

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

In the Matter of:	)	
	)	
Framework for Broadband Internet Service	)	**GN Docket No. 10-127**
	)	

COMMENTS OF INFORMATION TECHNOLOGY AND INNOVATION FOUNDATION

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[1] ITIF is a nonprofit, non-partisan public policy think tank committed to articulating and advancing a pro-productivity, pro-innovation and pro-technology public policy agenda internationally, in Washington and in the states. Through its research, policy proposals, and commentary, ITIF is working to advance and support public policies that boost innovation, e-transformation and productivity.

The Information Technology and Innovation Foundation (ITIF) is pleased to offer the following comments regarding a regulatory framework for broadband Internet service. ITIF has long advocated a Third Way approach to Internet regulation in the context of the net neutrality controversy and is deeply engaged in the matter of regulatory frameworks that recognize the Internet's unique characteristics and value to society.[2]

Summary

The Internet is the fruit of 35 year experiment in the novel technology known as *packet-switching*, but it is far from finished. It is therefore unwise to shoehorn the Internet – and make no mistake about it, the broadband networks that connect residential and small business networks to Internet Exchange Points (IXPs) are just as much parts of the Internet as the multigigabit/second links that interconnect content servers to the same IXPs – into a legacy legal framework devised for networks of an entirely different technology operating in an entirely different market structure.

The case has not been made that the broadband Internet services in the United States are on the brink of either stagnation or collapse without the expedited rulemaking proposed by the current Notice of Inquiry: Broadband adoption continues to improve, speeds are increasing, and price/performance is moving in the right direction. The FCC's recent consumer survey found that the overwhelming majority of broadband users are satisfied with their service:

> Most Americans are satisfied with the broadband speed they are getting. Fully 91 percent of broadband users say they are "very" or "somewhat" satisfied with the speed they get at home. The comparable number for mobile broadband, which is not yet technologically capable of the same speeds as home broadband, is 71 percent satisfaction. As a point of comparison, 92 percent of cell phone users are very or somewhat satisfied with their cell phone service overall.[3]

The NOI cites two class action settlements regarding terms of service as evidence of harm; but these instances have been settled without FCC involvement.

Consequently, the logic for an immediate reclassification of Internet services under Title II is weak. Reclassification will have negative consequences, some of them severe, and it's unlikely to arm the FCC with the power over ISPs that it seeks because of the platform nature of the Internet. It's therefore unwise policy. We believe that the proper venue for this policy change is Congress.

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[2] Robert D. Atkinson and Philip J. Weiser, *ITIF: A "Third Way" on Network Neutrality*, report (Washington, DC: Information Technology and Innovation Foundation, May 30, 2006), http://www.itif.org/index.php?id=63.

[3] "Press Release: FCC Survey Finds 4 out of 5 Americans Don't Know their Broadband Speeds" (Federal Communications Commission, June 1, 2010), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-298525A1.pdf.

There is no Policy Consensus

Fifteen years of discussion have not yet brought us to a consensus framework for Internet regulation. This is not only the reality in the United States; our neighbors in Canada and Europe have concluded that disclosure has more value at the current stage of the Internet's development than regulations adapted from earlier technologies. They recognize that network management practices are dynamic, and deviation from the telephone network standard of equal narrowband service for all doesn't translate well to a system that provides high-performance broadband service at affordable prices by pooling resources and operating on statistical assumptions.

Before solidifying the legal authority to regulate the Internet, we have to reach a policy and technology consensus about the regulations that this authority should impose, and we aren't there. We believe that the task of developing this framework falls squarely within the responsibility of Congress.

The current law is ambiguous at best regarding the Internet's regulatory status, as both the FCC and the Supreme Court declared in the *Brand X* case. The distinction between Title I and Title II services fails to capture the nature of Internet communication services, which are by their nature dynamic, software-controlled and information-rich in ways that no prior system of communication has ever been. Similarly, the demand that network operators simply refrain from taking actions that might degrade the performance of any particular application, such as peer-to-peer (P2P) file transfer, below its desired level fails to acknowledge the fact that such failure to act necessarily degrades the performance of most other applications, sometimes to the point of distraction. The NOI makes frequent mention of the *Comcast* case in just such terms. The engineering problem of harmonizing P2P with emerging real-time applications such as mobile video calling is serious and unsolved; half a dozen committees within the Internet Engineering Task Force (IETF) are working on it today. Yet the NOI seems to suggest that such problems are trivial; how else can we believe that the authors of the 1934 Communications Act devised an anti-discrimination construct that anticipated this problem before the Internet was even a dream?

Congress is Updating the Communications Act

When Congress passed the 1996 Telecommunications Act, the commercial Internet was still quite nascent. Therefore, it could not have been expected to adequately address the issues surrounding Internet regulation in the Act. However, Congress is now working on an update to the Communications Act that is intended to resolve the Internet's regulatory ambiguity and clarify the FCC's role. This amended Act may emerge quickly, or it may not. Understanding the aspirations that America has for the Internet as well as the developments in technology and economics that must take place in order to satisfy them may very well be a slow and arduous process. There is no need to short-circuit these needed policy deliberations.

Self-Regulation Has Worked Well for the Internet

The Internet economy and ecosystem has always featured an extraordinarily high degree of stakeholder cooperation. This dynamic is sometimes called "co-opetition" because it entails cooperation to develop standards and practices in parallel with market competition to sell products and services. Unique institutions have been developed around the Internet, such as the IETF and the North American Network Operators Group (NANOG) to harmonize standards and operational practices, at great expense to stakeholder firms because they recognize the necessity of cooperation and information transparency. The firms that jointly develop Internet standards compete with each other fiercely to offer the most attractive products and services. For example, after Comcast experimented with ways to better manage P2P traffic on its network in order to provide the best broadband experience for its customers, it worked cooperatively with key stakeholders, including P2P provider BitTorrent, Inc., to develop new and more effective techniques. The dynamic of stakeholder cooperation is more powerful than national regulation, as it spans the globe and crosses political boundaries. It's not going to stop because of the DC Circuit's ruling in the *Comcast* case.

Title II is a Last Resort

The FCC is understandably in an uncomfortable position with the law. It's the FCC responsibility to ensure that communication networks are well behaved, at least within the boundaries of the United States. The broadband Internet is the most significant developing system for communication, and the Communications Act doesn't say in clear and unambiguous language who is to ensure that broadband Internet services are all that they should be. It's possible, if unlikely, that some unscrupulous operator or application provider may try to pull a fast one on its customers (or competitors). The Internet is a complex technical system that's poorly understood by the lay public. The consumer survey cited above showed, for example, that 4 out of 5 Americans don't even know what broadband speed they should expect. It's a rapidly changing system (one reason we don't know what speed we're supposed to get is that operators have a nasty habit of giving us higher speeds without increases in price or great fanfare.) However, the rich constellation of non-government Internet watchdogs, including consumer advocacy groups, bloggers, and the media, would likely play a key (and needed) role in identifying any potential abuse and by so doing bring pressure on the company to change course.

Given that, what would the FCC do if such an instance of abuse were to arise, one that could not be settled by the Federal Trade Commission, a class action suit, or public exposure and pressure, while Congress is diligently amending the Communications Act? If that constellation of factors came together – a serious problem that could only be resolved by the FCC asserting Title II authority over Internet Service Providers – it probably would be appropriate to reclassify Internet services. The threat of reclassification was at least part of the power that made Chairman Powell's Internet Policy Statement effective. When the former Chairman introduced his Four Freedoms, he essentially offered them as part of a deal. As long as these principles were honored, there would be no need to regulate broadband networks according to legacy guidelines.

Network operators would be free to innovate, to upgrade networks, and to sell increasing tiers of service for increasing prices. The threat of Title II regulation was powerful because it represented a "nuclear option" that no one wanted to see. That was the case in 2002, and it's still the case today.

It's Best not to Use the Nuclear Option

The moment the FCC imposes Title II with forbearance on the broadband Internet, the threat loses its power and the real implications take hold, some of which might be difficult to envision today and some of which will have negative implications on investment, innovation and effective network management. These have been described in great detail by the network operators and investment analysts and need not be repeated here.

Title II is a last resort. It should only be imposed if all other means of protecting the public from harmful behavior fails. There are many options available to the FCC short of the "nuclear option," and these must be tried and exhausted before going this way, as it will be extremely difficult to switch back to Title I at a later date. The stakes are innovation and investment, especially in the mobile broadband systems that are the keys to greater prosperity and improved quality of life in the 21st century.

The FCC was Wrong on the Facts in *Comcast*

The ITIF believes that the FCC decided the *Comcast* case wrongly on the facts, in part because the Commission failed to conduct an independent fact finding and simply relied on hearsay testimony to determine what actually happened. The descriptions of the Comcast case in the NOI indicate that the Commission still has gaps in its understanding of this incident.

In paragraph 1, the NOI describes Comcast's action as "secretly degrading its customers' lawful Internet traffic," a partial and misleading description of an action that degraded a class of non-interactive, non-real-time traffic commonly associated with digital piracy and used by a small number of people in order for paid services such as Vonage to perform better. In paragraph 8, the NOI mentions the Commission's desire to "prohibit practices of a major cable modem Internet service provider that involved secret interruption of lawful Internet transmissions, which the Commission found were unjustified and discriminatory and denied users the ability to access the Internet content and applications of their choice." Most of transmissions in question were delayed rather than denied, and it's unlikely that more than a handful were "lawful."

It's perfectly legitimate for a network operator to delay high-volume applications that have loose time requirements in order for low-volume, delay-sensitive applications to perform successfully. If this is a hint at the Commission's proposed anti-discrimination rule – that all packets must be treated the same way regardless of application requirements, data value, or the effect of high-volume users on others – it would best if it took a step back and reflected before regulating. In paragraph 26, the Commission argues

its case once again, describing the network management practice as an example of "unreasonable traffic disruption practices."

One thing that should be clear, however, is that imposing Title II regulation on Comcast's Internet Services would not grant the FCC the power to enforce such an action.

The NOI says that it's not the Commission's intent to regulate non-facilities-based ISPs under Title II. Yet the action that Comcast took – reducing the number of active TCP Virtual Circuits between P2P servers (sometimes called "seeders") and parties known in P2P parlance as "leechers" who were not necessarily Comcast customers by introducing TCP Resets – is an action that a non-facilities-based ISP could take just as easily as Comcast did. Comcast actually employed this technique because upgrades it desired to deploy in its network were not available for a time, and their customers who were using third-party VoIP services which were adversely affected by P2P were complaining about poor call quality.

If Title II with forbearance would permit a non-facilities-based ISP operating over a network such as Comcast's to manage P2P using Resets, how could the Commission reasonably prevent facilities-based-ISPs from employing exactly the same technique? It seems arbitrary to impose different rules to firms who facilitate TCP communication depending on whether they own the facilities that serve as a platform to enable TCP. In other words, such a distinction could have the very real effect of allowing non-facilities-based providers to provide a superior service while preventing facilities-based services from doing so. It would be extremely ironic if the FCC were to adopt a regulatory classification which had the effect of stimulating litigation, reducing innovation, chilling investment and distorting the marketplace if the classification did not even effectuate the policy that the agency seeks to impose.

The Internet is a Collection of Platforms

We should understand that the Internet is composed of multiple platforms (sometimes called "functional layers",) each of which combines a transmission service and an information processing service. These platforms fit together like a layer cake, and their dual nature derives from their relationships to higher and lower layers. DSL service provides transport to the (higher) Internet Protocol layer, and information processing to the (lower) copper pair. Internet Protocol provides transport to TCP, but it's an information processing function to DSL.

Many Internet applications have a similar dual nature: Twitter is platform that provides message transport services through an Application Program Interface (API), and employs information processing to utilize the Web for transport. Because the Internet is a collection of platforms on top of platforms, any attempt to draw a single dichotomy between transport and information is arbitrary. Therefore, the regulatory carve-out of broadband service from the rest of the Internet is troublesome. The logic for such a carve-out of dial-up from an ISP made some sense, because there was a unique activity

involved in dialing the ISP from using the Internet once connected. Always-on broadband doesn't require dialing up, of course.

Conclusion

The rational approach to interim Internet regulation is for the FCC to work with the network operator community to devise self-regulatory standards and guidelines that can be guided and influenced by the Commission. Some legal avenues exist within the Title I framework, as Professor Werbach and others have suggested.[4] For the time being, the case for Title II regulation has not been made so this would be an unwise course to follow.

[4] Kevin Werbach, *Off the Hook*, 95 CORNELL L. REV. 535, 571-98 (2010). Cited in the NOI at page 21.