



- The significance of network congestion to the above considerations
- What consumers need to know about network management practices to make informed purchasing decisions and use of the services they purchase

All the views expressed in this comment are mine and mine alone. My comments are not affiliated with and do not represent the views of Villanova Law School. Once again, I thank the FCC for the opportunity to comment and for their consideration of my comments.

### **My Background**

I came of age in the era of affordable home computers. I began to use the internet at a very young age in school and at home. These early internet experiences were as a dial up internet user. I then began to use broadband internet when I went to college. I been fortunate enough to use broadband internet ever since. I have no formal education in the technology that underlies the internet. But despite my lack of formal education, I am well versed and could be considered a power internet user. My comment, therefore, is not that of the casual internet user, but it does not reach the level of an IT professional. I thank the Commission for their consideration of my views and the opportunity to express my concerns.

### **My Comments**

#### **1. THE FCC IS THE CORRECT AGENCY TO PROVIDE THE NECESSARY REGULATORY GUIDELINES IN THIS FIELD, DESPITE ITS CURRENT INABILITY TO REGULATE NETWORK MANAGEMENT PRACTICES.**

##### **A. The FCC does not have explicit statutory authority to promulgate this Rule.**

The FCC does not have the explicit authority to regulate the internet under its enabling statute. The FCC was given authority in 47 USC §151 to “regulat[e] interstate and foreign commerce in communication by wire and radio.” The 1996 amendment of the Act did not give the FCC jurisdiction over the internet. Section 201(a) of the Act, establishes an obligation for every common carrier engaged in interstate communication by wire or radio to furnish such communication service upon reasonable request. Section 201(b) says that the fees, methods, classifications, and regulations regarding that communication must be just and reasonable. But the difficulty is that internet service providers (hereinafter “ISPs”) do not qualify as common carriers, and thus are not bound by that section of the Act.<sup>1</sup>

ISPs do not qualify as common carriers because the FCC classified them as information services.<sup>2</sup> The Supreme Court affirmed the FCC’s classification and acknowledged that cable internet service does have a telecommunications component, and that that component is part of a larger “offering” classified as an information service.<sup>3</sup> This classification of the internet as an “information service” meant that the FCC could not regulate the internet under either Title II or

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<sup>1</sup> See National Cable & Telecommunications Ass’n v. Brand X Internet Services, 545 U.S. 967 slip op. (2005) (hereinafter Brand X)

<sup>2</sup> Brand X, 545 U.S. at 978,991.

<sup>3</sup> Id. at 991.

Title VI.<sup>4</sup> Therefore, the Court stated that the FCC should impose regulations on the internet under its Title I ancillary jurisdiction.<sup>5</sup>

**B. The FCC does not have jurisdiction ancillary to its Title I authority to promulgate this rule.**

Because the FCC's authority did not have authority over ISPs as common carriers, they attempted to claim jurisdictional authority ancillary to Title I of the Act. The Commission based their claim on two sections of the Communications Act.<sup>6</sup> Despite these claims, the District of Columbia Circuit Court of Appeals (hereinafter the "DCCA") recently held that the FCC does not have the power to regulate the network management practices of cable internet service.<sup>7</sup>

The DCCA examined the FCC's claim of ancillary jurisdiction pursuant to Comcast Corporation's challenge to a FCC management order under the test they had created in American Library Ass'n v. FCC. Under the test, the FCC must meet two conditions to exercise ancillary jurisdiction: the regulated subject must be covered under the Commission's general jurisdictional grant in Title I of the Communications Act and the regulation must be "reasonably ancillary to the Commission's effective performance of its statutorily mandated responsibilities."<sup>8</sup> The order under review met the first condition because the internet qualifies as "interstate and foreign communication by wire" as defined by Title I.<sup>9</sup> The FCC's failure to meet the second condition, however, led to the DCCA's ruling against the FCC.

The FCC unsuccessfully attempted to pre-empt the second condition through two arguments: that Comcast's previous acquiescence to the FCC's ancillary jurisdiction stopped this current claim and that the Supreme Court's recognition of the FCC's ancillary jurisdiction in Brand X had already decided the jurisdictional question.<sup>10</sup> The DCCA held that the Commission's ancillary authority over cable internet service providers granted under Brand X, only gave the FCC the authority necessary to make companies unbundle the components of their service.<sup>11</sup> The Court went on to state that each exercise of ancillary jurisdiction must be independently justified by statutory language.<sup>12</sup> The DCCA ruled that the language the Commission relied upon was not a statutory grant of jurisdiction to regulate in the area and the additional sections of the Communication Act that the Commission cited were actually policy statements. Thus they did not qualify as the statutory expression necessary to exercise ancillary

<sup>4</sup> Comcast Corp. v. FCC and United States, No. 08-1291, slip op. at 12 (D.C. Cir. 2010), available at <http://pacer.cadc.uscourts.gov/docs/common/opinions/201004/08-1291-1238302.pdf>. (hereinafter "Comcast Corp v. FCC").

<sup>5</sup> Brand X at 996.

<sup>6</sup> "The Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this chapter, as may be necessary in the execution of its functions." 47 U.S.C. § 154(i)

"The Commissioner may prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of this Act." 47 U.S.C. § 201(b)

<sup>7</sup> See Comcast Corp. v. FCC.

<sup>8</sup> American Library Ass'n v. FCC, 406 F.3d 689, 691-92 (D.C. Cir 2005).

<sup>9</sup> 47 U.S.C § 152(a)

<sup>10</sup> Comcast Corp. v. FCC, slip op. at 8

<sup>11</sup> Comcast Corp. v. FCC, slip op. at 16

<sup>12</sup> Id.

jurisdiction.<sup>13</sup> Consequently, the DCCA ruled that the FCC could not regulate the network management practices of cable internet service providers.

The result of this ruling is that the future of this Notice is now in question. The boundaries and true scope of the ruling have not yet been established. The FCC does not have the power to regulate the network management practices of cable internet service providers, but as I will argue below, the internet must be minimally regulated. Therefore, the FCC must gain jurisdiction using one of the methods discussed below and in the interests of the public good promulgate some sort of minimal regulation.

**2. THE PRESSING NEED FOR MINIMAL REGULATION IN THE FIELD WILL LEAD TO A SOLUTION WHEREBY THE FCC WILL GAIN JURISDICTION AND REGULATE IN THE FIELD, DESPITE THE DC CIRCUIT'S RECENT RULING STRIPPING JURISDICTION.**

**A. The efforts to maintain a free, open, and neutral internet are so vital that a broad set of guidelines to preserve those aspects of the internet must be adopted.**

The internet is so vitally important to our nation's future that it is imperative that the internet be regulated despite efforts to the contrary.<sup>14</sup> The FCC is correct when it states in the Notice that regulations are crucial to ensure that there is a level playing field that encourages widespread internet access, adoption of best practices and equitable consumer outcomes. The FCC accurately describes the central role the internet has taken in modern life and enumerates the services we often take for granted in the Notice. The internet's ubiquity, ease of access and its central role in our daily lives as a marketplace of commerce and communication underscore the need for a set of minimal regulations to protect the internet as we know it. In making the case for regulation, one also must address the issue of "if regulating the internet, why must it be regulated now?" The answer to that question lies in the ubiquity of the internet, its entwinement in our daily lives and our dependence on it. A brief history of the progression of internet adoption will illustrate that ubiquity and highlight why the regulations must be put in place now.

As mentioned in the Notice, the internet is decades old. The last significant statutory amendment to the Communication Act was in 1996, as the internet was becoming widely available and affordable residentially, but before the internet's omnipresence in daily life and our dependence on it. Broadband technology was initially limited to government and educational institutions. But recently broadband has become more extensively available and affordable in residential settings. This initial adoption of residential broadband internet was a wired one. Broadband was originally accessible via digital subscriber line (hereinafter "DSL") which used subscribers' phone lines, then progressed into being available over cable lines and was often part of users' cable television package. The internet is now also available via fiber optic cable service. Wireless access to the internet was limited to home networks. But that too is in the process of changing.

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<sup>13</sup> Comcast Corp. v. FCC, slip op. at 22-36.

<sup>14</sup> See Internet Freedom Act of 2009, S. 1836, 111th Cong. (2009). See also Comcast Corp. v. FCC and United States, No. 08-1291, slip op. at 12 (D.C. Cir. 2010), available at <http://pacer.cadc.uscourts.gov/docs/common/opinions/201004/08-1291-1238302.pdf>.

The growth of the cell phone industry and the creation of the smartphone (or internet enabled cell phone) have also created greater internet penetration in daily society. The growing omnipresence of cellular phones that allow constant and real time access to the internet has led to greater demands on the internet system. There are also a growing number of other devices that will be using that broadband cellular network as well: traditional devices such as laptops equipped with broadband cards, as well as new technology. One example of that new technology is the tablet or slate (such as the iPad). This proliferation of devices wirelessly accessing the internet will place extraordinary demands of a heretofore unseen level on our already overworked internet network. Because of the limitations on bandwidth available due to broadcast television, radio, and cellular phones, there is only so much of the spectrum the FCC can allocate to and auction off for wireless broadband. Even if the FCC does eventually force out other users in favor of wireless broadband internet access, the spectrum is still a much more limited resource than regular wired broadband. This coming demand for wireless broadband internet access makes it of paramount importance that some sort of regulatory framework be put in place to maintain the balance between usage, rates and innovation. This lack of spectrum available to increase bandwidth further supports the need for regulation of network practices.

**B. The FCC must gain regulatory jurisdiction over the internet because it is the best agency to carry out this regulation.**

The FCC is the best entity to regulate the internet by rapidly and efficiently deploying minimal regulations that can maintain the balance,<sup>15</sup> permit progress and encourage innovation and investment. There are three ways the internet can be policed. The first two are governmentally based: regulations promulgated by an agency or legislation promulgated by Congress. The final option is to let the market regulate by allowing the participants to regulate themselves. Of these three options, the final option cannot be seriously considered. That option is not viable because the fox cannot be in charge of the hen house. Placing the power to regulate in the market would leave internet users helpless at the hands of service providers and would effectively create monopolies for the internet service providers. Additionally, under this system, any attempts at regulating would involve titanic clashes between big businesses with the consumers and original service providers caught in the middle.

Therefore, a non-partisan, non-invested entity with the ability to create guidelines and enforce them must be in charge of regulation. Congress has the ability to create guidelines through legislation, but it lacks the necessary enforcement capacity. Only a regulatory agency possesses both the rulemaking and enforcement capabilities necessary for efficient progress in regulation. The next question is which regulatory agency should be responsible for regulating the internet. The Federal Trade Commission could be argued to be a logical choice because of the internet's large scale commercial role. It makes more sense, however, for the FCC to be the agency to regulate. The internet is delivered in two main ways: via wire and via radio wave. Both of these means of communication are within the FCC's ordinary scope of regulatory authority. Unfortunately, Congress' grant of statutory authority has lagged behind the times. The FCC is the most knowledgeable agency regarding these matters and therefore it is most efficient to have the FCC be the agency that regulates the internet, and before things become out of control.

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<sup>15</sup> See discussion below in Section 4.

**C. The FCC could gain jurisdiction to regulate the internet in a variety of ways, but the most successful method will likely involve a combination of these options.**

There is no one perfect path for the FCC to follow on its quest to gain jurisdiction. Each of the options presented below has their drawbacks. Some may take too long to implement. Other options are not final and could be subject to future judicial challenges. Some reverse the FCC's judicially approved actions. Some may be the right short term solution but may not fix the problem in the long term. Thus, it is likely that the FCC may chose to pursue a course of action that combines more than one of these options.

*i. The best long term single method for the FCC to gain jurisdiction to regulate the internet is through statutory mandate.*

The FCC's greatest chance of long term success in regulating the internet lies in Congress passing a bill giving them statutory authority to regulate the internet. As mentioned above, there are pending legislative efforts to define the FCC's authority to regulate the internet.<sup>16</sup> The FCC would have its necessary jurisdiction if one of them is passed.

The first dilemma with these two bills under consideration is that they are at cross purposes. The bill in the House of Representatives proposes to give the FCC jurisdiction over the internet. The proposed statutory authority encompasses the very same areas the FCC seeks to control through this Notice. The bill in the Senate, without fanfare or explanation, removes the internet from FCC jurisdiction. Any legislative efforts would have to be able to pass both the House and Senate, and the current opposing viewpoint of the bills under consideration makes it a serious concern that this is not a foregone conclusion. Thus, the FCC is not guaranteed successful jurisdiction should it pursue this solution.

Additionally, the amount of time it would take for the FCC to gain jurisdiction in this manner could pose a problem. If the FCC needs to regulate immediately in this area, then the legislative process may not suit their needs. The legislative process is not known to be rapid. Therefore, it may be better if the FCC seeks to overcome that time limitation by also seeking other methods of achieving jurisdiction.

I support the FCC minimally regulating the internet. I feel that the House's bill accomplishes that minimal regulation. The House's proposed Bill strikes an appropriate balance in the amount of authority it grants to the FCC to regulate the internet. Furthermore, it addresses some of the ambiguities the FCC created in this Notice. It presents a preliminary definition of network management practices and establishes a standard of review.<sup>17</sup> It also provides a clearer definition of what network management practices ISPs should be disclosing to IUCs.<sup>18</sup> Despite these benefits, the FCC should still pursue some of the other methods of gaining jurisdiction at the same time. This would allow the FCC to address the time limits and hedge against an unfavorable Congressional outcome.

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<sup>16</sup> Compare Internet Freedom Preservation Act of 2009, H.R. 3458, 111th Cong. (2009) (available at <http://www.opencongress.org/bill/111-h3458/text>) and Internet Freedom Act of 2009, S.1836, 111th Cong. (2009) (available at [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111\\_cong\\_bills&docid=f:s1836is.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:s1836is.txt.pdf)).

<sup>17</sup> H.R. 3458 at 8-9 (2009).

<sup>18</sup> H.R. 3458 at 9.

*ii. The FCC's best chance of success lies in utilizing other methods besides statutory mandate to gain jurisdiction.*

The FCC has a variety of other options to gain jurisdiction over the internet in addition to legislative action. The FCC could challenge the DCCA's ruling in the Supreme Court. They could attempt to partner with another agency to promulgate internet regulations. They could reverse their classification of internet service providers as "information services" and instead classify them as common carriers, thus allowing regulation under their Title II jurisdiction. They could seek to have the internet classified as a public utility and regulated as such. Or they could use the conditions made as part of the Comcast-NBC Universal merger as a method of regulating Comcast's network management practices. If those conditions are fulfilled, then the FCC could use them as the wedge that opens the door to further regulation.

But each of these solutions comes with their own limitations. Two limitations that they have in common with the legislative route are time and uncertainty of outcome. The FCC would be in a holding pattern until the Supreme Court granted certiorari and then heard and ruled on their appeal. But the Supreme Court could deny certiorari. If the Court does hear the case, they could still rule against the FCC. Attempts to regulate with the help of another agency or by classifying as a utility may not pass judicial review either.

Reclassifying the internet as a common carrier is the solution that is quickest to implement, but it raises its own unique problems. There is a large body of regulation that the FCC could attempt to apply to internet services. The issue with that is some of it was designed specifically with telephone services in mind. The FCC could adopt a pick and choose method of application, but then that would leave other areas open and require further regulation. If the FCC makes ISPs common carriers, there is also a risk to the deployment of broadband lines and future investment. If the ISPs, like the phone companies, are required to allow all ISPs to use their networks, then it could create a disincentive for ISP investment in innovation and the deployment of additional broadband. Finally, the court could also become involved if the FCC reclassifies the internet as a Title II service. The Supreme Court already ruled in Brand X that the internet did not classify as a Title II service and thus the reclassification would likely fail judicial review. Therefore, I caution against the FCC seeking the quick fix and reclassifying the internet as a common carrier. Although it may take longer, I still believe that some sort of unassailable statutory mandate of jurisdiction is worth the time spent pursuing it. The FCC should also appeal the DCCA's decision in the Supreme Court as well.

**3. THE FCC, WHILE CORRECT IN ITS AIMS, HAS CREATED A RULE THAT WILL CAUSE AN OUTCOME THAT DIRECTLY OPPOSES ITS STATED GOAL.**

The FCC has correctly identified the need to maintain the open spirit and freedom of access that has guided the development of the internet. The FCC's role, however, should not be that of the intrusive and meddling regulator, but rather one who codifies the rules that already exist with minimal intrusion on the current system. The FCC can address inequities in the system, but it must always be mindful of the possibility and consequences of over regulation. I have no doubt that the intentions behind this Notice are noble. But if it were adopted as currently written, it could lead to an outcome contrary to what the FCC is trying to accomplish.

One aspect of the Notice that could lead to such an outcome is that the Notice has neither a standard of review, nor any indication of who bears the burden of proving violations of the

Notice. It appears that all of the adjudicatory proceedings arising out of this Rule will be based upon the reasonableness of measures taken to regulate the network. It appears that the burden of proving the management practices' reasonableness will be assigned at the discretion of the FCC. As shown below, the lack of a defined standard of review and assigned burden of proof could very easily lead to unequal regulatory outcomes. If the FCC's goal is to protect internet users and foster innovation, then they would be best served by putting the initial burden of proof on the ISPs.

If the FCC puts the initial burden of proof on the internet service providers are more likely to achieve their goal of an open internet. There is an obvious information asymmetry between the ISPs and internet users and consumers (hereinafter "IUC"). There are also enormous information costs in proving a violation of the proposed terms of the Notice/Rule. Of the two sides involved (the ISPs and the IUCs), the ISP has better access to information about the state of the industry, what is reasonable, and what is appropriate. Furthermore, the ISP has access to the measures it has taken to regulate its networks. Thus, the ISP is on the more informed side of the information asymmetry. Because it is on the more informed side of the asymmetry and because it is the party responsible for the measures in question, the ISPs have the lower information costs. The size and resources of the ISPs also make them better able to bear that lower cost of producing the information.

The information asymmetry and costs make it irrational to expect individual consumers to acquire the correct and necessary information to prove unreasonable ISP network management practices. There is every incentive for the ISP to withhold information, misrepresent information, or generally behave intractably. Nonetheless, it still might behoove the FCC to establish some sort of rebuttable presumption for unreasonableness of use. There could be consequences if the FCC puts the burden of proof solely on the ISPs. By doing so it is possible the FCC will create a grey area where OSPs and IUCs could get away with unreasonable behavior because the ISP cannot meet the required standard of proof. Should this happen, this would once again alter the balance and could have negative consequences on investment, as discussed in Section 4(A) below. Therefore, it may be best to make the burden of proof shift in the proceedings. If the ISP can prove reasonableness, then the burden could shift to the IUCs to disprove the reasonableness. This could help maintain the balance. Alternatively, the FCC could hold some sort of hearing before the actual adjudication to establish parameters for reasonable network management practices in the situation that is under review and create opportunities for a more equitable outcome. The proposed House bill gives an example of some of the factors that could define reasonableness of a management practice, including particular network architecture and technology limitations of the ISP.<sup>19</sup>

**4. THERE IS A BALANCE THAT MUST BE MAINTAINED FOR INNOVATION AND INVESTMENT IN THE INTERNET AND BROADBAND DEPLOYMENT TO OCCUR.**

The internet has grown both because and in spite of the tensions created by its development. For it to continue to grow and develop, any regulations must maintain the precarious balance of those tensions. The internet has always been a system that has operated and flourished in the presence of an underlying tension brought about by fundamentally incompatible goals that have led to great innovation. The tension is created by a balance of sorts.

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<sup>19</sup> H.R. 3458 at 9.

On one side are the IUCs and original service providers (hereinafter “OSP”). On the opposing side are the ISPs. The OSP and IUC goal is to utilize the entirety of the existing bandwidth and have plans for whatever future bandwidth they can access. The ISPs goal is to get the most users subscribing to their service and using their existing bandwidth. At the same time the ISPs are trying to maximize the bandwidth they can provide, maximize their profit, and minimizing cost. The goals and interests of the parties on each side of the balance have the effect of spurring the internet’s development. Each group’s interests push the other side to improve. Every increase in bandwidth drives the IUCs and OSPs to find new ways to use it. Every IUC and OSP using the internet represents potential profit for the ISPs and so they try to both increase their bandwidth and better manage their delivery services to capture more IUCs and OSPs from the unsubscribed masses or by luring subscribers away from other ISPs. Out of the struggle between these two groups the internet has grown, and any regulations passed must preserve that balance.

**A. The rule as currently proposed is vague and the inevitable inconsistent interpretations after adoption would lead to the destruction of the balance and a have a negative effect on investment.**

Any measures taken to promote investment and innovation in the internet and in broadband are dependent on maintaining the balance described above. The parties’ investments and innovations are closely linked to their interests. ISPs invest in more bandwidth as long as it creates a profit. In the alternative, when they cannot efficiently invest in more bandwidth, they manage their bandwidth to support more users, and to get more use out of the existing bandwidth. On the opposite side of the balance, OSPs and IUCs invest in new devices and technologies to improve their internet access and experience. They also will buy upgraded subscription plans to get faster internet speeds and more bandwidth.

If the FCC, through the regulatory process shifts the balance of power and favors one group over the other, it will have negative consequences. If the regulations favor the IUCs by poorly defining network practices or creating a presumption against the network management practices of the ISPs, then incentive to invest will decrease and the amount of money they invest will decrease too. In order to achieve growth, their only option will be to invest in more high speed internet lines. But at the same time, they will be less likely to invest in that network infrastructure because they will be hampered in their efforts to manage the new lines.

**B. This alteration of the balance could have negative consequences for competition in the internet and the broadband market.**

If the FCC does not preserve the balance between the parties, as described above, it is likely there will be resulting negative consequences to competition. These consequences effect competition regardless of which side is unbalanced. If the FCC favors the ISPs, then they run the very likely risk of creating monopolies. They will reduce the very competition in internet service they are seeking to create. They will make affordable pricing a problem and will punish the IUCs they sought to protect. But if the FCC favors the IUCs, then there will be issues with competition in the market. Because of the effects on investment described in the previous section, ISPs are not likely to want to invest in and compete in new markets. They will not outlay the huge amounts of capital to enter and develop new markets and therefore consumers will suffer. In that case, the government could be forced to be the entity that lays the cable to supply internet to those areas and provide service, which would be anything but a minimal undertaking and would lead to non-minimal regulation in no time.

There are also other factors that could be greatly detrimental to maintaining a neutral and competitive market, should the notice be adopted as written. The proposed merger between Comcast and NBC-Universal has the potential to have such an effect. If the merger is approved, once again a cable and internet service provider will also be a large scale content creator. This merger raises some concerns. First is how one could ever trust any measure taken by the ISP to manage its networks to be reasonable. There would be an incredible incentive for the merged entity to always act in their economic best interest by providing false or altered information to prove reasonable network management. They could also ignore regulations and the resultant penalties the FCC would levy upon them. The merged entity, because it created and delivered its content would take measures, whether subtle or overt, to favor the material it created in delivery. The information costs and cost of constant regulation and adjudication could prove prohibitive.

There may be a temptation to compare the merger of Comcast and NBC Universal with the merger of AOL and Time-Warner, and to predict failure for this merger as well. That comparison is not applicable here. The players may fall in the same descriptive categories but those labels fail to take into the one main factor that is different in this merger. At the time of the AOL-Time Warner merger, the internet had not yet reached the ubiquity and penetration that it currently enjoys. The greater demand brought about because of the central role of the internet in our daily lives and our media consumption will most likely ensure the success of this merger. It seems like this merged company would be too big to fail.

**5. THE INTERNET IS AN UNPARALLELED FORUM FOR FREE SPEECH AND IS BECOMING AN ARENA FOR CIVIC PARTICIPATION; ANY RULE ADOPTED MUST MAINTAIN THE INTERNET AS AN ENVIRONMENT THAT IS FREE, OPEN TO PARTICIPATION AND WITHOUT DISCRIMINATION.**

The internet is an incredible forum for communication. New ways of using the internet as a low cost and universally accessible method of communication are being explored and developed daily. From social networking, to genealogy, to rediscovering lost classmates, to e-mail and instant messaging, the internet offers a one of a kind opportunity for individuals to connect with other people around the world. One area where people with shared views are starting to use the internet to communicate is in the political arena. The internet is becoming part of political campaigns and a place for the government to disseminate information to the electorate.<sup>20</sup> The low cost of entry and ease of use are making the internet the new engine driving the democratic process. The internet must be totally neutral to nurture that democratic process. The problem is that if the internet is anything but truly neutral, then censorship could masquerade as reasonable network management practices. If the FCC plans to use reasonable network management as the standard to judge ISP actions, then to avoid constant adjudication, the FCC should create a protected category for political usage of the internet.

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<sup>20</sup> *How Scott Brown Friendled, Tweeted and LOLed His Way Into The Senate*, February 7, 2010 <http://www.wired.com/epicenter/2010/02/how-scott-brown-friended-tweeted-and-loled-his-way-into-the-senate/>; Claire Cain Miller, *How Obama's Internet Campaign Changed Politics*, November 7, 2008, <http://bits.blogs.nytimes.com/2008/11/07/how-obamas-internet-campaign-changed-politics/>; David Talbot, *How Obama Really Did It*, *Technology Review*, September/October 2008, <http://www.technologyreview.com/web/21222/>; The White House, <http://www.whitehouse.gov>; <http://www.regulations.gov>.

**6. THE NOTICE MUST AID CONSUMERS IN ACQUIRING COMPREHENSIBLE INFORMATION ABOUT NETWORK CAPABILITIES AND MANAGEMENT PRACTICES SO CONSUMERS CAN MAKE INFORMED INTERNET SERVICE PURCHASING DECISIONS.**

**A. ISPs must provide honest information about their network management practices and clear information about the actual parameters of the service so internet users and consumers can make informed purchasing decisions.**

The old adage “information is power,” holds true with regards to the internet; the more information consumers have, the more powerful they are. Any regulation that proposes to control network management practices, and requires some sort of disclosure of network practices must start at the most fundamental level. Before any disclosure can take place, some sort of industry standard measurement system and parameters for internet performance must be established. This standardization will allow consumers to compare information provided by competing ISPs. Without the standardization, IUCs will not be able make informed decisions when purchasing their internet service.

That standardization of measurements should start with transmission rates. Consumers have to be able to accurately compare transmission rates to make informed purchases. Consumers have to know if the transmission rates being quoted to them are the maximum possible speed under some hypothetical ideal conditions or if they average speeds over time. They need to know if the rates are measured during peak use or during off-peak use. Consumers need to know if the quoted transmission rates are affected by the user’s choice of computer and operating system, their hardware or software. They also need to know what steps, if any they can take to affect their internet experience.

Consumers should also have access to an accurate description of the network management practices ISPs employ. This description should be in understandable language with standard terms so they can comparison shop between ISPs. The most important information consumers must be able to access is ISPs’ practices to reduce and address congestion. The limiting factor in the current development of the internet is bandwidth.<sup>21</sup> As previously stated, there are two methods of addressing this limiting factor: increase the bandwidth available by laying more cable or get more out of the current cable by managing the traffic through them. No matter how much cable an ISP lays, they will always seek to manage the bandwidth to fund further business activities and therefore consumers need to have access to those management practices.

**B. IUCs need to purchase the correct service plan for their needs so ISPs can best utilize the finite bandwidth available for broadband internet, especially for mobile broadband.**

The rapid growth of the internet as described in Section 2(A) is threatening to overwhelm the ability of ISPs to provide internet service. This is especially true of cellular wireless broadband providers. Therefore, if ISPs are going to be forced to disclose network management practices and inform IUCs through industry standard measurements, the IUCs and OSPs must be

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<sup>21</sup> A limiting factor is the environmental variable that limits or slows the growth or activities of an organism. If we treat the internet as an organism of sorts, then bandwidth is the factor that is slowing the growth and activities of the internet.

subject to regulations to maintain the balance. But even without that regulation, there are measures they can take to help maintain the balance.

The first, and easiest step, IUCs and OSPs can take is to regulate their bandwidth consumption. In order for them to regulate their consumption, it is possible that the ISPs will have to disclose additional information about their personal use. But once IUCs, and by extension, OSPs, actually have accurate information about their personal consumption and accurate accounting of what services are at their disposal, there will be no reason that they cannot consume more intelligently and appropriately. They will be able to accurately assess their two needs, upstream and downstream bandwidth, and purchase a plan that is the right balance of bandwidth and price.

IUCs and OSPs may have to accept a more restrictive or less favorable pricing system in exchange for a more regulated internet. ISPs may be able to adopt pricing controls to incentivize consumers to purchase the appropriate level of bandwidth and to maintain a certain level of available bandwidth for growth. I am not opposed to ISPs creating pricing plans that are consumption based to help them remain competitive and financially viable. By creating plans that actually reflect and adapt to the stresses the IUCs and OSPs put on the system, the ISPs may be able to price their services more appropriately and continue to have the revenue necessary to invest in the development and deployment of new technology.

The area of the internet where this pricing to regulate demand is most crucial is the area of the internet experiencing the most rapid growth: cellular broadband internet access. Here, even more than with wired broadband internet, are network management practices going to be crucial. As mentioned in Section 4, the two ways of allowing more internet access are new bandwidth and better management of the current bandwidth. As mentioned in Sections 2(A) and (B), the lack of available wireless broadband spectrum and the extremely finite amount of the total broadcast spectrum makes it prudent to be as efficient as possible with that resource. Therefore, it makes sense to make every effort to incentivize consumers to behave efficiently, thus utilizing pricing to help control demand.

### **Conclusion**

The FCC's first priority must be to gain jurisdiction to regulate the internet and the network management practices of all internet service providers. I have enumerated some of the methods the FCC could use to gain that jurisdiction. The FCC's best long term method of gaining jurisdiction over the internet would be through the amendment of the Communications Act of 1934 as proposed in H.R. 3458. This would grant the FCC the unambiguous statutory authority to regulate network management practices, as well as addressing the need for network management in a much more explicit and detailed manner than this rule. In actuality, it would probably render this Notice immaterial because the objectives outlined in the Notice are actually accomplished through the Amendment. As the FCC supports the Amendment, it could also seek to pursue some of the other options at its disposal including appealing the DCCA's ruling in the Supreme Court and seeking other the aid of other regulatory agencies in promulgating rules regarding network management practices.

Once the FCC has gained jurisdiction, it must make sure to maintain the balance between the internet service providers and the original service providers and internet users and consumers. By maintaining the balance that led to the development of the internet, the FCC will

allow for future innovation and investment. To preserve the balance, the FCC must reduce information costs, hold both sides of the balance accountable for actions that destroy the equilibrium and minimally regulate to maintain that balance. Most of all the FCC must lose sight of common sense and must seek to do what is best for the country as a whole and not just the group making the most noise at any given time. I thank the Commission for their consideration of my remarks and eagerly await their next move in this new and ever evolving field.