

Net Neutrality¹

by M. E. Kabay, PhD, CISSP-ISSMP
Associate Professor of Information Assurance
School of Business & Management
Norwich University, Northfield VT

Contents

1	The Net Neutrality Debate	2
2	Not TEOTIAWKI.....	3
3	ISP Liability and Net Neutrality	4
4	More on Net Neutrality	6
5	ISP Liability and Net Neutrality: Verizon.....	7

¹ This compilation includes articles published in the *ACM Ubiquity* online magazine < <http://ubiquity.acm.org/> > and then in the *Network World Security Strategies* newsletter < <http://www.networkworld.com/newsletters/sec/index.html> > in 2006 and 2007.

1 The Net Neutrality Debate²

Back in November 2005, Rep. Joe Barton (R-TX) introduced draft legislation in the US Congress that has generated animated debate about the concept of net neutrality: the even-handed treatment of all content providers (Web sites, streaming audio and video providers and so on) by all Internet service providers (ISPs).

Now in its fourth draft, the “Communications Opportunity, Promotion, and Enhancement Act of 2006” is moving through the Commerce Committee’s Subcommittee on Telecommunications and the Internet with co-sponsorship of Rep. Fred Upton (R-MI), Chairman of the Telecommunications and the Internet Subcommittee; Rep. Chip Pickering (R-MS), Commerce Committee Vice-Chair; Rep Bobby Rush (D-IL); and with support from Rep. Dennis Hastert (R-IL), Speaker of the House. The Benton Foundation, a private think tank specializing in digital telecommunications policy, has an overview of the bill < <http://tinyurl.com/ha4hz> > and a more extensive analysis < <http://tinyurl.com/hwxmr> > available online.

The bill includes provisions for improvements in the regulatory approval process for establishing new pay-for-service cable television networks; ensure that subscribers to voice-over-IP (VoIP) users would be able to communicate their location automatically to emergency 9-1-1 services; prohibit discrimination against classes of subscribers (e.g., refusing to offer cable service to districts with lower average income in a coverage area); and enshrine the rights of municipalities to create publicly-owned broadband ISPs.

Proponents of the bill argue that it would contribute to a lively competitive marketplace with new offerings for consumers.

Opponents have focused on the absence of any specific prohibitions on differential service levels relating to content. *Net neutrality* is the term generally applied to the concept that ISPs should in no way privilege specific types of content (or, for that matter, disadvantage other types of content). A common hypothetical example used in debates is to imagine that a specific search engine might pay ISPs fees to ensure that responses from its Web site would be delivered to the user faster than the results from a competing search engine that had not paid special fees. Another example of content-based discrimination imagines that an ISP might accord a lower priority to packets transmitting, say, video feeds – unless the customer were to pay a special fee for higher-speed access. The most alarming scenarios involve outright blockage of content by source or by type. An example of blockage by source often cited in news stories is that of the Canadian ISP Telus, which blocked subscribers’ access to a Web site of the Telecommunications Workers Union, with which it was in conflict < <http://tinyurl.com/kkzau> >. The example of type-based blocks much mentioned in the debate is that of Madison River telco, which blocked VoIP traffic from Vonage as an anticompetitive move to protect its own long-distance conventional long-distance service < <http://tinyurl.com/hscav> >.

An organization called “Save the Internet.com” < <http://www.savetheinternet.com/> > has announced a campaign to stop what it calls a plan by Congress to “ruin the Internet.” In heated prose, the organizers describe Rep. Barton as having “sponsored a bill to hand over the Internet to big telephone and cable companies.” Rep. Rush, claim the writers, “supports Barton’s bill that would stifle independent voices and small businesses.” In a note headed, “The Threat is Real,” the organizers write, “If the public doesn’t speak up now, Congress will cave to a multi-million dollar lobbying campaign by companies like AT&T and Verizon who want to decide what you do, where you go, and what you watch online.” Indeed, they proclaim, “Congress thinks they can sell out and the public will never know. The SavetheInternet.Com Coalition is proving them wrong — together, we can save the Internet.”

You can easily find a wealth of articles looking at this issue by typing “net neutrality” into your favorite search engine. One of the most reasoned commentaries is by Daniel Berninger: “Net neutrality means don’t tread on the Internet!” His essay was published on April 18, 2006 on the Jeff Pulver blog < <http://pulverblog.pulver.com/> >.

² Kabay, M. E. (2006). “The Net Neutrality Debate.” *ACM Ubiquity* (May 2006). < <http://ubiquity.acm.org/article.cfm?id=1138694> >

Some of the other comments I have read seem to be based on misconceptions about the nature of “the” Internet (you’ll find out why I put it that way next time). In my next column, I’ll lay out the issues in the hope of turning down the heat a bit and raising the level of rationality in the discussion.

I promise you: we are not approaching The End of the Internet As We Know It and you really can Feel Fine (with apologies to R.E.M.) < <http://tinyurl.com/z9vpf> >.

2 Not TEOTIAWKI

Back in the late 1990s, a common acronym in discussions about the “Y2K” (year 2000) problem was “TEOTWAWKI”: The End of the World As We Know It.”

In my most recent column, I surely enraged proponents of social action to defend “net neutrality” by suggesting that the situation we face today is not TEOTIAWKI (The End of the Internet As We Know It).

There are several issues mixed up in the excited rhetoric about Internet service providers (ISPs) who might want to provide faster access to certain content providers and to certain types of Internet traffic. I’d like to analyze the issues so that we can think about the problems with more reason and less emotion than some of the writing I’ve seen on the ‘Net recently.

The issues seem to be that

- Some people think of “the” Internet as a public service or a commons, much like air. In their mental model, no one owns the Internet and access to “it” should be free and uncontrolled. Any interference with equal access to any aspect of the Internet is morally reprehensible and must be opposed in all possible ways.
- Another block of people perceive “the” Internet as an entity much like “the” phone system. That is, their mental model is of a unified construct under centralized control, or at least, under the control of monopolistic forces. According to this model, we need strong regulation analogous to that which regulated the development of the telephone system, complete with strong central-government agencies that impose restrictions on anti-competitive behavior that could stifle the development of small competitors to The Big Guys.
- Without explicit new regulations, ISPs will naturally apply restrictions on the content made available to users because wealthy content-providers will pay fees to enhance access speeds to their material and possibly even to block access to competitors’ materials. Under these rules, non-profit, counter-culture, and individual content-providers won’t stand a chance of having their materials read because users will naturally flock to the quicker sources and abandon the slower ones.

My mental model of the Internet is a bit different. I think of the Internet as the totality of computer systems that communicate using TCP/IP. Similarly, the World-Wide Web is the totality of computer systems that communicate through the Internet and make content available through HTTP and various derivatives of HTML.

Nothing in this model suggests that there is anything to own about the Internet, or indeed that “the” Internet exists apart from interconnections, any more than there is an “Englishspace” consisting of all people who communicate using English. All components of the Internet are owned by individuals, collectives, corporations, or governments; there is nothing free about them. Yes, some owners of Internet components provide free access to the Internet, but that free access implies nothing about ownership.

Such a model of the Internet has implications for the problems articulated above. For example, the whole notion that anyone has a fundamental, inherent, inalienable *right* to Internet access evaporates – except insofar

as a government declares that such access must be available to all, much as public roads are available to all because people decided that they would be so.

Similarly, if ISPs are engaged in civil contracts to provide defined services to users, then the terms of the contracts freely entered into are entirely up to the parties involved. An ISP that declared that it would bar access to all Web sites in which the word “xylophone” appeared might lose users with an interest in music and those opposed in principle to violations of net neutrality, but it would in no sense be breaking a law or violating a moral principle. It would be a stupid idea, but that’s another question. By analogy, an ISP in the USA that decided to bar access to Web sites based on political or religious grounds might appeal to some people and not to others – but again, such filtering would violate no fundamental principles of justice. Anyone not liking the policies would presumably choose a different ISP.

If ISPs do eventually violate net neutrality to make money from contracts with content producers or to privilege certain types of traffic (video is most often mentioned), I cannot believe that users will simply shrug and give up access to sites they wanted to visit simply because an alternative is faster. If I want to read a story from SCIENCE magazine, I am not going to visit SCIENTIFIC AMERICAN simply because it happens to be faster. What makes the TEOTIAWKI folks believe that users so fickle in their choices of content that speed alone will be the determinant of their browsing habits?

3 ISP Liability and Net Neutrality

One of the issues that doesn’t seem to get mentioned much in discussions of what has been called “net neutrality” as it affects Internet service providers (ISPs) is the notion that ISPs currently serve as common carriers and are therefore immune to certain types of liability – but only if they keep a hands-off attitude toward the content that they convey.

Some of the readers of this column may not know that before the Internet became a commonplace mechanism for exchanging information, there were services called value-added networks (VANs) that provided some of the same functions as ISPs do today. CompuServe, Prodigy, the early versions of America OnLine and several others offered pay-for-service access to moderated discussion groups (threaded discussion lists), news services (e.g., the original online version of the vast ComputerSelect database that supplied electronic copies of thousands of technical articles a year from respected journals and technical magazines) and commercial sites.

Even as late as 1994, these VANs offered a higher signal-to-noise ratio than some parts of the USENET and of the fledgling World Wide Web. I just located an article I wrote back then that included the following text: “Far from being an *Infobahn*, with that word's overtones of Teutonic neatness and order, the Internet [in 1994] resembles a loose network of paths, some of them rutted with overuse, others infested with vermin. Internet destinations range from the cyberspace equivalent of well-groomed parks and impeccable libraries to unkempt garbage dumps and run-down road-houses.”

In 1991, a landmark case called *Cubby, Inc. v. CompuServe, Inc.* < <http://tinyurl.com/ruwho> > established a fundamental attribute of ISPs. CompuServe had provided facilities for a Journalism Forum that included a section called Rumorville USA which was created by Don Fitzpatrick Associates (DFA). A competing service called Skuttlebut was developed by Robert Blanchard and Cubby, Inc. that was directly accessible through subscription without going through CompuServe. When defamatory materials were published about Skuttlebut on the Rumorville service, Cubby Inc. and Blanchard sued Fitzpatrick and CompuServe for libel. Judge Peter Leisure of the US District Court of New York ruled that because CompuServe had no involvement in the content of its forums, it could not be held responsible for libelous material posted there. The judge wrote that “...CompuServe is, at most, that of an independent contractor of an independent contractor. The parties cannot be seen as standing in any sort of agency relationship with one another, and CompuServe may not be held liable for any of plaintiffs' claims on a theory of vicarious liability.” Many legal commentators have interpreted this judgement as classifying CompuServe (and by implication other VANs) as equivalent to a distributor (which is not involved in selecting content of what they provide) rather than as a

publisher (which does make judgements about content).

In 1994, someone sent vile, threatening messages via e-mail in Alexander G. Lunney's name by opening fraudulent accounts on the Prodigy ISP using his identity. Lunney sued Prodigy for allowing him to be placed in a false light (one of the classic legal definitions of defamation) but lost the case and his appeal because, the appeals-court judge wrote in 1999, "Prodigy's role in transmitting e-mail is akin to that of a telephone company, where one neither wants nor expects to superintend the content of its subscribers' conversation. In this respect, an ISP, like a telephone company, is merely a conduit." <

<http://tinyurl.com/n65yv> >

In the Stratton Oakmont Inc. v. Prodigy Services Co. case completed in the Supreme Court of New York in 1995, an anonymous user of the "Money Talk" bulletin board on Prodigy made libelous statements about the principals of the Stratton Oakmont securities investment banking firm in October 1994 <

<http://tinyurl.com/rkyf3> >. Judge Stuart L. Ainsworth ruled that Prodigy's stated policy of reviewing and censoring postings qualified it as a publisher with respect to its bulletin boards (note the contrast with the judgement about its e-mails from Lunney v. Prodigy).

I bring these cases to readers' attention because although-I-am-not-a-lawyer-and-this-is-not-legal-advice-(for-legal-advice,-consult-an-attorney-qualified-in-this-area-of-legal-practice), I think these classic cases bear directly on the issue of net neutrality of ISPs. To the extent that ISPs begin to interfere with unbiased, unrestricted access to content from different providers, I think they will fall afoul of the existing case law that specifically protects ISPs that net neutrality and will find themselves qualifying for responsibility for content as publishers.

I doubt that such increased liability for content decisions will provide a good business case for changing accessibility of content to users. ISPs who take money from content providers to increase accessibility to their content or to block access to competitors may forfeit their defensive claims to being content-neutral distributors immune to liability for libel and other legal infringements (I have not discussed other issues such as intellectual property violations). Civil law may provide an excellent tool for preventing abusive interference with access to information on the Internet.

I look forward to a flood of commentary from cyberspace attorneys interested in this issue and will summarize their comments in a later column.

I'm already cringing.

4 More on Net Neutrality³

With talks on media concentration going on at FCC hearings across the country, I'm pleased to pass on a thoughtful letter from Bill Nelson, Manager of Network Services at a hospital in Minnesota. Mr Nelson wrote to me on this topic several months ago after reading the column on The End of the Internet As We Know It (TEOTIAWKI) < <http://www.networkworld.com/newsletters/sec/2006/0501sec1.html> >. With his permission, I am providing them here with the usual minor editing. In what follows, "I" refers to Mr Nelson.

* * *

First, it seems to me the 'Net is very much like the phone company. The 'Net (just like the phone company) is a collection of providers all selling access to a network of communications resources. The phone system is the totality of systems that communicate using voice. These systems are all owned by individuals who provide their own content in many different languages. Just as it would be wrong for the phone company to partially busy out Joey'Ds Pizza because Pizza Hut paid for such obstruction, it would be wrong for Amazon.com to pay to limit access to, say, rumpusbumpusbooks.com simply because they could afford to pay an Internet service provider (ISP) to do so.

Second, I think you give the average user too much credit and too much power. Just because we don't like something doesn't mean we have the inclination or even ability to change it. I am a DSL subscriber. I chose this over the much faster cable because I can have an account with my local ISP (Qwest), have statically assigned IP addresses and access anything I want. However, I have seen many cable companies limit virtual private network (VPN) transmissions because they wanted to charge for that ability. I pay a premium for these privileges but most of the people I know wouldn't pay for such liberty. Most of the people I know accept limits in the service they are provided because it is easier and cheaper to accept those limits. That acceptance ultimately limits *my* choices because larger companies don't see the value in providing choices to smaller groups, merely offering uniform access to the lowest common denominator.

I have had DSL service for 6 years. I own my router and can terminate at any time. Due to the deregulation of DSL service, Qwest has changed the terms of its contracts. As of November 2006, I will have to commit to yearly contracts with early termination fees. I don't like this but I don't have any other options. Cable or satellite are the only other providers and they also have contracts to sign; none of them provide options for using a different ISP.

So I ask, do we really have a choice? I recently got more detail on the DSL early termination fees and discovered that Qwest considers a change of ISP (even though still retaining the DSL line) a termination and will hit clients for the fee, unless of course they are changing to Qwest. As I look forward, I fear the day when Qwest says the only ISP I can use is MSN. Then where is my choice? What happens when MSN, AOL, Verizon, and SPRINT are my only choices? What happens when I have to change my phone service because I don't like my ISP? What happens when the ISPs each have their vertically integrated markets and picking one limits my access to content hosted on the other?

I don't think TEOTIAWKI is upon us. Indeed I tend toward conservative ideals and business models. But I don't agree that anything goes for those who can pay on the 'Net. There was a time when conservative people felt that there was a public-service element in broadcasting (I realize there is a difference because the airwaves are a public resource). Over time, the bottom line became the only thing that is important. Would you say this has made things better or worse? Would you say we have a more informed society or worse? What happens when that happens in cyberspace as well?

³ Kabay, M. E. (2006). "More on 'Net Neutrality.'" Network World Security Strategies (Oct 24, 2006). < <http://www.networkworld.com/newsletters/sec/2006/1023sec1.html> >

5 ISP Liability and Net Neutrality: Verizon⁴

In May 2006, I published two articles in this newsletter on the subject of Internet Service Provider (ISP) liability for the content distributed or published via their facilities. (< <http://www.networkworld.com/newsletters/sec/2006/0501sec2.html> > and <http://www.networkworld.com/newsletters/sec/2006/0508sec1.html> >) I reviewed the classic cases of *Cubby v. CompuServe* and *Stratton Oakmont Inc. v. Prodigy* and explained the legal issues concerning *distribution* of uncensored materials on a communications channel versus *publication* of controlled, edited or censored materials on such a channel.

Today I want to pick up the subject with some recent news about Verizon's interference with voluntary communications among its subscribers.

On Wednesday, 26 September 2007, news wires carried reports that Verizon Wireless had decided to block its subscribers from using the NARAL (National Abortion Rights Action League) Pro-Choice America's text-messaging service using "short codes" to receive news bulletins about its political activities. Sinead Carew, writing for Reuters, said that "The decision was based on a company policy that denies short codes for what it deems controversial issues, according to Verizon Wireless spokesman Jim Gerace."< <http://uk.reuters.com/article/internetNews/idUKN2733012620070927> > According to several news reports, Verizon Wireless wrote to NARAL stating that it "does not accept issue-oriented (abortion, war, etc.) programs – only basic, general politician-related programs (Mitt Romney, Hillary Clinton, etc.)."< <http://www.nytimes.com/2007/09/27/business/27cnd-verizon.html> >

Brad Reed of Network World reported on Thursday the 27th of September that Verizon Wireless had reversed its decision. He quoted Verizon spokesman Jeffery Nelson as saying that "The decision to not allow text messaging on an important, though sensitive, public policy issue was incorrect, and we have fixed the problem that led to this isolated incident."< <http://www.networkworld.com/news/2007/092707-verizon-naral-text-messages.html> >

I think that it's a Good Thing for Verizon Wireless that they backed off their initial position so quickly. Although-I-am-not-a-lawyer-and-this-is-not-legal-advice-(for-legal-advice,-consult-an-attorney-qualified-in-this-area-of-legal-practice), it seems to me that the company could have ruined their status as a disinterested, neutral communications carrier and opened itself to serious legal liability for the content of anything that it allowed on its networks. In addition, their quick reversal saved them from making fools of themselves for claiming a risk that did not exist: the possibility that people *voluntarily subscribing* to a political channel would be *offended* by *unsolicited* communications.

I think that there are lessons in this debacle for everyone concerned with network services, customer relations, security and legal liability.

1. Before applying policies that are rarely used, check to see if they are consistent with current needs.
2. Before applying old policies based on technical criteria, check to see if the technical circumstances behind the old policies still apply.
3. Before letting a company employee with little or no training (I am not speaking specifically of Mr Gerace here, simply making a general point) apply rarely-used policies, have a competent resource review the proposed communication.
4. Before letting a public relations spokesperson discuss technically-based old policies, have them check their proposed public statements with technical experts and with legal counsel.

⁴ Kabay, M. E. (2007). "ISP Liability and Net Neutrality: an Update." Network World Security Strategies (Oct 2, 2007) < <http://www.networkworld.com/newsletters/sec/2007/1001sec1.html> >