

The Impact of Net Neutrality

On Internet Service Providers & Service Consumers

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Summary of Net Neutrality

Net Neutrality, the term coined by Professor Tim Wu, is a concept of legally enforcing rules and provisions to ensure strong transparency, non-blocking, anti-discriminatory services to broadband internet consumers by Internet service providers (ISP) so that the internet remains open for everyone. Internet Service providers (ISP) such as Comcast, AT&T and Verizon want to reject blocking, throttling, and paid prioritization for internet users, but the disagreement is over how to enforce it. In the end, whether the Federal Communications Commission should regulate broadband internet or leave market players to do it by encouraging competition in the market so that internet consumers may benefit is a political issue. The existing common carrier service regulations (applicable to utilities, railroads, airlines, etc.) can be extended to broadband internet but it remains to be seen whether it would allow research expansion, infrastructure investment and innovation. In 2015, during the Obama administration, Netflix (a content provider) championed an effort to reclassify high-speed Internet as a telecommunications service rather than an information one, subjecting ISP to regulation under Title II of the Communications Act under FCC jurisdiction to protect the open Internet. In 2017, the current administration reversed FCC's reclassification of broadband as a common carrier service. It is very unlikely to see any immediate change in the near future due to recent reversal of regulations. Net neutrality is as political a battle as it gets. It is the battle over the future of the internet and it is going to unfold over a long period of time. It would be best if FCC had the power to analyze issues on a case by case basis. The challenge is that ISP business practices will evolve in the future as will the technology surrounding internet-of-things (IoT).

Control of communication channels

ISP Networks

Telecommunication services are strictly regulated whereas ISP is lightly regulated. Internet Service Providers such as Comcast want total freedom to choose whom they serve, where they serve and how they serve and under what conditions they serve. Transit network providers and level 3 providers enable direct peering, one internet connection connects directly to another and anyone can use it. The question is how much dominance Internet Service Providers will have in controlling the communication channels. At present, there are only two dominant companies in

the market, Comcast and Verizon. AT&T plays a role both in ISP space and internet backbone network provider.

Internet Services

Content providers such as Google, YouTube, Facebook content delivery network (CDN) - a cluster servers setup inside ISP to closer to consumers to server faster (Google and Netflix have their own CDN)

Service Accessibility

ISP Networks

Comcast and Verizon provide last mile circuit connection to internet service consumers. Unless those network circuits are made available to all competitors under the same terms, like it happened with dial-up services in 1990 in telephone network, service accessibility to all remains a big concern. Without regulations, internet service providers will find innovative ways to impress customers which could lead to more satisfied customers with more benefits. It is also proven in any business that increase in competition among ISP will promote a healthy market competition for fast internet speeds that everyone can enjoy.

Internet Services

The internet should be open and at the same it should be competitive as well. This means ISP should not block access or degrade traffic based on IP address, websites of certain competitive business entities. There should not be prioritization of service based on fee or bundled service over others. The rules should be the same regardless whether one is accessing the internet using a cable connection, wireless device, virtual private network or any other technology. This will eliminate so called "fast lane" and "slow lane", leaving one group in a competitive advantageous position over others. One should be watchful over ISP like Comcast who practiced torrenting and blocked BitTorrent to win the contract to manage their network. There is limited competition in ISP market which makes big players like Comcast may not do what is best for customers or transparent to its customers.

Users

ISP Networks

Net neutrality assumes that all web sites are created equally but in reality they are not. Netflix is video streaming service and it requires faster downloading speed to keep their customers video viewing experience better. Forms based web applications may need not require faster bandwidth as much as video streaming. Amazon website has built to increase customers shopping experience and its bandwidth requirements are different from others. ISP providers like Comcast nowadays have services packaged to cater the needs for various customers based on their application and customer needs, effectively creating a fast and slow internet lane which makes perfect sense. This also makes net neutrality provisions ensuring service equality questionable. In contrary, without net neutrality regulations, big players like Comcast can potentially block websites or apps, throttle or slow websites based on companies, content, prioritize websites who pay premium, called traffic shaping or forcibly bundle services to gain footing in other businesses, for an example cable TV services.

Internet Services

Various preferential treatments of internet usage already exist today. One such practice is called "zero rating". For an example, AT&T customer will not face data limits for streaming DirectTV programs but they will if they use other streaming services. It is because DirectTV's parent company is AT&T. The same goes with Comcast and xfinity TV duo, Verizon and Go90and FiOS TV. Netflix customers have no data limit with T-Mobile. If one applies Net Neutrality rule or common carrier service regulations, there should not be any discrimination by Comcast, AT&T, T-Mobile or any other Internet Service Provider (ISP) to discriminate streaming service one against the other such as Hulu, Netflix, FiOS TV etc. If there is "data limit" be applied, it should be applied to all streaming service equally and fairly.