Opinion **New Technology Policy Forum**

A third way for net neutrality

Eli Noam AUGUST 29 2006

Comment on this column

"Net neutrality" has been a hot topic in Washington and expert conclaves, like one recently held by the Aspen Institute.

On the one side are traditional media - phone and cable companies, the carriers - in rare agreement. They do not want to be regulated, and they want to preserve the profitability potential that protects their network upgrades. They are therefore joined by some hardware tech firms. On the other side is what might be called the internet-industrial complex - consisting of idealistic net community folks, small start-ups, large Silicon Valley corporations pretending to be both - and Hollywood, in another strange bed fellowship.

The US Congress is in the middle; by the latest count six bills are pending, and while none is likely to be passed for now, the process itself has been a boon.

But what is all that noise about? Part of the problem is that net neutrality is like an inkblot into people project their fears and hopes. There are a least seven different related but distinctive meanings in which the term is used.

• No different quality grades ("fast lanes") for internet service

• No price discrimination among internet providers

• No monopoly price charged to content and applications providers

• Nothing charged to the providers for transmitting their content

• No discrimination on content providers who compete with the carriers' own content

• No selectivity by the carriers over content they transmit

• No blocking of the access of users to some websites

The latter two issues are by far the most important to the entire society since they affect speech, culture, and politics. It is easy to agree to them (though some have made the carrier companies' First Amendment argument in opposition). Therefore, proponents of net neutrality tend to latch to them their other concerns which are more in the nature of an economic dogfight among companies.

Both sides have considerable market power – the carriers over the pipes, and several of the internet companies over major instrumentalities. I have only two meaningful options for broadband connectivity, but the same can be said for my search engines, whose proprietary selection and priority system govern my access into the world of information. And while I have no beef with the folks who run them today, who knows what less benign people might do in the future, and whether alternatives can still emerge if economies of scale are high.

In contrast to these future problems, the people who run the pipes have already a track record of using gatekeeper power, whether over the interconnection of other pipes - by phone companies - and of content - by cable companies. The main reason why phone companies have not done the latter is because they were regulated as "common carriers", they had to serve everybody equally, and had no control over the content of communications. But now, the Federal Communications Commission, backed up by the US Supreme Court, have deregulated at least the broadband operations of the telecom companies, giving them in effect the same status which cable companies long enjoyed, that of "private carriers", where they can pick and chose among content providers and cut individual deals. They are also moving to carry their own content as a kind of alternative cable company.

Predictably (see my 1994 article "The impending doom of common carriage") this has now led to the present commotion. Internet firms and content providers fear restrictiveness by the pipes in favour of their own offerings, and the exercise of monopoly pricing. Phone companies fear being returned to the common carrier status of the past, with the regulatory supervision over prices and quality that tends to accompany "nondiscrimination" requirements. After all, who's to determine what that means in practice? They also fear that while they will be stuck with requirements, cable competitors will not. Both factors will affect their profits and business plans of fiber investments, which Wall Street already views with some unease. Thus, they argue that the result of imposing onerous conditions on them will only result in the most open network that was never built.

And cable companies know that it will be a hard sell to maintain a system in which they are treated differently from telecom companies, which would get them into the common carrier status they have avoided for decades, and who knows where that might lead on their regular video service.

What then to do?

Perhaps the best way to analyse the issues is to view it as a triangle involving three parties: the providers of internet content and applications, such as Google, Yahoo, HBO, and Vonage; the end-users of that content (some of whom are also providers at the same time) like you and me; and the electronic pipes that connect between them and transport the information packets, such as Comcast and AT&T. These pipes come in two different sections: 'last-mile pipes' that reach individual end-users, and 'middle-pipes' that constitute the local and national network system and serve numerous users simultaneously. It is important to distinguish between those two different pipes.

The question then is what kind of control the pipes can exercise over the content, prices, and quality of information packets that are sent by providers to end-users, and over the access of end-users to the providers.

The content and access providers are not united in what they want, but it covers either to have the pipes be prevented from either charging any price, or a differentiated price or quality level that can discriminate among them, or a single monopolistic price. The problem with any of these is that they invariably lead to a complex and traditional common carrier regulation of prices and quality, and an inability to differentiate oneself through quality differentials. There is a long and painful history here, and most providers seem to be only partly familiar with it, so they can be forgiven for denying the inexorable logic of price constraints working themselves out institutionally. They are caught in a bind: on the one hand, they tend to be a pretty libertarian bunch opposed to a governmental role. On the other hand, they are now calling for a fairly intrusive regulatory regime on their internet collaborators and rivals, the carriers who supply the essential pipes.

These pipes have a long history of monopolistic pricing and restrictions of access. The logic of economic behaviour would lead them to charge content and applications providers as they send out packets, even when these are requested by the end-users. Indeed, the pipes are likely to entice end-users with low subscription fees, and then hit the providers with high charges, because they have other way to reach a particular end-user after he's made his choice of a last-mile pipe. They will then have to charge those consumers for their use. As a result the internet ceases being mostly free to end-users beyond their monthly connectivity fee. Instead, they will often have to pay each time they click on a website, thereby reducing the use and excitement of the internet.

In that dilemma of two dismal alternatives there is fortunately a third way.

To do so, one needs to break down the problem into its components.

Last-mile pipes. This is the traditional core of market power for the pipes. Right now, there are at most two major pipes – the telecom and the cable pipes. They have significant market power towards the end-users, and even more so towards content providers, for whom they are the only way to access an end-user. To deal with this situation requires the following principles:

• Incentives to increase the number of pipes. (allocation of spectrum to competing wireless providers, unlicensed spectrum, encouragement of municipal and electric powerline provision, temporary tax benefits to all broadband pipes, and access to public rights-of-way.)

• Only end-users pay for use of the last-mile pipe, there is no charge by pipes to content providers to send packets to those end-users.

• Packets from providers can access the end-user's last-mile pipe at its initial point.

• Pipes are free to offer different quality and price packages to end-users.

• Users are free to choose a quality or price package, to access any lawful provider, and to connect any device.

Middle-pipes. Here, there would be only no restrictions. For those pipes, competition exists, and content and applications providers could find ways to bypass restrictive middle-pipes, directly or through resellers, as long as they could access the last-mile pipes. The following principles would apply:

• Pipes are free in their pricing and quality offerings.

• Pipes cannot limit resale by a customer to other parties such as content and applications providers.

• Where pipes discriminate in favour of their own content or applications provision and hold market power, they are subject to fast-track regulatory and antitrust laws.

This system is only minimally intrusive in that it basically only requires the free access of packets into the last-mile pipe, from whatever middle-pipe the content provider picks, and no restrictions on the resale of services. With just those two elements, no further regulation is necessary, and competitive forces can arise, and pipes and content providers are otherwise unrestricted.

And if this does not work, there is always antitrust law and laws on predatory pricing practices. If chronic problems arise, pipes might face the creation of parts of their transmission capacity into a 'must-carry' capacity with a common carrier status, or even the draconian prospect of a divestiture from their content operations or wireless pipes.

Net neutrality is of worldwide relevance, though this is sometimes not understood. The French communications minister reportedly argued that it is not an issue in Europe because there broadband is more plentiful. But actually, the problem is more acute in countries where there is only one serious avenue for broadband - the telecom pipe - without a well-developed cable broadband system, which is the case in many of the larger European countries, as well as Japan, and in the developing world. The access to a single pipe and protection from its power without creating a regulatory system for the ages then becomes still more important. Thus, the American debate also helps set the way for others' future information media scenario.

This arrangement, by separating the last-mile pipe where potential problems exist, from the middle-pipes, where they do not, provides both openness and minimal intervention. It responds to both sides' legitimate problems, not as a 'divide-the-baby-in-half' compromise, but as a genuinely better system.

Comment on this column

"Beyond Liberalization II: The Impending Doom of Common Carriage," Telecommunications Policy, Vol. 18, No. 6, (1994), pp. 435-452

The writer is professor of finance and economics at Columbia University