tion and a free and open marketplace are all at stake in this fight," he said.

Such self-styled defenders of the internet like to portray the net-neutrality debate as a fight to stop evil telecoms firms messing with freedom and innovation. The reality is rather more complicated. For a start, the internet is not, in fact, neutral today. Fast broadband connections already cost more than slower ones, for consumers and businesses alike. As well as buying fast pipes and building huge "server farms", big companies such as Google and eBay also pay extra for specialist "content delivery" services, such as Akamai, to make their websites download even faster. None of this has hampered innovation or hurt small companies.

It is also rather odd to see internet activists, who are generally suspicious of government intervention, calling for regulators to step in and pass new laws in the name of freedom. Laws mandating net neutrality could, in fact, do a great deal of harm. Ensuring "neutrality" could require regulators to interpose themselves in all kinds of agreements between network operators, content providers and consumers. Content-delivery services, such as Akamai's, might suddenly become illegal. Strict rules could also hinder the development of new services that depend on being able to distinguish between different types of traffic. And it does make sense, after all, to be able to prioritise telephony and video traffic over e-mails. "We are talking about some people getting a better service if they are prepared to pay for it," says Forrester's Mr Godell.

By dressing up the net-neutrality debate as a fight for online freedom, however, Google, eBay and other big internet firms have cleverly diverted attention from an unpleasant truth. As telecoms firms around the world upgrade their networks, there are two ways in which they can recoup the money. They can simply charge subscribers more; or they can pursue new business models in which big internet firms and other content-providers pick up some of the bill too.

But the idea that big firms such as Google ought to contribute in some way to these costs "has been roundly greeted as if it is a threat to basic liberties," notes Craig Moffett, an analyst at Sanford Bernstein in New York. Despite their howls at the idea of paying for such services as packet prioritisation, he says, it would in fact be the big internet companies that would benefit most from the new business models that such premium services might unlock.

In the name of consumer choice

That does not mean that big telecoms firms should be allowed to interfere with access to sites that do not pay them. But Mr Whitacre insists that he has no plans to do so. "We're not going to block, we're not going to interfere with what's out there today," he says. Instead, the idea is to charge extra for additional services. "The other way, consumers are all locked into one calibre of service, but consumers should be free to choose what they want," he explains. Not everyone believes him, of course. But so far there is no evidence that AT&T or Verizon have tried to block sites or demand ransoms. And if they do, regulators will be able to take action under existing antitrust laws—there is no need for a new net-neutrality law.

Even so, the arguments of the past few months have served a useful purpose. "The public reaction has already been as powerful and effective as any law," says Timothy Wu, a professor at Columbia Law School who is credited with coining the term "net neutrality". The debate has put the telecoms companies on notice that they are being watched closely, he says, and has forced them to make public pledges not to block or degrade access. "Shame can have more power than litigation," says Mr Wu. "The market and consumers can control bad practices, but consumers actually have to be aware of what is going on for that to happen."

The telecoms firms could even find that the boot is on the other foot, says Mr Odlyzko of the University of Minnesota. Referring to companies such as AT&T and Verizon, he asks: "What makes them think that they are going to charge Google, as opposed to Google charging them?" Cable companies, he points out, have to pay for the television shows and films they deliver over their networks.

Clearly convergence requires new or updated rules in some areas and the enforcement of existing rules in others. But overall, by pitching companies in previously distinct industries against each other, convergence will result in more vigorous competition. That should allow market forces, rather than regulators, to determine the best shape for the industry. ■

Winners and losers

Who will benefit most from convergence?

WHO is right about convergence, the boosters or the sceptics? The truth probably lies somewhere in the middle. Operators have high hopes that convergence will open up valuable new markets, but that seems unlikely. Voice-data convergence can cut operating costs, but the same VOIP technology is also eroding revenues from traditional fixed-line telephony, and new revenues from broadband will not fill the gap. Fixed-mobile convergence may help operators to hold on to customers, but will not produce much, if anything, in the way of new revenue. And the prospects of telecoms firms making money from television also look dim, because they will have to lure customers away from other television providers and invest heavily.

Yet that is not to say that telecoms firms should keep clear of convergence. It might still be the best way for them to cut costs, fend off competitors, retain customers and minimise their losses from declining fixed-line voice revenues—not least because everyone else will be doing it. They may have overstated the money-making potential of convergence, but there are probably good reasons to pursue it anyway, not least greater operating efficiency and lower running costs.

"It's not a panacea, but it is a necessary step," says Alcatel's Mr Alwan. "It doesn't fix everything right away—it's a multi-year, multi-step, complex project that will ultimately deliver a better infrastructure with which to lower costs and improve services." AT&T's convergence project, Lightspeed, for example, is not being driven by a mania for technology for the sake of it, says Mr Alwan, but "because there's a serious threat to voice revenues from triple-play bundles from cable companies." ▸▸