

Internet's fast lane getting crowded

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When Google Inc. tapped Kansas City as its first test bed for super-fast Internet service, the market looked poised to slingshot into a high-tech stratosphere. Two years later, as a few Kansas City neighborhoods plug into their light-speed fiber optics, the heights delivered by Google Fiber look less rarified.

Fast-moving plans in Lawrence, Kan.; Omaha, Neb.; rural Vermont; and pockets of Chicago and Seattle match the Internet speeds that [Google Fiber](#) is beginning to deliver in parts of Kansas City. Google itself says it also will bring 1-gigabit-per-second connections to Austin, Texas, and Provo, Utah, in the next year or so.

Those new Big Data markets reflect a momentum that advocates of speedier broadband say marks the early remaking of high-tech infrastructures.

"We're actually seeing gigabit envy starting to drive the desire for speed," said Heather Burnett Gold, the president of the Fiber to the Home Council Americas. "You're starting to see communities wonder, 'Why shouldn't we have those speeds, too?' "

Her organization is staging a conference Kansas City this week to seduce more communities into the investments needed to overhaul their access to the Internet.

Four years ago, U.S. [broadband speeds](#) ranked 22nd in the world. Thanks largely to marginal upgrades of Internet services sold by cable

and telephone companies, the U.S. now ranks eighth.

The light-carrying glass wires that make next-generation data transfers possible aren't particularly pricey. The costs of installing those fiber-optic lines directly to homes - with inevitable ditch-digging and pole-climbing- are.

Some parts of the job are getting easier and cheaper. Crews can dig trenches more quickly and cheaply than a decade ago. And wires that once had to be fused on the spot can now be plugged into each other more easily.

Still, regulations remain a barrier. Google Fiber has benefited in the Kansas City market because it is not bound by rules that it move into neighborhoods where few customers are likely to take the service. It also has seen cities fast-track its permitting process and give it relatively easy access to public rights of way.

That is partly why Kansas City and its Internet speedster cousins remain so rare. The cable and [telephone companies](#) may have some pressure from customers for faster connections, but the demand isn't strong enough yet to prompt them to yank out their existing hodgepodge of decades-old fiber-optic, copper and coaxial cables and replace them with fiber-optic lines stretching all the way to homes.

"Google has prompted others. It's one of the drivers that's motivating change," said Jake Brewer, a spokesman for US Ignite. His group focuses on next-generation Internet applications that demand ultra-fast connections.

"Once they see what's possible, it's consumers that will be the bigger drivers."

So far, however, very few American consumers can see for themselves what's possible.

Kansas City remains ahead of the pack. Sure, Chattanooga, Tenn., had a similar network before Google Fiber's debut, but there's a critical difference. Gigabit speeds there sell for \$300 a month, so virtually no residential customers signed up. In Kansas City, Google has priced equally fast Internet at \$70 a la carte or \$120 when bundled with a cable-style TV package.

Meanwhile, parts of rural Vermont can soon expect offers of similarly blazing upload and download speeds for \$35 a month - half of what Google Fiber charges. Why so much cheaper? Government money. And that may be one path to a gigabit norm.

The Vermont Telephone Co. is one of about 1,250 rural phone companies scattered across the country. It had been asking the federal government for money to help it build a fiber-to-the-home network for a few years. Then the Obama administration added more money as part of the stimulus package intended to maneuver the economy out of recession. And then the Google Fiber project was announced.

"I think the government saw what Google was doing, and that helped us," said Vermont Telephone CEO Michel Guite.

The company landed \$105 million in a pair of grants, much of which will go to the cost of connecting 17,500 homes with glass wires. It will cost about \$6,000 to connect each residence.

"We couldn't have logically invested that money on our own without the grants," Guite said. "With it, we have a 10-year start on the technology that's going to be coming to other places."

Likewise, tax dollars are helping to speed downloads and uploads in a section of Chicago. Gigabit Squared, a for-profit economic development firm, patched together a deal that used state tax dollars and partnered with the University of Chicago to build a fiber-optic network to reach about 100,000 homes on the city's South Side.

Gigabit Squared engineered another deal with Seattle and the University of Washington. That service will deliver high-speed Internet in various sections of the city, a project propelled in part by the city granting access to unused fiber cables already in underground pipes or hanging on utility poles.

In Omaha, the key to progress was fast-approaching obsolescence. An outdated network was limiting the kinds of Internet speeds and TV packages that CenturyLink could sell to about 48,000 customers on the city's west side. Replacing that with fiber-optic lines made more sense than ongoing, piecemeal fixes.

Some customers there are already getting gigabit connections, \$150 a month as a standalone service or \$80 a month when bundled with other packages.

"It's light speed away from where we were historically," said Matt Beal, CenturyLink's chief technology officer.

But he said the move was a "one-time investment strategy." Beal said that if CenturyLink were to expand home fiber service to the rest of Omaha, or to other markets, the company would first need more accommodations from government.

He cited the deals Google secured that gave it the flexibility to only go where it expected demand. Franchise laws in many states insist that a cable or telephone company not just serve the most profitable

neighborhoods, but reach across an entire city. Critics of revising those rules fear that only wealthy neighborhoods would have access to the best technology.

Shortly after Google Fiber announced it was going to Austin, AT&T said it would also offer gigabit Internet there. It has made no such promises to Kansas City, although the company said in a statement that the market "would be a community to consider for future installations." Austin is the capital of the state where the telecom giant is based.

In Lawrence, Wicked Broadband plans to launch a pilot project stringing fiber-optic lines directly to homes in one neighborhood. It will charge \$100 a month for gigabit connections and offer lower prices for slower speeds. The company, run by husband and wife Joshua Montgomery and Kris Adair, is also seeking \$500,000 from the city to expand its reach.

But Wicked is building defensively, installing extra lines to homes for leasing to other Internet service providers.

"The target buyer for that is Google," Montgomery said. "Our hope is that if Google comes to town, they will play nice and lease it."

Google has not said whether any expansion plans might include Lawrence. Still, the Wicked Fiber project fills a tiny square in an uneven patchwork taking shape across the country.

Julius Genachowski, who earlier this month left his post as head of the Federal Communications Commission, has called for at least one [city](#) in every state to build a [gigabit](#) network. That would, he argues, create a habitat of uses for ultra-broadband that would entice more businesses to blanket the country in [fiber optics](#).

"Google Fiber is an important positive development and has been

followed by a growing number of other high-speed broadband deployments," Genachowski wrote in a letter to The New York Times. "But ... challenges remain."

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