

Management Information Systems 13e

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CHAPTER 4 ETHICAL, SOCIAL, AND POLITICAL ISSUES IN E-COMMERCE

CASE 1 What Net Neutrality Means for You



SUMMARY Net neutrality refers to the pricing of Internet broadband service by the telephone and cable companies that provide the Internet backbone (Internet Service Providers or ISPs) . Facing very large investment costs, ISPs would like to be able to charge more for heavy users of their networks—people, who, for instance, watch a large number of Netflix streaming movies each week. In some cases, ISPs have suggested they would like to eliminate or slow down certain traffic altogether, like BitTorrent music files, or Skype VOIP phone calls. The FCC and public policy advocates claim any discrimination against certain types of files, or charging more for heavy bandwidth use, is unfair, discriminatory, and will likely hurt innovation and the Internet. If Netflix and YouTube customers had to pay more for their videos, they might not watch so many. L= 4:28.

URL <http://www.youtube.com/watch?v=hxz7PYIFvdl&feature=fvst>

CASE Net neutrality is the idea that ISPs like Comcast, Time Warner, Verizon, and AT&T, must allow customers equal access to content and applications, regardless of the source or nature of the content. ISPs may not discriminate against any content, or types of files, by refusing to transmit these files, or charging more for these files and content. For some, it also means that everyone will be charged the same flat fee regardless of how much bandwidth they consume. This means that people who download very large video files pay no more this

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service than people who just send emails. The Internet currently fits this description, but service providers are increasingly interested in changing this fundamental principle to respond to recent trends in Internet usage.

Currently, most Internet traffic is treated equally (or “neutrally”) by ISPs in the sense that all activities—word processing, e-mailing, file downloading, music and video files, etc.—are charged the same flat rate regardless of how much bandwidth is used. Someone who streams a Netflix movie each day to his or her computer pays no more for Internet service than someone who uses the Internet for email and Web surfing. This is not true for the cell-phone wireless system, where there are many different data plans, and the more bandwidth you use, the higher the charges .

However, ISPs would like to be able to charge differentiated prices based on the amount of bandwidth consumed by content being delivered over the Internet, much like a utility company charges according to how much electricity consumers use. The carriers claim they need to introduce differential pricing in order to properly manage and finance their networks. Critics worry about ISP conflicts of interest: AT&T may want to prevent Skype traffic on its Internet connections in order to force customers to use the AT&T cell network.

There are three basic ways to achieve a rationing of bandwidth using the pricing mechanism: cap plans (also known as “tiered plans”), usage metering, and “highway” or toll pricing. Each of these plans have historical precedents in highway, electrical, and telephone pricing. Cap pricing plans place a cap on usage, say 300 gigabytes a month in a basic plan, with more bandwidth available in 50 gigabyte chunks for, say, an additional \$50 a month. The additional increments can also be formalized as tiers where users agree to purchase, say, 400 gigabytes each month as a Tier II plan. Additional tiers could be offered.

A variation on tier pricing is to offer speed tiers, charging more for higher speed Internet service. Comcast offers its Xfinity Platinum Internet plan with download speeds of 300 megabits per second for \$300, and Verizon offers its FiOS high-speed tier for \$204 a month. An alternative to cap plans are metered or usage-based billing charging on the basis of metered units of Internet service. Time Warner is testing usage plans which start at five gigabytes a month (the equivalent of two high-definition movie downloads) and charge \$1 for every additional gigabyte (much like an electric usage meter in a home). One variation on metering is congestion pricing, charging more for peak hour Internet service congestion pricing, where, as with electric “demand pricing,” the price of bandwidth goes up at peak times, say, Saturday and Sunday evening from 6:00 P.M. to 12 midnight—just when everyone wants to watch a movie!

Still a third pricing model is highway (toll) pricing where the firms that use high levels of bandwidth for their business pay a toll based on their usage of the Internet. Highway pricing is a common way for governments to charge trucking companies based on the weight of their vehicles to compensate for the damage that heavy vehicles inflict on roadways. In the

case of the Internet, YouTube, Netflix, Hulu, and other heavy bandwidth providers would pay fees to the Internet carriers based on their utilization of the networks in order to compensate the carriers for the additional capacity they are required to supply to these heavy user firms. Presumably, these fees would be passed on to customers by the industry players by charging users a distribution expense. The only way to do this fairly is to charge fees to users based on how much they download, e.g., a short YouTube video might cost 10 cents, a feature-length movie might cost \$1.

Plans to ration bandwidth are controversial, and in some cases bring legal, regulatory, and political scrutiny. For instance, in September 2007, Comcast, the largest ISP in the United States, began to slow down traffic and specific Web sites using the BitTorrent protocol not because the content was pirated, but because these video users were consuming huge chunks of the Comcast network capacity during peak load times. Comcast claims its policy was a legitimate effort to manage capacity. In August 2008 the Federal Communications Commission (FCC) disagreed and ordered Comcast to stop discriminating against certain Web sites. Comcast filed suit and in April 2010, a federal appeals court ruled against the FCC and for Comcast, arguing that Comcast had the right to manage its own network, including charging some users more for bandwidth or slowing down certain traffic such as BitTorrent files (Watt, 2010).

In 2009, the FCC began developing a national broadband strategy. In December 2010, the FCC approved "compromise" net neutrality rules (Schatz, 2010). The rules force ISPs to be transparent about how they handle network congestion, prohibit them from blocking traffic such as BitTorrent or Skype protocols on wired networks, and outlawed "unreasonable" discrimination on such networks. The regulations do not cover wireless cellular networks, nor do they prohibit paid prioritization, in which broadband companies could enable premium customers to have access to higher-speed, higher-priced "fast lanes." For instance, telecommunications providers such as Verizon and AT&T, and Internet distributors such as Google, have reached a market-based compromise: maintain existing rules for landlines, but implement differential pricing for mobile wireless networks. Currently, for instance, for new wireless customers, AT&T no longer offers a flat-rate plan. Instead, consumers must choose between plans with different data limits, ranging from \$15/ month for 200 MB/month of data to up to \$45/month for 4 GB/ month. In September 2011, Verizon sued the FCC to stop its net neutrality rules from going into effect (Wyatt, 2011a). In November 2011, the FCC implemented its new rules despite Verizon's law suit. In 2012, the U.S. Court of Appeals began consideration of the Verizon case, which will not be decided until 2013 (Sasso, 2012).

Meanwhile, public interest groups have filed suits against the FCC for not going far enough to regulate ISPs, claiming that to allow ISPs to manage their networks will reduce innovation on the Internet. The U.S. Senate in November 2011 defeated a Republican proposal to prevent the FCC from regulating the ISPs. For instance, opponents of the legislation argued that if ISPs are allowed to manage their networks, they would impose costs on heavy bandwidth users like YouTube, Netflix, Skype, and other innovative services. New start-up companies offering high-

bandwidth innovative services might not be able to get traction if they had to charge their customers for network distribution. Supporters of the FCC net neutrality regulations argue that, without net neutrality, Netflix or Hulu customers might find their cable company (which also happens to be their Internet service provider) blocking Internet access to online streaming video from Netflix in order to force customers to use the cable company's on-demand movie rental platform from which the cable company makes a much larger profit.

In the end, net neutrality is about distributing the costs of building high-speed broadband Internet networks. Companies like YouTube and Netflix, very heavy users of Internet bandwidth, want no price rationing, caps, metering, or toll pricing in order to maximize their revenues. One price fits all. ISPs and landline carriers of the Internet want to charge heavy bandwidth users more than light users, in order to maximize their revenues.

VIDEO CASE QUESTIONS

1. Are you in favor of network neutrality going forward? Why or why not?
2. What is the threat of ISPs, private business firms, charging whatever they want to charge and that the market will bear?
3. What do the FCC and industry critics mean by "discriminatory behavior" towards selected Internet services? Does the FCC want to prevent ISPs from managing their networks?
4. Does the FCC support metered pricing and/or Internet bandwidth caps?
5. Major cities of the world have adopted "congestion pricing" in which cars pay a toll to enter the core of the city during daylight hours. Congestion pricing is also used to regulate demand by businesses for electricity. During the day when electricity is in high demand, many businesses pay a "demand" fee in addition to the regular charge for electricity. Why is the Internet any different?
6. If your business model depended for its success on millions of people being able to inexpensively stream videos on demand (like YouTube or Netflix) would you be in favor of net neutrality or against it?

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