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TECH

## Google's High-Speed Web Plans Hit Snags

After initial rollouts prove costly, Google Fiber rethinks how to deliver connections in metro areas



Google Fiber reached just six metro areas in four years. Above, Google Fiber workers in northwest Kansas City, Kan., in 2013. *PHOTO: KEITH MYERS/TNS/ZUMA PRESS*

By **JACK NICAS**

Updated Aug. 14, 2016 8:08 p.m. ET

Google parent Alphabet Inc. is rethinking its high-speed internet business after initial rollouts proved more expensive and time consuming than anticipated, a stark contrast to the fanfare that greeted its launch six years ago.

Alphabet's internet provider, Google Fiber, has spent hundreds of millions dollars digging up streets and laying fiber-optic cables in a handful of cities to offer web connections roughly 30 times faster than the U.S. average.

Now the company is hoping to use wireless technology to connect homes, rather than cables, in about a dozen new metro areas, including Los Angeles, Chicago and Dallas, according to people familiar with the company's plans. As a result Alphabet has suspended projects in San Jose, Calif., and Portland, Ore.

Meanwhile, the company is trying to cut costs and accelerate its expansion elsewhere by leasing existing fiber or asking cities or power companies to build the networks instead of building its own.

Google's announcement in 2010 of its Fiber project sparked high expectations at a time when telephone companies were perceived as moving slowly in rolling out faster broadband service. More than 1,000 cities applied and Google began service in the Kansas City area in November 2012. The following month, Google Executive Chairman Eric Schmidt told a conference that Fiber "isn't just an experiment, it's a real business and we're trying to decide where to expand next."

Today, Google Fiber has reached just six metro areas, the latest example of the challenges facing digital companies seeking to move into more traditional lines of business.

"If you're in the telecommunications industry for 150 years, there are no surprises here," said Jonathan Reichenal, chief technology officer of the city of Palo Alto, Calif. "But if you're a software company getting into the business for the first time, this is a completely new world."

Mr. Reichenal said Google Fiber executives recently told him that plans to bring the service to Palo Alto and nearby cities are on hold for at least six months.

In a written statement, Alphabet said, "We're continuing to work with city leaders to explore the possibility of bringing Google Fiber to many cities. This means deploying the latest technologies in alignment with our product road map, while understanding local considerations and challenges, which takes time."

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The delays in Alphabet's fiber plans follow stumbles in other arenas outside the company's core internet search and advertising business. Alphabet stopped selling the first version of its Glass wearable computer early last year amid privacy concerns, and it recently dissolved a robotics team it assembled from six separate acquisitions.

The company doesn't disclose financial results for the Fiber unit, but consolidates them with other nonsearch businesses in its "Other Bets" unit. That unit reported revenue of \$185 million in the latest quarter, primarily driven by Fiber, home-automation firm Nest and life-sciences firm Verily, and an operating loss of \$859 million. Fiber accounted for most of the unit's quarterly capital expenditures of \$280 million.

Alphabet hopes the investment in Google Fiber will eventually pay off with subscriber fees and, indirectly, more clicks on its search ads. Fiber costs \$70 a month for the fastest internet connection and an additional \$60 a month for TV. Analysts estimate a one-time cost for Alphabet of more than \$500 for each home the network reaches, not all of which subscribe.

Alphabet declined to disclose its number of subscribers. Based on numbers reported to the U.S. Copyright Office, research firm MoffettNathanson said in March the TV service had 53,000 subscribers total as of December.

There likely are many more subscribers for the internet service, the firm said, but "one can't help but feel that all of this has the flavor of a junior science fair."

Google Fiber has begun construction in five new metro areas and announced plans to reach another dozen cities in the next few years. Now, those dozen cities will be the test bed for a push into wireless technology.

Google Fiber last month bought Webpass Inc., a company that beams internet

service from a fiber-connected antenna to another antenna mounted on an apartment building. The company serves roughly 820 buildings in five cities.

Webpass Chief Executive Charles Barr, now an Alphabet employee, said wireless offers an opportunity to overcome the challenging economics of building fiber networks from scratch. “Everyone who has done fiber to the home has given up because it costs way too much money and takes way too much time,” he said.

In Kansas City, Alphabet also is testing a wireless technology that delivers connections from antennas on street lamps. And the company recently applied to the Federal Communications Commission to test “experimental transmitters” for wireless connections in 24 U.S. locations during the next two years.

Google Fiber is planning a system that would use fiber for the central network and antennas to connect each home wirelessly to that network, according to a person familiar with the plans. Alphabet Chairman Eric Schmidt said at the company’s shareholder meeting in June that wireless connections can be “cheaper than digging up your garden” to lay fiber.

AT&T Inc. and Verizon Communications Inc. also have discussed using wireless technology for the “last-mile” connection to homes, but neither has deployed it widely.

Google Fiber is also trying other strategies to aid its expansion In San Francisco.

In San Francisco and parts of Atlanta, the company is leasing existing underused fiber and connecting apartment buildings rather than single-family homes. It chose Huntsville, Ala., in part because the city agreed to build a fiber network for Google.

In Tampa, Google Fiber is in talks with a power company to build the fiber network. It is working with real-estate firm Irvine Co. to pre-install fiber in new properties near Irvine, Calif., and it hopes to strike similar deals with other builders.

The new strategies are in response to the headaches of building a fiber network. In Kansas City, homeowners complained about destroyed lawns and ruptured gas lines. In Nashville, Tenn., and Louisville, Ky., competing telecom firms are blocking the company from stringing fiber on their utility poles.

Some analysts have long suspected that Alphabet's primary goal was to prod other broadband firms to increase their speeds. AT&T, Comcast Corp. and Time Warner Cable, which recently was acquired by Charter Communications Inc., have done so in some competing markets.

Alphabet says Google Fiber is a real business. "We continue to see Fiber as a huge market opportunity," Chief Financial Officer Ruth Porat told investors last month. "We're being thoughtful and deliberate in our execution path."

*—Shalini Ramachandran contributed to this article.*

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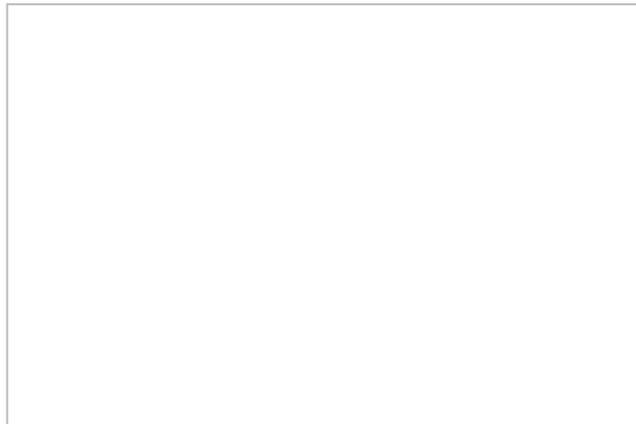
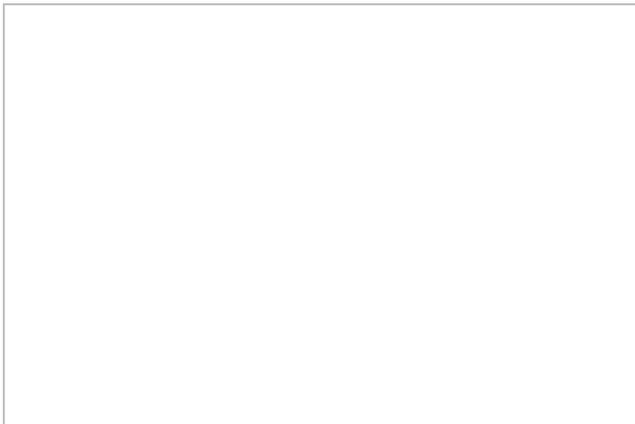
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