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The Net Neutrality Debate: You Pay, You Play?

The democracy of the Web may soon be a relic of the past, a change that may have costly implications for doing business on the Net.

BY BEN WORTHEN

Last April, Cisco Systems published a white paper explaining how the companies that own the phone lines and cables that connect homes and businesses to the Internet—the proverbial last mile—could use new routing technology to boost revenue. The technology would allow telephone and cable companies to establish priority lanes for high-bandwidth traffic like video, games, or voice-over-IP (VoIP) calls and then charge the Googles, Yahoos and Amazons of the world for access to these highway toll roads. Cisco's paper predicted that this new strategy would allow broadband service providers to create new revenue-sharing business models with any company that sells content online.

The plan had only one problem: It was illegal.

The telecommunications laws that have governed the Internet since its inception require network owners to treat all traffic the same. The laws date to the 1930s and were put in place to force telephone companies to prevent a scenario where one company could refuse to carry calls placed by a rival's customer. The Internet was designed with the same principle in mind. Routers are programmed to direct each packet of data on a best-effort basis, regardless of file type—video, voice, e-mail—or who the sender and recipient are. In the online world, this

is called network, or net, neutrality, and last summer, it was the only thing standing between the telecommunications companies and a vast new revenue stream.

Since then, a Supreme Court ruling and a series of Federal Communications Commission (FCC) decisions have eliminated this barrier, prompting Congress to rewrite the nation's telecommunications laws. The new bill, which could be finalized as early as the summer, will in all likelihood officially eliminate net neutrality as the legal principle that governs the Internet. "If net neutrality goes away, it will fundamentally change everything about the Internet," says James Hilton, associate provost for Academic IT Works of the University of Michigan.

The impact of these changes on CIOs and their companies will be profound. The telecommunications and cable companies argue that allowing them to govern their networks as they see fit gives them a financial incentive to innovate at the core of the network, and develop new technologies that could guarantee things that CIOs want, like security and better quality of service. Proponents of net neutrality counter that the principle is the reason that the Internet and the corresponding online ecosystem have developed into the commercial and cultural phenomenon they are today. They argue that without a level playing field, telecommunications companies will force content providers—a broad category that includes anyone with a website—to pay up or see access to their content shifted to the slow lane.

The new Internet will certainly make telecommunications decisions more strategic. CIOs will not only need to worry about how much bandwidth to buy, but which lane they want their traffic to travel in. And tiered service is just the beginning. Telecommunications companies will be able to rearchitect their networks however they see fit. Over time, the new

architectures and the services that network owners deliver will result in complicated payer/payee relationships between companies and telecommunications companies. And if a telecommunications company decides it wants to introduce a new Internet standard, CIOs may be forced to rearchitect their company's systems.

The common thread is money. For all the talk about equal access and treating all data the same, the net neutrality debate is just window dressing for a less gentlemanly argument over who gets to profit in the online economy. More bluntly, Steve Effros, former president of the Cable Television Association, says, "This is about who pays."

Making the Content Providers Pay

The current telecommunications act, which was written in 1996, was designed to help local phone companies compete with the baby bells. The 128-page law mentions the word "Internet" a grand total of 11 times, generally treating it as a curiosity, albeit one with potential. Today, that curiosity has evolved into the world's dominant commerce and communications platform. And instead of a battle between small and large phone companies, the competition that emerged in the telecommunications industry is between cable and telephone companies, and the service they are vying to provide is not just phone, but high-speed Internet access and television as well—the so-called triple play.

In June 2005, the Supreme Court ruled that the service cable companies sold was an information service, not a telephony service, and hence isn't covered by telecommunications law. In order to address this imbalance within the new cable/phone competitive landscape, the FCC declared that the high-speed DSL connections offered by the telephone companies were also information services. The result is that the entire Internet is now essentially outside the law.

Amid all this legal chaos, the telecom and cable providers are still struggling to figure out how to profit from the vast new market for online services. The three largest telecommunications companies—Verizon, AT&T and Bell South (which was bought by AT&T pending regulatory approval)—all had their profits drop in 2005, the latter two by double-digit percentages. Comcast, the nation's largest cable company, saw its profits shrink by 4.3 percent. In contrast, content providers are taking it to the bank. Google's profits increased 267 percent, Yahoo's 126 percent and eBay's 39 percent. Google, whose $6.1 billion in revenue is less than half of Qwest's and 1/12 of Verizon's, has a market cap higher than any telecommunications or cable company.

It's no surprise that the carriers might be a little jealous of the new economy wunderkinders. In one less guarded moment, Ed Whitacre, now the chief executive officer (CEO) of AT&T (at the time he was the CEO of SBC, which bought AT&T but adopted its name), told Business Week last November what he really thought of companies that publish content or host applications: "They don't have any fiber out there. They don't have any wires. They don't have anything," Whitacre said. "For a Google or a Yahoo or a Vonage or anybody to expect to use these pipes for free is nuts!"

The Road to Riches

Whitacre's frustration may soon be a thing of the past. Telecom officials argue that they need to be able to treat different types of data differently in order to meet the demands of today's and tomorrow's high-bandwidth traffic. "Some products are only useful if they come as a constant bit stream, like IP TV, video gaming and, to a lesser extent, voice over IP," says Bill McCloskey, director of media relations for Bell South. "If you are watching the Super Bowl on an IP TV, and someone down the street decides to download a tune, we think that the video

signal should have priority. The small delay for the tune just doesn't matter, and it would matter even less for an e-mail. But it matters to a video signal."

So using the vision outlined in the Cisco white paper, the telecoms are proposing that they build dedicated lanes on the Internet for high-bandwidth traffic. The rub is that these lanes will be toll lanes, with companies needing to pay for access. The telecommunications companies say this pay-to-play model gives them an economic incentive to innovate on the network itself, which will lead to services that businesses will want. AT&T declined to be interviewed for this story. However, in a prepared statement, AT&T said: "We will succeed or fail based on whether or not other providers see value in engaging in commercial agreements that enhance their content or applications. And that means not just capacity or speed, but guaranteeing things like security against viruses, worms and spam."

Christopher Yoo, a professor at Vanderbilt Law School whose research is sponsored in part by the National Cable and Telecommunications Association, thinks that as telecommunications companies move to this tiered approach, complicated payer/payee relationships will evolve, with content providers and network owners negotiating based on their relative strengths in the market. This happens now in the cable TV world. The cable carriers pay channels with large audiences such as ESPN about $2.50 per subscriber and an established niche channel without a large following such as Oxygen about 25 cents. And not only would cable carriers not pay a brand-new channel anything, but in all likelihood, that channel would have to pay the cable carrier promotional fees to use its pipes.

A better analogy for the telecommunication companies' plan to offer tiered services might be the relationship between a food manufacturer and supermarket, says Yoo. The manufacturer

will pay the supermarket more money for better shelf positioning. In this example, both the food manufacturer and the supermarket have the same goal: to sell more food. The argument, says Yoo, is over how to break up the profits.

If the telecommunications companies develop the online equivalent of the eye-level shelf, CIOs will have to give up a percentage of their companies' profits to be placed there. If this new arrangement results in significantly more sales and revenue for a company, most probably won't mind paying the extra freight. But there's no guarantee these new charges will result in additional business, and it will be years before anyone knows whether the juice is worth the squeeze.

Even so, the telecommunications companies all agree with AT&T that "this is an issue best left to the marketplace."

The Elephant in the Room

The problem is that the telecommunications marketplace is fast consolidating. The proposed AT&T/Bell South merger means that the eight regional phone companies that emerged from the Ma Bell breakup will have shrunk to three in less than a decade. And the new AT&T will be twice as big as all the cable companies put together. "A free market works as long as there is competition," the University of Michigan's Hilton says. Hilton and other proponents of net neutrality are concerned that giving carriers the right to decide how traffic flows over their networks will turn telecommunications companies into online kingmakers, giving them the power to decide who will be winners and losers online through the rates they charge and the speeds they deliver.

This kingmaker role greatly dismays content providers and other proponents of a free and open Web. "The Internet is the greatest engine of innovation we have ever seen because no

one had control over it," says Art Brodsky, communications director for Public Knowledge, a digital rights advocacy group.

After all, Google and Yahoo are among the new economy's greatest success stories not only because they developed services that people want to use, but also because people had access to those services. What if a telecommunications company downgraded one of its services because it had a partnership with a rival? That's possible in a world without net neutrality. In fact, it is already happening. Clearwire, a wireless broadband provider, sells a VoIP service from Bell Canada and acknowledges blocking VoIP from other providers, as well as other high-bandwidth applications. Clearwire says it is allowed to do this because it sells an information service and thus is not covered by the Telecommunications Act.

More generally, net neutrality proponents argue that changes in the Internet's architecture could make it harder for the creation of new application innovations, yet such innovations—like e-mail, Web browsers, Ajax and new search capabilities—are responsible for most of the Internet's growth to date. In addition, something as complicated as changing how the core of the Internet works doesn't happen overnight. Indeed, some of the telecoms' attempts to develop new network technologies for the core of the Internet have been less than successful. For instance, network-based standards that the telecommunications companies introduced, like ATM and IP multicasting, were supposed to revolutionize the Internet by guaranteeing quality of service. Instead, they proved to be so expensive that they never caught on outside of the telecommunications companies' own networks and a handful of private corporate networks.

In addition, while a network owner like AT&T is busy experimenting with different architectures, device and application makers would be forced to delay releasing their

innovative products until they knew how to make them compatible with the new network technology, says Gary Bachula, vice president for external affairs for Internet2, the ultra-high-speed network that connects more than 200 colleges and universities. Furthermore, letting network owners adopt different standards will inevitably lead to interoperability problems, proponents of net neutrality argue. Look no further than the wireless phone system, they say. The United States had competing and incompatible standards for years. Even today, phones that use U.S. networks don't work in Europe and other parts of the world. The introduction of a new IP by a telecommunications company could have the same effect.

"It is not inconceivable that the optimal number of networks may be greater than one," Yoo says. In general, he adds, it is in network owners' best interests to make their product compatible with everyone else's. However, if people develop a new technology that they believe is a large enough improvement on what came before, Yoo argues they should be free to try to sell it and let the market either punish or reward the decision. And that prospect concerns CIOs and other observers.

"If you had to have a different architecture for every single provider that is out there, it would mean Balkanization of the Internet," Bachula says.

How to Navigate the New Terrain

One thing’s for sure: It will be up to the CIO to make sure that his company can negotiate the new landscape. Tiered service alone "is going to transfer a lot of responsibility to the [CIO]," says Steve Novak, CIO of the law firm Kirkland and Ellis. Telecommunications costs will go up, and these decisions will become more strategic, says Novak, because they will no longer just be about how much bandwidth to buy, but also what level of service to purchase from

each carrier.

John Ambler, an Accenture consultant who is in charge of telecommunications decisions for the state of Arizona, says that lack of security and the inability to deliver high-bandwidth traffic without interruption are obvious problems for CIOs. And if the network owners build and sell a solution to these challenges before application vendors do, so be it, says Ambler. "If I have an expanding business or I create a [high-bandwidth] application, I'd gladly pay for better service," he says.

Hilton, on the other hand, worries that paying for improved services is positive spin on a more sinister reality. "Frame it the other way," he says. "Would you pay to prevent someone from degrading your service?"

Longer term, a telecommunications company may try to introduce a new standard—having the freedom to do so is an explicit part of the telecommunication industry's vision. And as Bachula suggested, CIOs would then need to rearchitect their systems so they work with more than one network technology. "Everything we do is IP-based," says Novak. "The investment [required] to move from the IP standard would change a tremendous amount for us."

Hilton says that he likes the idea of better networks; after all, it's impossible to come out against innovation, but he worries that if a company the size of AT&T decided to introduce its own standard, it wouldn't necessarily have to be a better technology. CIOs would be forced to adjust their applications to conform to the new standard simply because of AT&T's market share. "The last thing I want to do is negotiate a bunch of closed proprietary networks," says Hilton.

The Legislature Picture

Such arguments are already being aired in the halls of Congress. But between the money involved and progression of draft legislation, it doesn't look good for net neutrality advocates. The U.S. Telecom Association alone spent more than $16 million on lobbying in 2005. AT&T spent more than $11 million, Verizon at least $7.5 million [Verizon's filing is incomplete] and Bell South $7.4 million. In contrast, Microsoft, which spent $8.7 million, was the only proponent of net neutrality to break a million.

Not surprisingly, drafts for a new Telecommunications Act have had progressively fewer protections for net neutrality. An early version adopted the term, a later version watered down neutrality protection, and the most recent draft didn't have any at all. Even the most hard-core advocates see the handwriting on the wall. "We're up against a bigger, more powerful player," says Public Knowledge's Brodsky.

In the meantime, CIOs need to prepare for an Internet and economic arrangements that will be quite different. And for CIOs who don't want to pay? Tough luck, says Vanderbilt's Yoo. "No one ever promised that the business environment that you started in will be the business environment of tomorrow."

Senior Writer Ben Worthen can be reached at bworthen@cio.com.

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