Google’s OpenEdge does not violate network neutrality

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Computer Science 182s
February 6, 2009

1 Introduction

A controversial article in the Wall Street Journal [1] claims that Google “has approached major cable and phone companies that carry Internet traffic with a proposal to create a fast lane for its own content.” And although Google has traditionally been regarded as “one of the loudest advocates” for network neutrality [1], the authors claim that Google’s proposal, OpenEdge, violates this principle.

“Network neutrality” means many different things to many different people—including the article’s authors and Google. But an investigation reveals that the Wall Street Journal article is not technically correct, and that Google’s proposal does not actually violate network neutrality.

2 OpenEdge

The Wall Street Journal article [1] claims that Google has proposed “placing Google servers directly within the network of the [Internet] service providers,” and would pay the service providers to do so. This proposal, OpenEdge, would “accelerate Google’s service for users.”
In a post on the Google Public Policy Blog [2], Google’s Richard Whitt responds to the article and explains OpenEdge in more detail. He explains that, for a price, Google “has offered to ‘colocate’ caching servers within broadband providers’ own facilities.” This practice, known as edge caching, is already used by content distribution networks such as Akamai and Limelight. Edge caching improves Web performance through “temporary storage of frequently accessed data on servers that are located close to end users,” and would “improve page load times” for Google content.

John Timmer of Ars Technica explains:

Under this system, users who are looking to obtain a large download, such as a video, get redirected to a copy of the file on a server that is local to them, providing a low-latency connection that avoids any network congestion elsewhere on the Internet.

Google’s twist on the edge caching setup is that it doesn’t want to bother with the hassle of setting up a server facility and arranging a fat pipe to connect it with the local network. Instead, they’re negotiating with ISPs to simply colocate their servers in the existing network facilities, neatly clearing both of these hurdles.

[3]

Whitt [2] also notes that OpenEdge is non-exclusive. Google would allow other companies, such as Microsoft or Yahoo!, to make colocation agreements with service providers—that is, if they are also willing to pay.

3 Does OpenEdge violate network neutrality?

Network neutrality is difficult to define, and it means many different things to many different people. Central to the debate is the “prioritisation or de-prioritisation of data packets... often
dubbed ‘access tiering’” [4]. Columbia Law School professor Tim Wu, who popularized the term “network neutrality,” considers it to be a network design principle: “a maximally useful public information network aspires to treat all content, sites, and platforms equally” [5].

The Wall Street Journal article claims that Google’s OpenEdge violates network neutrality:

> At risk is a principle known as network neutrality: Cable and phone companies that operate the data pipelines are supposed to treat all traffic the same—nobody is supposed to jump the line. [1]

However, the article—and this quote in particular—is technically incorrect. Although OpenEdge would speed Google’s content delivery, it would not allow Google to “jump the line.” That would require service providers to prioritize Google’s traffic over other traffic, which Google is not proposing. Still, the proposal would make Google’s services faster.

Whitt [2] dismisses the article as “confused,” and says that “Google remains strongly committed to the principle of net neutrality.” Whitt cites another post [6], in which he explains Google’s position on network neutrality: “outright blocking, impairing, or degrading Internet traffic should not be tolerated,” but service providers may “employ certain upgrades, such as the use of local caching.” However, service providers must not “prioritiz[e] packet delivery based on the ownership or affiliation (the who) of the content, or the source or destination (the what) of the content” [6]. OpenEdge conforms to Whitt’s requirements. OpenEdge is a form of “local caching”, and although it would speed Google’s content delivery, service providers would not be “discriminating” or “prioritizing” Google’s traffic over other traffic.

In 2006, Google CEO Eric Schmidt wrote an open letter to Google users on network neutrality. He said:

> Today the Internet is an information highway where anybody—no matter how
large or small, how traditional or unconventional—has equal access. But the phone and cable monopolies, who control almost all Internet access, want the power to choose who gets access to high-speed lanes and whose content gets seen first and fastest. They want to build a two-tiered system and block the on-ramps for those who can’t pay. [7]

While OpenEdge conforms to Whitt’s requirements, it does not necessarily conform to Schmidt’s. OpenEdge would not help Google’s content be seen “first,” as this would require service providers to “prioritize” packets. However, it could help Google’s content be seen “fastest.”

But as long as prioritization is not involved, this does not violate network neutrality. To be sure, web companies already want their content to be delivered “fastest”—their end users always want faster service. Whitt points out that “Google and many other Internet companies... deploy servers of their own around the world” to speed content delivery [2]. But Google wants to install caching servers in the networks of service providers, and wants to pay the service providers to do so. Does this violate network neutrality?

Lawrence Lessig, a professor at Stanford Law School and an advocate of network neutrality, argues that it does not: “network providers should be free to charge different rates for different service... [if] the faster service at a higher price is available to anyone willing to pay it” [8]. Whitt has explained that OpenEdge would not be exclusive, so Lessig would say that OpenEdge does not violate network neutrality. Indeed, Timmer explains that “companies have always been able to spend money to do edge caching, either by themselves or by paying someone like Akamai to do so for them” [3].
4 Conclusion

Despite the Wall Street Journal’s claims to the contrary, Google’s OpenEdge proposal would not violate network neutrality. Service providers would not be discriminating packet-by-packet, and would not be prioritizing Google’s traffic over other traffic. OpenEdge would improve the performance of Google’s services through an agreement with service providers, but the agreement would not be exclusive. Web companies already spend money to install servers and improve the performance of their services, and companies can already pay to implement edge caching, or pay Akamai to do it for them.

The controversy over Google’s proposal results from differing definitions of—and, in the case of the Wall Street Journal article [1], technical misconceptions of—network neutrality. Because of this, and especially with important network neutrality debates occurring this year in Congress, [1], Google would be well-served to officially, emphatically reiterate and clarify its support for network neutrality.

References


