on an equal, non-discriminatory, non-preferential basis.

We respectfully submit for your consideration the following observations and responses to the questions posed by the Committee, along with two attachments⁴ that are examples of our

¹ Information Age Economics (IAE) is an independent management, economics and technology consultancy that fully endorses the need for, and value of, updating the Communications Act. We have considerable experience in the T-I-E sector working on behalf of public policy makers, regulators, operators, services providers, and others in many national and regional markets around the world, as well as in North America. We bring a balanced and objective perspective to bear on the relative strengths and weaknesses of the U.S. compared to other countries. Our guiding principle is to assist the private and public sectors to identify and pursue initiatives that will sustain a healthy, mutually beneficial broadband environment for competition, customers of all types, network operators, and third party applications and services providers, respecting and balancing their various distinctive as well as overlapping interests and needs.

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⁴ "Telecom Act Rewrite Is Needed to Return Real Competition to Broadband Sector," Bloomberg BNA Daily Report for Executives, November 7, 2012; Information Age Economics Letter to Chairman Wheeler, December 19, 2013 *Re: Economic Evidence on Competition in Communications Markets and Implications for Key Policy Issues*, <http://apps.fcc.gov/ecfs/document/view?id=7520963726>



relevant experience in, and commitment to, this important sector for the U.S. economy and society.

The State of U.S. Broadband

Today the U.S. has lost its early leadership, and is in significant danger of falling farther behind in broadband, unless trends that have developed since the turn of the century, and have eroded effective competition in the U.S. market, are rapidly reversed. A revitalized, intelligent regulatory regime is a necessary, although not sufficient step toward reestablishing U.S. leadership. This leadership is still evident in several key aspects of the overall Internet ecosystem, as manifest in the global roles and reputations of companies such as Apple, Google, Facebook, and Twitter.

However, the U.S. is not the leader in broadband networks themselves, despite the ceaseless flood of propaganda and lobbying about their world-beating achievements emanating from the largest U.S. broadband operators. Over the medium-to-long-term, decreasing competition in the broadband market, along with gaps in the broadband infrastructure in the U.S., are bound to harm the ability of U.S.-based innovators to launch, and of U.S. customers to access, the best and most innovative content, applications, and services (CAS) delivered over broadband facilities. Yet these CAS are the source of economic value and the connections on which we all depend for our social activities as well as our economic lives.

The Seven Claims about the Status of U.S. Broadband

We have identified seven claims about the status of U.S. broadband that are frequently presented by and on behalf of the largest broadband operators. We have analyzed these claims and found them to be false. They rest upon a combination of misinterpretation of some facts, disregard of others, and even fabricated “facts” that in the worst case violate known laws of physics. We hope that the Committee will examine the validity of these claims. Decisions about the content of an updated Communications Act should be founded on an honest and accurate picture of the U.S. broadband market today and the roles, dynamics, and needs of its multiple stakeholders on both the supply and the demand sides. This updated Act should also reflect principles that like those in the U.S. Constitution will stand the test of time through (in this case) major changes in network technologies and the advent of unforeseeable innovative services and applications.

These claims are:

- 1. The U.S. broadband market is intensely competitive.*
- 2. The economics of deploying cellular mobile networks are independent of the frequencies in which they are deployed.*



3. *The largest U.S. mobile operators are more efficient in their use of spectrum than smaller operators.*
4. *The U.S. mobile sector leads the world in price and performance.*
5. *The U.S. is second to none in broadband.*
6. *Broadband and the Internet are coterminous.*
7. *Regulators are incapable of influencing market developments and innovation positively.*

We have noted in the context of Claim #6 that the issue of net neutrality has been obfuscated by characterizing net neutrality rules as regulation of the Internet, which is undesirable. This issue has most recently been brought into the limelight by the decision of the U.S. Court of Appeals for the District of Columbia to vacate the core provisions of the Federal Communication Commission's (FCC) Open Internet Order⁵.

However, net neutrality rules govern how traffic can be delivered over broadband networks, not what can be delivered. These rules relate not to the ingredients of Internet-delivered content, applications and services, but to the governance of the traffic that they generate over broadband networks. Unfortunately, this perspective has been lost in the debate about whether there is a need for net neutrality rules, and circumstances in the U.S. broadband market that justify their introduction. The correct perspective is that regulation of broadband, which is where net neutrality rules would have an impact, is necessary in order to preempt the need for regulation of the Internet. Net neutrality rules can be formulated to be pro-competitive and justified to protect and sustain competition in the markets for Internet-delivered applications and services.

We offer below the following responses to the thematic questions posed by the Committee.

Questions for Stakeholder Comment

1. The current Communications Act is structured around particular services. Does this structure work for the modern communications sector? If not, around what structures or principles should the titles of the Communications Act revolve?

To the maximum possible extent a new Communications Act should be based on principles governing the use of, and access to, networks, rather on specific technologies and services that as experience shows are likely to be superseded over time. The principles embodied therein should include, for example, that the purposes of the Act are to:

⁵ "U.S. Court of Appeals Overturns Net Neutrality", <http://www.reuters.com/article/2014/01/14/idUS383839452820140114>



- Affirm and promote nondiscriminatory and affordable access by the broadest number of users and suppliers of communications products and services to public telecommunications networks used to provide telecommunications service through:
 - coordinated public telecommunications network planning and design by telecommunications carriers and other providers of telecommunications service; and
 - interconnection of: (i) public telecommunications networks with each other, and (ii) devices to networks used to provide telecommunications service;
- Ensure the ability of users and content, applications and services providers to transmit and receive traffic seamlessly and transparently between and across telecommunications networks; and
- Stimulate and sustain competitive markets and limit regulatory intervention to circumstances in which competitive forces are too weak to ensure that the legitimate interests of consumers and of small and entrepreneurial suppliers of network and other services are being met.

2. What should a modern Communications Act look like? Which provisions should be retained from the existing Act, which provisions need to be adapted for today's communications environment, and which should be eliminated?

The devil and the genius in terms of flexibility and "future proofing" lie in the details. There are too many to deal with in these Comments, but we would be happy to elaborate further as the Committee's examination proceeds. We note that while some provisions need to be adapted, and others should be retained or eliminated, there are also new provisions that should be added.

3. Are the structure and jurisdiction of the FCC in need of change?

How should they be tailored to address systemic change in communications?

(1) The FCC needs to have adequate resources to monitor and enforce compliance with regulations; (2) Companies subject to FCC regulation should enjoy significant incentives for compliance and face significant penalties for non-compliance with regulations and for presenting demonstrably false information to the Commission.

4. As noted, the rapidly evolving nature of technology can make it difficult to legislate and regulate communications services.

How do we create a set of laws flexible enough to have staying power? How can the laws be more technology-neutral?

(a) Regulations should be subject to sunset or renewal clauses, so they are not perpetuated indefinitely, but have to be positively renewed (or modified or dropped) ;

(b) Laws or regulations should be focused on principles, such as those referred to in 1 above, and minimize references to specific technologies (technology-independence as far as is practically possible);



(c) Technology-independence of regulations means that public broadband networks should be classified like narrowband networks and therefore subject to the principles and purposes of common carrier regulations with respect for example to interconnection and access, although the specific implementation of these principles must take account of the characteristics of technologies as they evolve (see (a) preceding);

(d) Technology-independence also supports the position that wireless or mobile networks should not be exempt from regulations that affect the use of wireline or fixed access facilities (e.g., with respect to any net neutrality provisions), since they are complementary and mutually reinforcing aspects of the complete broadband landscape;

(e) Proposed regulations should be assessed in light of their commonsense and impact on competitors and consumers in the real world.

5. Does the distinction between information and telecommunications services continue to serve a purpose? If not, how should the two be rationalized?

Yes, networks, and the applications, content and services delivered over networks, can and must be distinguished – see the discussion in our attached letter to FCC Chairman Wheeler. It is not easy to draw “bright lines” and doubtless they will need to be adjusted over time as new technologies and products and services are developed. Nevertheless, it is a durable principle that there are distinctions between capital-intensive services that can be and are offered predominantly only by a handful of large corporations operating potentially bottleneck facilities, in contrast to those that are provided by a plethora of diverse providers and draw upon a multitude of sources of innovation. Just because network operators also offer higher level services and some networks are being deployed by non-traditional operators, i.e., examples of vertical integration by corporations, does not mean that there are no reasonable and sensible distinctions that can, and indeed must, be drawn between facilities-based transport services and other major parts of the Internet ecosystem.

Subject: Comments for the update for the Communications Act
Date: Tuesday, January 28, 2014 at 1:52:32 PM Eastern Standard Time
From: Karin Kalda
To: CommActUpdate

Dear Representatives Upton and Walden,

Your committee is taking on a big task to reform the Communications Act.

In the context of the American debate about ICT readiness, Estonia is frequently mentioned as a model because of its broadband infrastructure and digital readiness.[i] I come from Estonia where I witnessed the change from Soviet rule to independence. I was also a member of the Estonian Reform Party and worked at Estonian Reform Party faction in Parliament (Project Manager and Public Relations Advisor). As I have been working closely with policymaking in Estonia on these issues, I would like to share with you my experience and thoughts about what is important to keep in mind in your effort to reform the laws.

It is true that Estonia built its ICT sector from scratch over the last two decades. Estonia uses a simple, unique ID methodology across all systems, from paper passports to bank records to government and tax offices and hospitals. We were also the first country in the world to implement electronic voting with digital signature. (Estonian Digital Signatures Act in 2000 <https://www.riigiteataja.ee/en/eli/530102013080/consolide>; read also about standardized national Public Key Infrastructure (PKI) http://en.wikipedia.org/wiki/Public-key_infrastructure). In addition Microsoft provided the software to help our new government get off the ground.

Because we were able to kick-start our ICT from point zero, we did not have to worry about legacy classifications of communications regulation. There was no phone company, no cable company, or internet provider. We started at a point with modern communications, and all networks are equal. However, in order to accelerate innovation, the state tendered building and securing the digital signature-certificate systems to private parties, namely a consortium led by local banks and telecoms. And that's not where the public-private partnerships end: Public and private players can access the same data-exchange system (dubbed X-Road), enabling truly integrated e-services.[i]

This is one recommendation from Estonia to the USA: get rid of the old classifications and silos. It is meaningless to make distinctions between telephone, cable, fiber, VOIP, and mobile in an all-digital world. Yet, if the states get the key infrastructure right and continuously re-invent in this environment, they will be best positioned to attract the world's increasingly mobile citizens.

Another so-called Estonian success story is Skype, now owned by Microsoft. The company runs much of its operations from Estonia, but truth be told, Skype is a loss-leader for Microsoft. It is unclear whether Microsoft can make much money from Skype, and the business model is largely dependent on extensive investments from broadband providers in order to work. So without good telecommunications infrastructure around the world, Skype can't exist.

Additionally Skype has access to a number of tax advantages that telecommunications companies can't get under the law, especially in Europe. If some communications companies pay tax and others don't, then there is hardly a level playing field when it comes to ICT. This is certainly one area that your reform could address.

While Estonia is proud to have Skype, this one company is not enough to create a vibrant innovation ecosystem that America enjoys today. To create economic development in ICT, a country needs more than a legal framework and a cool Internet company. Economic development for ICT requires many things such as education, venture capital, and access to markets.

I am part of Estonia's proverbial brain drain. Lacking education and employment opportunities in Estonia, I went abroad to Denmark where I was able to obtain an education in business. I now work with in the Insight and Analytics field for Denmark's leading digital marketing agency and consult with some of the biggest online businesses and companies in Europe. In my day to day work, I use software developed by American companies, namely Adobe and Google. I use an iPhone produced by Apple. I participate on Facebook, the world's largest social network, also an American company. To a large extent, the digital goods and services I consume come from the USA, not from Europe or Estonia.

It's remarkable that the US has achieved what it has with a Communications Act that dates from 1934. I understand as well that an update in 1996, essentially a deregulation of the telecom companies, launched a period of ICT flourishing in the USA. It would seem to me that a similar deregulation would help the US even more.

I recommend you revise the Communication Act to bring the laws up to date, but don't waste precious taxpayer resources in costly governmental monitoring and regulation. Use those resources to educate the people so that the can be digitally literate.

Furthermore take these media articles about Estonia with a grain of salt. Though we are proud of some accomplishments, we have a long way to go to realize the ICT innovation ecosystem. We from Estonia, having endured 50 years of Soviet domination, know all too well the dangers of an authoritarian government and an overreaching state. That being said, the people of the United States should as much as possible limit the government's power in communications. Therefore a limited regulatory regime should be encouraged.

Sincerely,

Karin Kalda, Senior Consultant, Insight & Analytics

Copenhagen, Denmark

See [i] <http://www.theatlantic.com/international/archive/2014/01/lessons-from-the-worlds-most-tech-savvy-government/283341/>



Recommendations of the Internet Innovation Alliance to the United States House Energy and Commerce Committee Regarding Communications Law Legislative Reform

January 31, 2014

By the late 1980s, advances in communications technology and accompanying consumer preferences drove the need for the first comprehensive revision of the Communications Act since its adoption in 1934.

Responding to these changing circumstances, Congress embarked on an eight-year exercise to modernize the law culminating in the 1996 Communications Act (“96 Act”). It was groundbreaking because it opened the door for competition across a range of communications industry sectors. Telephone companies were empowered to offer multi-channel television service. Cable companies and CLECs were empowered to enter the local telephone market to compete with incumbent local exchange carriers. The Regional Bell Operating Companies (RBOCs) would be able to enter the nationwide long-distance market upon demonstrating that they had sufficiently opened their networks to local telephone competition, and the RBOCs were granted permission to manufacture telecommunications equipment.

Moreover, emerging technologies in the telephone, cable and wireless industries rapidly set the stage for the convergence of communications services, and the potential for robust and vibrant cross-platform competition.

Since 1996, the way in which consumers receive communications services of all kinds has dramatically transformed. In 1996, telephone companies offered telephone service through signals delivered over circuit switched networks. Cable companies used coaxial cables to deliver multi-channel video service. The wireless industry was in its adolescence, and the Internet was in an early stage of

commercial use. Today, telephone, cable and wireless companies offer the combination of voice, video, and data to their customers in digital format over packet routed networks that employ the Internet protocol; there are more wireless than wireline communications customers, and the use of the internet for the delivery of information of all kinds is becoming ubiquitous.

Consumers have strongly embraced the benefits of cross-platform competition. Given the new marketplace and consumer realities made possible by the successful 96 Act reforms, the inevitability of continued technological innovation, and the reality that today's laws severely lag technological and marketplace advancements, comprehensive statutory telecommunications reform for the 21st Century is vital.

A thoughtful reform should begin by setting a date at the end of this decade to “sunset” the public switched network, and replace it with a highly efficient and scalable network that is resilient and readily capable of handling voice, data or video communications.

The need for this step is underscored by the rapid and well advanced transition from circuit-switched to “routed communications” (i.e., the Internet being the most well-known example of this type of communication). Today, only 5% of American households use the old network as their exclusive communications medium.¹ Another 29% use it in combination with wireless service, and most households use wireless communications only or rely on a combination of wireless and a non-traditional wired alternative to the telephone network, such as cable modem service.² We stand at an inflection point where the rules that were sensible in the last century for a heavily regulated telephone monopoly are no longer sensible in today’s competitive communications landscape dominated by broadband and a multiplicity of Internet enabled services.

The expectation of current law that telephone companies spend billions annually maintaining an aging network that consumers no longer prefer is impeding the next level of broadband investment. Planning and delivering a rapid transition to

¹ Anna-Maria Kovacs, Internet Innovation Alliance, *Telecommunications competition: the infrastructure-investment race*, October 8, 2013, page 11.

² *Id.*

an all – broadband communications environment is today's largest telecommunications policy challenge.

Outdated rules today compel telephone companies to invest nearly \$13.5 billion each year to maintain and run the aging phone system as if it were still the nation's core communications medium used by almost all.³ As the number of telephone company subscribers on POTS (plain old telephone service) sharply falls, the per subscriber cost of maintaining the old network has become unsustainable.⁴ According to a recent study, America's telephone companies made more than \$154 billion in capital expenditures from 2006 to 2011.⁵ Surprisingly, the majority of that investment was dedicated to maintaining the declining telephone network, even though today only about one-third of American households still use it at all, and only 5% use it exclusively.⁶ Every dollar that is spent maintaining an inflexible and costly network that consumers are fleeing is a dollar not invested in the modern multifunction broadband networks that consumers prefer. Every dollar telephone companies spend on an ancient, declining, and little used technology is a dollar not spent developing the more capable broadband infrastructures that permit phone companies to efficiently offer voice, video, and data services on a more equal footing with largely unregulated cable companies. That's an important goal because when competition is fair and fierce, consumers ultimately win big with competitive pricing and greater choices to fit their personal needs.

Ancient rules and old ways of thinking are undermining innovation, damaging competition, forcing billions of dollars into misdirected capital investment, and slowing our national progress. Maintaining the status quo for the antiquated telephone network--either by decision or inaction--is a costly anachronism. Requiring phone companies to operate voice-only telephone networks while they

³ Fung, Brian. "We spend billions a year maintaining phone lines (almost) nobody depends on. Should we get rid of them?" *Washington Post* 8 October 2013. Web. 30 January 2014. <<http://www.washingtonpost.com/blogs/the-switch/wp/2013/10/08/we-spend-billions-a-year-maintaining-phone-lines-almost-nobody-depends-on-should-we-get-rid-of-them/>>

⁴ Anna-Maria Kovacs, Internet Innovation Alliance, *Telecommunications competition: the infrastructure-investment race*, October 8, 2013, page 9-10.

⁵ *Id.* at page 20.

⁶ *Id.* at page 11.

are building out new fiber-optic broadband networks makes as much sense as requiring a hitching post in front of every store, forcing bus companies to maintain streetcar tracks, or insisting on backup electric fans in every air-conditioned building.

Against this backdrop, the leaders of the House Energy and Commerce Committee have announced the launch of a process for legislative reform. This submission is in response to the committee's invitation for legislative recommendations. We make the following suggestions:

- Reform legislation should recognize the pervasive and rapidly developing role of broadband networks in the delivery of modern communications and the urgent need for deregulatory parity among similarly situated broadband service providers.

The 96 Act was about telephone service delivery. The only provision which addressed Internet protocol delivery was known as the "Communications Decency Act", and it was declared unconstitutional by a unanimous vote of the Supreme Court. The division established in the Act between information services and communications services was not specific to the Internet but was designed to address the provision by telephone companies and potentially other entities of data services and applied to any platform over which the communication is delivered. Given the advanced nature of the transition to broadband delivered services and the accelerating cost of maintaining the little used circuit-switched telephone network, reform legislation should proceed from the assumption that the old network will sunset by the end of this decade. In addition, Congress should level-the-playing field and encourage greater innovation by ensuring that artificial legal and regulatory distinctions between broadband service providers are eliminated.

- Reform should also be premised on the understanding that our current light touch regulatory approach to broadband broadly stimulates investment in networks and promotes both job creation and innovation. A comparison of the state of broadband in the United States and Europe is instructive. Europe heavily regulates broadband through leased access

requirements. Consequently, according to the National Telecommunications and Information Administration (“NTIA”), the US, despite its vast geography and dispersed cities, has higher average broadband speeds and lower prices than Europe generally. In fact, entry-level broadband pricing in the US is the second lowest globally, behind only Israel, according to the International Telecommunications Union (“ITU”). Our light-touch regulatory approach toward broadband networks works and must be retained.

- Any reform should realign the Federal Communications Commission's (“FCC”) regulatory structure to match current marketplace and technological realities. Today’s structure is a holdover from a distant past in which telephone companies, both wired and wireless, delivered voice services, cable and satellite companies delivered one-way multi-channel television service, and the Internet was barely in existence. A streamlined functional regulatory structure is needed which recognizes today's cross-platform competition in which telephone, cable and wireless carriers are in head to head competition one with the other offering the combination of voice, video and data to customers who care only about the quality and the price of services not about the historical identity of the companies that offer them. A realigned structure will ensure that similar services will have similar regulations.

- Reforming the FCC’s regulatory structure should include elimination of existing duplicative or unnecessary functions at the agency. In particular, the Committee should consider trimming back the FCC’s duplication of the Department of Justice (“DOJ”) and Federal Trade Commission’s (“FTC”) role in reviewing communications merger transactions. Today, the FCC essentially replicates the DOJ and FTC’s merger review process, by using the Act’s ambiguous public interest standard to require that proposed transactions “enhance competition.” Even though some mergers might generate effects that do not trigger anti-trust harm, the FCC has used its authority in the past to impose unrelated behavioral requirements on merging parties to promote the public interest. Given the DOJ’s and/or FTC’s current role and expertise in determining whether transactions would “substantially lessen competition,” the Committee should promote

government efficiency and on a going-forward basis limit the FCC's merger review authority.

- Congress can help address the existing spectrum deficit facing commercial wireless carriers by enabling the near-term reallocation of significant swaths of government held spectrum for commercial auction. Government spectrum holders have proven resistant to past reallocation efforts, and even when reallocation has been mandated have been very slow to vacate the reallocated spectrum. To address these concerns, the Committee is urged to consider the provision of incentives of various kinds to government spectrum holders which will encourage greater cooperation in the reallocation process and in the taking of steps necessary to make the reallocated spectrum available for commercial auction.

- The Committee should also consider facilitating secondary market transactions among spectrum holders and encourage streamlined processes to facilitate spectrum use as additional mechanisms to address the nation's spectrum crisis.

Today, companies that purchase spectrum in federal auctions receive a license to use the spectrum for specified purposes. Due to legitimate interference (co-channel and adjacent channel) concerns, if the spectrum is bought for the provision of terrestrial wireless services, it may not be used for over the air broadcasts or for the delivery of satellite-based services. In many instances, the dynamically changing marketplace, and the technology to support that marketplace, will suggest appropriate and profitable spectrum uses not apparent at the time of the original spectrum allocation, but under restrictions imposed on license holders, the spectrum may not be used for those new and appropriate purposes without regulatory approval following a costly and lengthy proceeding. Spectrum scarcity is challenging the ability of wireless carriers to meet the exploding demand for service. Reform legislation should enhance the efficiency of spectrum use through the provision of flexible licenses, allowing for direct negotiations between co-channel and adjacent channel licensees on operating rules to minimize interference while facilitating the expansion of the secondary market for spectrum.

The Internet Innovation Alliance appreciates the opportunity afforded by the Committee to submit these recommendations and commends the Committee for its leadership in undertaking a thoughtful process to address modern communications policy needs. We stand ready to assist the Committee through the provision of additional information upon request and in supplying oral testimony for Committee informational hearings.

A handwritten signature in black ink that reads "Rick Boucher". The signature is written in a cursive style with a large initial "R".

Rick Boucher
Former Member of Congress
Honorary Chairman, Internet Innovation Alliance

**House Energy and Commerce Committee
Communications Act Update**

**Response from the Information Technology Industry Council to white paper
number one: Modernizing the Communications Act**

January 31, 2014

The Information Technology Industry Council (ITI) appreciates the undertaking of the House Energy and Commerce Committee and the Communications Subcommittee to review, assess, and consider modernization of the Communications Act of 1934. ITI represents 55 of the global leaders in the information and communications technology sector, including manufacturers and providers of hardware, software, network equipment, Internet and e-commerce services, devices, peripherals and social networking.¹ We appreciate the opportunity to comment on these issues that are at the core of our companies' ability to innovate, grow, and compete in the domestic and global marketplaces.

Introduction

Because of the broad representation of the high tech sector in ITI's membership, we have an extensive set of priorities we would like to see addressed as the Committee considers updating the Communications Act. ITI believes the fundamental principles of any update should be to 1) promote the continued adoption of next-generation services and technologies, 2) facilitate private investment in broadband build-out and deployment, both wired and wireless, and 3) protect the ability of companies to innovate and bring new choices and products to the consumer and commercial marketplaces.

We look forward to working with the Committee on all these issues going forward, and appreciate the opportunity to provide feedback on the questions posed in the first whitepaper.

¹ Please find a complete list of ITI's member companies at:
<http://www.itic.org/about/member-companies.dot>

Protecting the Ability to Innovate

One of the most important aspects affecting the ability of ITI's members to experiment, innovate, and offer new products and services, has been the light regulatory touch to over-the-top (OTT) services, which generally are unregulated. These are voice, text, video, gaming, and other services and applications, some of which may in some respects resemble traditional services covered by various titles of the current Communications Act, but which have a distinguishing feature in that they rely on an underlying Internet data connection. OTT applications are fast evolving, and often not limited to a single platform (e.g. a mobile phone). Many OTT services are accessible on multiple platforms (e.g. mobile phone, tablet, laptop, and/or desktop computer).

The FCC has correctly recognized the distinct nature of OTT services and applications, as early as 2004 in the pulver.com Free World Dialup Order.² As then-Chairman Michael Powell stated "We know from experience that IP-enabled services such as Pulver.com's FWD offering can spur demand for broadband connections by providing consumers with a feature-rich set of Internet voice applications. We also should be mindful that the largest barriers to progress and the development of this and other services like it, are conflicting sets of economic regulations and onerous taxes." Based in large part on this decision, tech companies of all sizes are experimenting with, designing and offering numerous free services, applications, and features to consumers that were not even dreamt of in 2004.

As you consider whether or how to restructure the Communications Act, it is important to keep in mind that the underlying technology for OTT services is fundamentally different than traditional services that OTT services and applications may to some degree resemble. Text-to-911 provides a perfect example of the distinct difference. A third party OTT application on a mobile smartphone may resemble some of the same functionalities of the native short message service (SMS) on the phone, and some policymakers may therefore be tempted to conclude that

² Federal Communications Commission, WC 03-45, Declaratory Ruling that pulver.com's Free World Directory is Neither Telecommunications Nor a Telecommunication's Service, February 12, 2004.

the same rules should be applied to all services and applications with those similar features. The underlying technology is significantly different, however. As an example, OTT services and applications are not able to obtain reliable wireless network location information from the provider offering the service as the native SMS functionality is able to; OTT applications are offered by entities that are not affiliated with the relevant network operator. Further, many OTT services and applications are offered across a variety of platforms and devices, some of which may not have any capability at all to determine the user's location. Various forms of OTT messaging applications may be found on devices ranging from tablets, laptops, and computers, to televisions, gaming machines, media players, and even appliances. Beyond the technical infeasibility, any regulation of these products in this area would be prohibitively expensive, and crippling for innovation. The more regulatory of economic burdens developers face in this area, the more we will see innovation stifled.

Continued restraint from regulatory impulses will be especially important for continued innovation in this space as we see growth in the Internet of things (IoT) providing for machine-to-machine, consumer-to-machine, machine-to-consumer, and other types of communications. OTT services and applications, along with these emerging forms of communication, have flourished because they have been recognized as distinct from older technologies; promoting competition and regulatory parity for those older forms of communication should not include more regulation of new technologies and OTT services and applications.

Facilitate Spectrum Transition

The Committee and Subcommittee fully recognize the importance of making additional spectrum available for mobile broadband, and ITI appreciates and applauds their work to make this a priority during the previous and current Congresses. Going forward, we think it is important to give the Commission new and flexible tools to continue making additional spectrum available for mobile broadband. These should include the current auction tools available to them, as well as additional tools such as the Federal Spectrum Incentive Auction Act to

encourage federal spectrum licensees to use their spectrum more efficiently and relinquish spectrum they no longer need. We also support additional tools beyond auction mechanisms that would provide the Commission flexibility to allow the private industry to make the most efficient use of spectrum currently in the marketplace.

Conclusion

Again, ITI thanks the Committee for its work and leadership in looking at whether to modernize and update the Communications Act. Our industry recognizes the significant undertaking this process will entail, and look forward to working with you to ensure the vibrancy of the Internet remains while bringing outdated structures of the Act into the 21st Century.

Respectfully submitted,
Vince Jesaitis
Senior Director, Government Relations
Information Technology Industry Council
1101 K Street NW, Suite 610
Washington, DC 20005
[REDACTED]



January 31, 2014

Honorable Fred Upton, Chair
Honorable Greg Walden
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

The Information Technology and Innovation Foundation (ITIF)¹ applauds the House Committee on Energy and Commerce for undertaking the arduous task of modernizing the Communications Act and appreciates this opportunity to comment on the Committee's white paper.² ITIF looks forward to future hearings and white papers as the Committee moves forward with this important project. The Communications Act of 1934 (the Act) is a complex patchwork of laws, and the time is ripe for a comprehensive update.

The Committee's white paper traces the major legislative changes made to the Act since 1934, some of which represent wholesale shifts in competition policy. We urge the Committee to craft a law that respects dynamic innovation in communications technologies and markets. As the white paper acknowledges, these technologies are unpredictable, and the speed at which communications markets change direction can be hard to judge. Any update of the Act should proceed with humility, refraining from specific predictions as to how future Americans will communicate. A light-touch federal framework that relies primarily on the market to define the contours of our communications markets will best allow innovation to flourish.

That said, there is undoubtedly a continued role for the Federal Communications Commission (FCC or Commission). The FCC should be able to intervene where market participants engage in anti-competitive behavior or consumers are being harmed. The

¹ The Information Technology and Innovation Foundation (ITIF) is a non-partisan research and educational institute – a think tank – whose mission is to formulate and promote public policies to advance technological innovation and productivity internationally, in Washington, and in the states. Recognizing the vital role of technology in ensuring prosperity, ITIF focuses on innovation, productivity, and digital economy issues.

² The Committee on Energy and Commerce, "Modernizing the Communications Act" (white paper, 2014) available at <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/CommActUpdate/20140108WhitePaper.pdf>.



Commission can also play a key role in convening stakeholders to encourage cooperation. Furthermore, the federal government should be empowered, and funded, to facilitate more widespread broadband adoption and deployment.

The core of the Act, its general organization and basic principles, was put into place 89 years ago. The Communications Act of 1934 was premised on regulating communications in a similar way to then monopoly railroads. We have since recognized that a competitive market in interstate transportation make railroad regulation obsolete. Any Communications Act update should similarly recognize that communications markets are mostly competitive – the vast majority of Americans have access to multiple digital video platforms, mobile wireless carriers, and broadband services, and increasingly telephony is a simple app that runs on broadband networks. We have already moved away from the assumption that these networks are natural monopolies in practice; it is time to formalize this fact into law.

Even just in the 18 years since the last major update to the Act the communications market has changed significantly. We are all well familiar with the recent explosion of services riding over our networks, but a simple thought experiment illustrates just how dramatic the changes of the last twenty years have been. Imagine if Congress had enacted the Telecommunications Act of 1999 instead of the Telecommunications Act of 1996. Would encouraging facilities-based competition in an attempt to build a duplicative phone network have seemed wise when by then it was clear broadband networks were key? Would the rise of the Web and early IP voice communications have given us pause? The changes we have witnessed since the '96 Act represent a break in our ability to understand and predict this complex sector. It is time to update the Act, but not in a way that assumes to know what direction our communications and media markets are heading or what would be best for them.

In 1996 voice, video, and data were carried over separate “wires” and constituted separate services. Soon after the '96 Act, communications began to converge on the IP platform. With this ongoing convergence comes improved competition and dynamism in communications markets. Many laws, especially those designed for regulating legacy services in a monopoly era, no longer make sense where competition is established. A general shift towards policing competitive markets will work better than up-front regulation, though there are some areas that will continue to need prospective rules.



Universal service for broadband access, for example, will require continued government support. Similarly, public safety, accessibility, and spectrum management will also need clear rules. Any rewrite of the Act should also ensure that there is clarity on what is and what is not VoIP and ensure that just because a service simply transmits voice over an IP network, does not mean that it gets swept up in a regulatory voice framework. Simply clarifying the regulator’s jurisdiction, those areas that require affirmative, up-front regulation, would be an important first step in providing much needed certainty.

The relationship between competition and innovation, and more specifically the role of competition in telecommunications markets, has been hotly debated for years. These days some claim that a lack of competition in broadband access leaves consumers with high prices and slow speeds. Not only does ITIF believe these claims are not empirically true,³ but, furthermore, such views generally represent short-sighted, old-fashioned economic thinking. It is all too easy to romanticize innovation, to think innovation happens only in garages. While such innovation is no doubt important, a Communications Act update should avoid hampering innovation and investment in existing networks: incumbents should be allowed to innovate as well.

Indeed, the law’s inability to keep pace with rapid changes in technology is a common concern. The white paper rightly identifies some steps to overcome this problem. The law should certainly move away from the siloed structure of the old Act and attempt to treat similar services alike instead of picking out specific technologies for regulation. That said, the notion of “technology neutrality” is a difficult one, and in some circumstances different architectures may require different approaches. For example, in the context of the recently vacated net neutrality rules, the Commission’s decision to exempt wireless services from the anti-discrimination rule was entirely reasonable, as the capacity constraints on these networks are significant. Even here, the goal should be less about different rules for different technologies and more about reasonable rules based on the performance of the underlying network architecture.

ITIF believes the best way to regulate in this space is to encourage a multi-stakeholder model of governance that allows for flexible, subtle application of clearly

³ See Richard Bennett, Luke A. Stewart, & Robert D. Atkinson, “The Whole Picture: Where America’s Broadband Networks Really Stand” (Information Technology and Innovation Foundation, Feb. 2013) <http://www.itif.org/publications/whole-picture-where-america-s-broadband-networks-really-stand>.



articulated principles. Such an approach can encourage continued cooperation in increasingly complex markets and recognize where it makes sense to treat different technologies differently.⁴ Targeted reforms to the Federal Advisory Committee Act could help facilitate government leadership in multi-stakeholder institutions that can best address rapidly changing markets.

ITIF congratulates and supports this initial investigation to updating the Communications Act. We applaud the Committee's recognition that this is a complex environment not well suited to monopoly style regulation. We urge the Committee to move forward with this important work and stand ready to assist in any way we can.

My best regards,

Robert D. Atkinson
President and Founder

Douglas Brake
Telecom Policy Analyst

Information Technology and Innovation Foundation

⁴ See Philip J. Weiser, "The Future of Internet Regulation" *U. of Calif., Davis Law Review* Vol. 43 (2009) 529, http://lawreview.law.ucdavis.edu/issues/43/2/articles/43-2_Weiser.pdf.



INDEPENDENT TELEPHONE & TELECOMMUNICATIONS ALLIANCE

January 31, 2014

The Honorable Fred Upton
Chairman, House Energy and Commerce Committee
2125 Rayburn Building
Washington, D.C. 20515

The Honorable Greg Walden
Chairman, Subcommittee on Communications and Technology
2125 Rayburn Building
Washington, D.C. 20515

RE: #CommActUpdate

Dear Chairmen Upton and Walden:

The Independent Telephone and Telecommunications Alliance (ITTA), the voice of mid-size carriers, welcomes the opportunity to provide feedback and participate in the House Energy and Commerce Committee's efforts to update the Communications Act.

The members of ITTA¹ are mid-size communications companies that provide a broad range of high quality wireline and wireless voice, broadband, Internet, and video services to consumers in 44 states.

ITTA submits this letter in response to your request for comment on your January 8, 2014 white paper on "Modernizing the Communications Act." As a general matter, ITTA believes that the principle of regulatory parity must be a cornerstone of any congressional efforts to update our nation's communications laws to reflect today's marketplace.

The incumbent telecommunications carrier members of ITTA have been leading the broadband revolution in the markets they serve. However, despite advances in technology and increased competition, ITTA member companies remain burdened with an outdated federal

¹ The members of ITTA include: CenturyLink, Cincinnati Bell, Compurium Communications, Consolidated Communications, FairPoint Communications, Frontier Communications, Hargray Communications, Enventis Communications, and TDS Telecom.

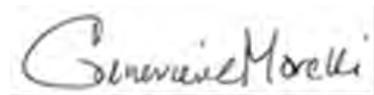
regulatory regime that puts them on an uneven playing field with the many competitors who have and continue to enter the marketplace.

Notwithstanding the dramatic changes that have radically altered the competitive landscape since the Communications Act was last updated in 1996, ITTA members must continue to adhere to a set of costly, arcane, and anticompetitive regulations that were created in a bygone era in which they were monopoly providers of voice service. Today, incumbent telephone companies are hardly the “dominant” providers of voice or any other communications service. It makes no sense that they continue to be saddled with a regulatory regime that their direct competitors do not have to abide by.

ITTA believes that Congress and the Federal Communications Commission (FCC), as well as state regulators, should focus on deregulating incumbent providers so that parity among competing providers of the same services is achieved.

ITTA appreciates the opportunity to weigh in on the Communications Act update and looks forward to commenting on more specific items, including the need for Congress to update our outdated video laws, as this process moves forward.

Sincerely,

A handwritten signature in black ink, reading "Giovanni Morelli", enclosed in a thin black rectangular border.

President

Subject: Communications Act Update comments

Date: Monday, January 13, 2014 at 9:19:06 PM Eastern Standard Time

From: Jesse Walser

To: CommActUpdate

CC: Maxwell, Bryan

Committee Members;

As an affected citizen, I am strongly interested in the updates to the Communications Act.

For background, my family and I live in the semi-rural town of Pompey in Upstate NY, just outside of Syracuse. I currently have no access to wireline broadband. Verizon Communications has declined to upgrade my wire center to support its FiOS product, or even DSL, and Time Warner cable refuses to extend service to me without an exorbitant- (and opaquely derived) contribution in aid to construction of between \$20,000-\$26,000 depending on which survey is used.

My answers to the stakeholder comment questions are below:

1. The updated Act should focus on the unimpeded transfer of information:

- no internet fast lane for "preferred" traffic
- no deep packet inspection- this is the equivalent of the phone company listening to my phone conversation, and adding its two cents like a nosy operator.
- Open network access- the companies that own the networks must provide access to all; They must allow others to provide service over their networks, both wireless and wired, and cannot choose winners and losers.

2. A modernized act must include the following:

- Universal Service, including carrier of last resort requirements.
- Access for all citizens to advanced telecommunications services
 - This should be the new minimum for service, like voice service is today
- Guaranteed Quality of Service for the "New" Universal Service minimum (99.999% reliability; like the PSTN is required to have now; meeting advertised speed tiers, etc.)
- Standardized maximum service rates and line extension costs,
- Costs and Return on Investment formulas updated to include new (and much higher) Average Revenue per User figures, and actual depreciation and network life expectancy (to allow all Americans to have access to the new network capabilities)

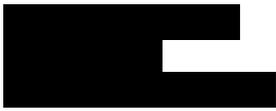
3 and 4 can be answered with the information in #1 and #2; competition and universal access without discrimination.

5. The distinction between information and telecommunications services no longer serves a purpose; most telecommunications traffic is sent using internet protocol- an information service that is unregulated- even over the PSTN. IP transition is just a more efficient way to use the existing telecom network. There aren't any busy signals in IP, just lost "packets." With the loss of this distinction, the telecom market can be more competitive- open coaxial, copper and fiber networks, offering guaranteed service, with the differentiation between the companies being pricing, features, and customer service, not which single company has access to my house.

Please feel free to contact me with any additional questions you might have.

Sincerely,

Jesse Walser

Subject: Response to questions related to FCC " Current State of the Law and Criticisms"

Date: Wednesday, January 22, 2014 at 3:24:34 PM Eastern Standard Time

From: Ken Benner

To: CommActUpdate, Michael Dudding, Barry Mishkind

K.J. Benner & Associates

Serving American Broadcasting Since 1959
7669 West Copper Crest Place
Tucson, Arizona 85743-5302

January 2014

Re: Response for: "Questions (1 - 5) for Stakeholder Comment" for
"Modernizing the (FCC) Communications Act"

The Honorable Members of The U.S. Congress,
Messrs. Fred Upton (Mich) and Greg Walden (Ore)
and others for whom the referenced matters herein are of serious concern

The undersigned has served the Radio/Television Broadcast industry for approximately 54 years with a "masters" certification as a "Telecommunications Engineer" by the International Association of Radio and Telecommunications Engineers, a "Life Certification" as a "Broadcast Engineer" from the Society of Broadcast Engineers, numerous Licenses, commendations, former "Alternative FCC Compliance Certification Inspector" for over 15 years, FCC license examination proctor for 30 years and other qualifications that justify the good faith integrity of the statements herein.

Questions for Stakeholder Comment:

1. The current Communications Act is structured around particular services. Does this structure work for the modern communications sector? If not, around what structures or principles that should titles of the Communications Act revolve?

My response: There is no problem with the structure of the Communications Act as long as it remains clearly defined without modification serving special interests.

2. What should a modern Communications Act look like? Which provisions should be retained from the existing Act, which provisions need to be adapted for today's communications environment, and which should be eliminated.

My response: The Act is far too complex to permit comprehensible compliance for most of those generally responsible for such compliance without very substantial, costly professional legal assistance. For this writing we are mainly concerned with the American Radio and Television Broadcast Industry. Indeed, over the past 20 years fines, fees, forfeitures and most significantly legal expenses have increased substantially.

3. Are the structure and jurisdiction of the FCC in need of change? How should they be tailored to address systemic change in communications?

My response: Indeed such structural change is long overdue. In this regard the undersigned is willing to serve in a good faith Congressional advisory capacity so as to address need to restructure the jurisdiction of the FCC to operate "In the public interest, convenience and necessity", the long established criteria for which a broadcast license is granted and its renewals permitted. Clearly much of the legislation contained in CFR 47 parts 70-79 have been deregulated, eliminated or modified over the past 20 years very adversely affecting the quality of broadcasting.

4. As noted, the rapidly evolving nature of technology can make it difficult to legislate and regulate communications services. How do we create a set of laws flexible enough to have staying power? How can the laws be more technology-neutral?

My response: Evolving technology should in no way make communication regulations more difficult - - instead, it should simplify the process. Nor is "technology-neutral" in any way problematic. For "staying power" and to remain flexible is to simply ask "Is this legislation truly in the best interest for America or does it serve some special, perhaps profitable hidden agenda? Generally such can quickly be determined by simply asking "Who may profit from this proposed legislation?"

5. Does the distinction between information and telecommunications services continue to serve a purpose? if not, how should the two be rationalized?

My response: The phrase "If you don't like the message, kill the messenger" is applicable in addressing these questions. The quality of broadcast telecommunications has diminished substantially as the result of the deregulation activity of the 1990's.

When telecommunications legislation is used to control the quality, quantity and flow (or speed) of information, the intellectual net result for Americans can suffer greatly. To "rationalize" these two factors, simply determine how one may complement or adversely affect the other. For example, the mandated switch from analog to digital television telecommunications was a quantum leap in the quantity and quality for information transfer in this country. Careful, unbiased legislative evaluation serves to enhance the good of the people and when adequate "rationalization" is achieved.

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I respectfully submit the following recent editorial for your consideration:

How Special Interest - Hidden Agenda Legislation Plagues American Broadcasting

by Ken Benner, NCE, SBE

According to the FCC (Federal Communications Commission), there are about 30,643 broadcast stations in this country. Most of these operations struggle desperately to be compliant by spending millions of dollars each year in organizational memberships and legal expenses to avoid frustrating fines, fees and forfeitures imposed each year by the FCC. Such is no fault of the FCC.

The Commission is much the same as the Internal Revenue Service, simply doing their job as enforcers of Congressional mandates which are in many cases, utterly preposterous having absolutely no relation to the FCC requirement for every licensee "to serve the public interest, convenience and necessity" -- the conditions under which every broadcast licensee is granted and remain valid.

This article is an effort to expose some of the more egregious abuses that plague American broadcast licensees based upon my 54 years in the industry and a recent 10-month research project soliciting examples from broadcast licensees in an effort to prompt a congressional investigation.

Prior to the early 1990s, all stations were required to perform an annual signal quality proof of performance detailing their compliance involving distortion, picture quality, frequency response, etc. all of which stations maintained within clearly defined tolerances. Such requirements were eliminated for the most part.

During that period of deregulation, the requirement limiting the amount of commercial content to less than 22 minutes per hour was also abolished, giving us the current "infomercial" which certainly denigrates the public's perception of the value of what was previously good entertainment and information with a reasonable balanced format of commercial content.

Engineers were required to be licensed at levels that varied with the station's technical complexity. If an operator abused his responsibility, he could lose his license and find himself unemployed. Deregulation prompted the elimination of these requirements. **The hidden agenda:** To provide unlimited commercial time per hours of on-air programming and enable fewer, less qualified and less expensive employees.

The Emergency Alert System (EAS) has had its share of embarrassing and sometimes catastrophic failures. In rare instances, it has warned of an approaching weather emergency or has located an abducted child. However, it has failed more often than it has succeeded. Indeed, during the 9/11 attacks, EAS proved itself worthless. Just prior to President Obama's latest State of the Union address, a hacker compromised the EAS Internet Control system during which some stations broadcast a "warning" to the effect that the dead were rising and zombies were becoming a threat.

The EAS is predicated upon the presumption that Americans are glued to their radio or TV's 24/7. **The hidden agenda:** The system as actually prompted by the broadcast industry itself was a wage saving effort with its effects to be fully unattended, automated and was thus a response to the question: "How can you possibly serve your community of license during an emergency with no one in control of what is on the air?"

The most frustrating concern for stations are the required "**Public File Folders**" of which 16 are for radio and 18 for

TV stations. The contents are each required to be available for public access during normal business hours. These files are a primary source of fees, fines, forfeitures and legal costs and clearly the major headache for the license holders. They are detailed in part 73 and 74 of the US Code of Federal Regulations (CFR). The average frequency of requests for access to the public files was found to be less than once in four years according to interviews conducted for this article.

Obviously, these files serve some purpose other than interests of the public. **The hidden agenda:** These files serve as a means of providing a "standardized means of defense" for a station licensee who is challenged by a competitor claiming he'd do a better job of serving "The public interest convenience and necessity". Hidden agendas with these files becomes apparent with a tad of forensic research as follows :

Political advertising: All stations must make public for two years all political advertising on-air activity listing the time, date and charge for each spot aired. They are allowed to charge only their lowest unit rate for each candidate ad regardless if it's an order for a single spot or a thousand. The rationale is that our home town barber running for city-mayor pays the same rate as Mr. Big running for the U.S. Senate under the assumption that such lowest ad-unit-rate makes costs fair for everyone. **The hidden agenda:** To require minimized political ad rates for the big spenders with a tremendous loss in revenue for broadcasters, and in some cases even forcing canceling local merchant advertising to accommodate political ads.

Another such required public file is called the "**Issues and Programs**" folder, so that the public can determine to some extent how well the station is serving its community by reporting on the city council meeting, the proposed property tax increase, public safety issues etc. Since anyone can challenge a station license by claiming he will do a better job of "serving" than the current licensee and file his challenge with the Commission at which point the current license holder can expect to spend a bundle in legal expenses defending his license. **The hidden Agenda:** This is one example many broadcasters feel serve the financial interests for many of the approximately 400 law firms practicing communications law for those 30,000+ broadcast stations.

Most parties interviewed for this article agree the most bizarre broadcast regulation is the FCC's Equal Employment Opportunity Regulations in CFR 73.2080 of about 5800 words that defines an incomprehensible regulatory litany that includes to "...establish, maintain and carry out a positive continuing program of specific practices designed to ensure equal opportunity and nondiscrimination in every aspect of station employment policy and practice."

The regulation spells out in detail how a licensee may or may not hire an employee in addition to conducting "...a continuing review of job structure and employment practices and adopt positive recruitment job design and other measures needed to ensure genuine equality of opportunity to participate fully in all organizational units, occupations, levels of responsibility."

Among the adverse employee consequences in the definition of "'full-time employee" as one working more than 30 hours per week. Many small stations limit most of their employees to less than 30 hours per week to avoid some of the mandates of this regulation. The adverse ramifications involved with this legislation are far more than an article such as this could place into a comprehensible analysis. For example, one FCC publication attempts to address these requirements with over 150 single spaced pages. This law also mandates FCC "random audits" to determine compliance. One licensee interviewed for this article had to pay \$6,000 in legal expense to address such audit.

Readers are encouraged to review this regulation available from www.fcc.gov, and in the search box, enter: 73.2080. Discrimination is obviously a moral issue that cannot be clearly defined, much less fully regulated. **The hidden agenda:** This regulation while requiring substantial time, effort and legal expense arguably does not achieve its implied purpose to any reasonable extent.

To prepare a simple 4-page license renewal (involving over 30 pages of "instructions) we have documentation from one law firm that charges a minimum of almost \$2,000 and additional charges to renew licenses for micro-wave remote control systems and mobile news unit licenses.

Our efforts hope to achieve the simplification of these and numerous other examples such that broadcast licensees

can save substantial local costs by preparing these items themselves as was the case in previous years. **The hidden agenda** : There is substantial legal profiteering with what appears to be the intentional complicating of what could and should be reasonable regulatory compliance.

This article has tried to make, at least somewhat comprehensible, a few regulations that obviously have significant hidden adverse agendas. I would hope the broadcast industry would join our efforts to encourage a congressional investigation for effectively simplifying these costly regulations that are playing a major role in the reduced quality of today's broadcasting.

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*Mr. Benner, 76, is a semi-retired broadcast engineer and chairman pro tem of the "Coalition for the Transparency, Clarification and Simplification of Regulations pertaining to American Broadcasting". [REDACTED]

Subject: Comments on reforming the Communications Act

Date: Tuesday, January 28, 2014 at 4:59:01 AM Eastern Standard Time

From: Tatjana Apanasevic

To: CommActUpdate

Dear Representatives Upton and Walden,

This letter comes as part of the process to support your effort to reform the Communications Act. My colleagues and I are academic researchers at KTH School of Information and Communication Technology & Wireless@KTH (one of the world's leading research centers in wireless communications <http://wireless.kth.se/>), and department of Industrial Economics and Management at KTH, the Royal Institute of Technology, Stockholm, Sweden. KTH was founded in 1827 as Sweden's first polytechnic and is one of Scandinavia's largest institutions of higher education in technology.

-
What the U.S. can learn from mobile payment in Sweden

A lesson from the world of mobile payments may be illustrative for the Communications Act reform process in the miscellaneous provisions area.

Sweden, like the US, is a country with high mobile penetration. Mobile payment has existed as a form payment since at least 2007. It is seen as a business opportunity for mobile providers to transfer payments of small amounts (less than \$10) or micro-payments. In 2012 the EU released the Payment Service Directive (PSD) stating that the mobile operators cannot handle payments and transactions for non-telecom services without being a payment providers. This means that mobile operators need a banking license [1,2]. In addition, payment providers need to know the identity of users making mobile payment transactions.

Users were dissatisfied with a need to provide personal data. Some became reluctant to use mobile wallets. This added to users' frustration with the imperfect design of mobile wallets.

Today mobile operators have lost an opportunity to participate in the mobile payments market. Usage of services based on premium SMS has decreased dramatically. This has also had ripple effect on other areas of the economy. Consider the non-profit organization Red Cross, which lost some 95% of revenue it had earlier received as donation through mobile payments [1].

While the EU directive may have been made with good intentions in mind (e.g. protecting consumers and deterring money laundering), it effectively obliterated a new innovation by mobile providers.

The experience suggests that rather than make burdensome obligations outright, it is better to wait to see whether there is harm before applying the rule.

Additionally there is little evidence that mobile payments, essentially micro-payments, are used for money-laundering. As for personal authority, should authorities need users' identity, they can obtain it from the mobile operator.

It is a missed opportunity for innovation in Sweden because banks are often too big and reluctant to try new services. They don't see the business opportunity in the same way as a mobile operator or other entrepreneur.

The additional requirement of a banking license has been another deterrent. Mobile operators either need to

partner with bank or pay for the license outright. This adds unnecessary complexity. In the case of partnership with banks, there is a risk that the parties can't agree how to share revenues and risks and what value each party brings.

The references attached provide further explanation.

In summary the message for the Committee is that that any new Communications Act needs to needs to have the flexibility to allow new innovations to emerge and new parties to experiment with services and business models. When barriers are too high for companies, especially when business models are not clear, innovation can be chilled.

Tatjana Apanasevic
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[REDACTED]

References

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2. Tatjana Apanasevic, Jan Markendahl and Niklas Arvidsson, 2013. *An exploratory study of consumer attitudes towards mobile ticketing in Sweden*. 24th European Regional Conference of the International Telecommunications Society (ICT), Florence, Italy, 20 - 23 October 2013. [online] Available at <http://wireless.kth.se/wp-content/uploads/2013/12/Apanasevic_Markendahl_Arvidsson_Exploratory_Study_of_Consumer_Attitudes_Towards_Mobile_Ticketing_in_Sweden.pdf>



Hon. Fred Upton
Chairman
Energy and Commerce Committee
US House of Representatives 2125 Rayburn House Office Building
Washington, DC 20515

Hon. Greg Walden
Chairman
Communications and Technology Subcommittee
Energy and Commerce Committee
US House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515

Re: Updating the Communications Act

Dear Representative Upton and Walden,

We are a research group at the Department of Management at London School of Economics(LSE) active in the area of innovation and technology management. It has expertise in research and analysis of organisations, industries, markets and policies. The team is led by Dr Jonathan Liebenau, Reader in Technology Management.

To the extent that you are contemplating updating the Communications Act, you should take an evidenced based approach. Our group has defined some of these metrics in our presentation

http://www.caida.org/workshops/wie/1312/slides/wie1312_jliebenau.pdf

In general, telecom regulators have created laws that are incompatible with the internet's architecture. Some incumbent networks are held to be distinct while other networks are "governed" by "market forces". These distinctions are no longer tenable in the world where information and communication are global. Regulators are still focused on obsolete paradigms and problems. Furthermore metrics need to be redefined to full econometric analysis.

To the extent that your update can reflect reality would be an improvement over the status quo.

Sincerely,

Jonathan Liebenau PhD [REDACTED]
Silvia Elaluf-Calderwood PhD [REDACTED]