ABSTRACT

The internet is currently a free place; where anyone can post anything provided they have a connection. However, those who control the connections want to regulate the speed and availability of content. To what extent the Internet Service Provider wants to implement these measures, and what is practical or legally viable are questions many have on their minds. The FCC wants to regulate these actions that the ISPs use to regulate internet traffic, and despite each side’s claims, there might be a practical and agreeable solution; letting the people decide.

KEY WORDS

FCC, Federal Communications Commission, ISP, Internet Service Provider, Net Neutrality, Deep Packet Inspection

1. Introduction

According to a publication on Google’s online public policy archive, “Fundamentally, net neutrality is about equal access to the Internet…Just as telephone companies are not permitted to tell consumers who they can call or what they can say, broadband carriers should not be allowed to use their market power to control activity online.” [1] Net neutrality is defined as the concept that all network communication packets (i.e. data on the Internet) are of equal value, meaning that an Internet Service Provider(ISP) should not determine which websites and which content can be accessed by a given user.

2. Proposed Work

As net Neutrality is a hot topic issue, and a very politically motivated one for a lot of people, and that some clarity needed to be introduced to the topic, without being overly technical. I want to give both sides of the issue to the reader, and what each side is doing to achieve the means they desire. This gives the reader a more informed view of net neutrality, and let them further form a more informed opinion on the matter. The goal of this work is to give the reader a better idea of what Net Neutrality is, the pros and cons of its protection, and who and what is willing to protect it. The reader is encouraged to make their own opinions on the issue.
The amount of time required can be either lengthy or minimal depending on how long it takes me to find the required information. I set the timetable as one to two weeks of finding material; and three weeks to write on it, make changes, and add new sources if needed.

3. Background

The topic of Net Neutrality is controversial, and has gained widespread attention in the media. According to the Associated Press, the major ISP Comcast is actively interfering with Peer-to-peer (P2P) connections (e.g., BitTorrent) [2]. While it is clear that Comcast instituted such active intervention to reduce the distribution of illegal content, such as unpaid sharing of copyrighted music and video, such a blanket approach negates valid uses of such P2P information sharing. Applications such as BitTorrent provide a convenient and productive way to effectively distribute and share legally obtained and produced content, as well. [4]

Many major corporations and players in the online community have supported the concept of Net Neutrality. For example, Google has taken a stance in favor of neutrality, as well as Yahoo. One ISP in the United Kingdom called Plus.net already has a tiered structure, which it says is used for distributing data, with more heavy internet usage requiring, as expected, more payment.[4] Companies that use Deep Packet Inspection(DPI) such as Ellacoya and Procera, can give their clients, the ISPs, the “ability to block, shape, monitor, and prioritize that traffic—in any direction.”[4] Plus.net actually uses the Ellacoya technology to implement their tiered service model, as well as other ISPs, although the others use them to comply with the Communications Assistance to Law Enforcement act(CALEA), an adaptation of current wiretapping laws. [4] This technology leaves those proponents of Net Neutrality up in arms not only over the possibilities of overcharging, but the infringement upon privacy.[4] This isn’t to say however, that those for Net Neutrality aren’t taking action. FCC Chairman Julius Genachowski is taking action not only against the main ISPs, but also those that provide connections for smartphones. [5] He intends to extend the “four freedoms” of the internet the FCC has outlined before: Freedom to Access Content, Use Applications, Attach Personal Devices, and Obtain Service Plan Information. [3] Basically, user should be allowed to access any legal content they desire, connect any device or application they desire to the internet, and to be educated on their internet service plan. [3] The two additions include “1. broadband providers cannot discriminate against services or applications by slowing them down. 2. broadband providers must tell customers how its engineers manage the network when it gets congested.”[5] The Chairman believes “Our work now is to make sure that, in the 21st century, the garage, the basement, and the dorm room remain places where innovators can not only dream but bring their dreams to life.”[3] The FCC also accused Comcast of slowing speed of other VoIP(voice over IP) service while increasing the speed of their own. [6] They were sent a letter by the FCC to explain why there’s evidence of these practices. [6]

As of now it seems the government is on the side of Net Neutrality, while the ISPs look to find ways around the current laws. According to Ars Technica, the company Narus, “has been working hard for the past several years at developing innovative network analysis technology, long before anyone really foresaw the popularity of VoIP in 2005. However, their software is being used in Saudi Arabia, Egypt, and even Germany to block VoIP calls from traditional phone networks.”[7] As said, US laws for the most part are protecting Net Neutrality. However Narus has other plans, according to their President of marketing Jay Thomas: “But there’s nothing that keeps a carrier in the United States from introducing jitter, so the quality of the conversation isn't good,” Thomas says. “… You can deteriorate the service, introduce latency [audible delays in hearing the other end of the line], and also offer a premium to improve it.”[7] So it seems that ISPs can, if they want to, limit usage in ways that the government can’t currently declare illegal.

There seem to be very reasonable arguments on both sides, as well as big players. Google, as said earlier, is very pro-neutrality, as opposed to AT&T who not only openly supports tiered internet services, but is planning to employ them in the near future. [8]Bob Kahn, considered one of the fathers of the internet, calls net neutrality a “slogan” and is open about being against the idea the “slogan” represents.[9] On the other hand, Tim Berners-Lee, creator of the web, believes that "One of the things I always remain concerned about is that that medium remains neutral."[10] It’s suffice to say that there really is no go-to arbiter in this situation, as it seems the debate is divided both among consumers and the tech-elite. It seems though that ultimately it will be on the public’s decision about how this debate ends; whether through political or economic means.
3. The Future of Net Neutrality

AT&T is already planning tiered service, with the promise that it will enhance internet service rather than take away from it. [8] Tiers aren’t really as new as people think. Even now when going to purchase internet service one can choose a “high speed” option. This is a little teaser for what AT&T is planning. For instance, they plan as a possibility to work with game companies to setup servers that would be for “premium” or “gaming” users of the service; an idea that may be applauded or criticized by their client base.[8] It seems despite the issue only taking center in the media recently, the idea of net neutrality has been around for a long time. The new attention might be to the idea of Quality of Service (QoS) tiering of internet services; such that as said earlier, gaming might be given priority on a “premium” service. The opponents of this system are quick to point out, however, that this may lead to a “default” package for the average consumer that is less than desirable.[8]

Is the dystopian perception of tiered services truly warranted? An editorial in the Washington Post had this point, “Allowing builders of Internet infrastructure [to charge] the Googles and Amazons for use of their network would balance the incentives for innovation more closely.” Their argument centers around the idea that if the broadband providers will have more incentive to make faster connections to satisfy their customers. [11] With the new, fast connections, the masses that the author claims favor net neutrality will be able to post their content, and compete with the big companies who have to pay more for their heavy use of the internet highway. The author argues the fear of on-neutrality being like cable are “absurd”, and that the ISPs will be more inclined to speed up service for everyone and won’t restrict it as consumers have alternatives.[11]

Although the debate is still ranging, it seems like a few things are clear for the future: The government wants solid regulation, and as of now is leaning toward a net neutral agenda, those for net neutrality want freedom of information, and those against it argue that there’s little incentive for the ISPs to provide good service. It seems that the ISPs would profit from a non-neutral internet, and that the average consumer may receive faster access to their content if there’s competition. However, given the few ISPs there are, whether this future is plausible is debatable as well. Although across the country it may seem consumers have choice between providers, but from state to state they can only choose from a few. Because of this, the idea that consumers can just leave a provider that has an ungenerous tiered service plan can seem as absurd as the idea that the ISPs would make the internet like cable. The more practical future seems to be one where the Internet Service Provider will be regulated, as the Cable Service Providers before them have been regulated years ago. If cable is any example, it seems internet service will go down in price, and that “premium” services are already being paid for either by advertisements or by subscriptions; and that we all will still benefit from the internet, however and whoever regulates it.

4. References


