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## **Palo Alto moves ahead with citywide fiber plan**

### City Council approves 'master plans' for Fiber to the Premise, wireless network

by Gennady Sheyner / Palo Alto Weekly

The good news for Palo Alto's technophiles is that if all goes as planned, construction of a long-sought, citywide ultra-high-speed Internet network could begin by the end of next year.

The bad news is that so far, in the city's frustrating slog toward what is known as "Fiber to the Premise," almost nothing has gone as planned.

The years of setbacks haven't stymied the City Council, which on Monday agreed to commission a master plan for expanding the city's 41-mile "dark fiber" ring to all parts of Palo Alto, giving residents and businesses Internet speed of more than 100 megabits per second. The council also directed staff to pursue a complementary master plan for a citywide wireless system that would improve public-safety communications, create new smart-grid applications and provide the public with WiFi Internet access.

Both plans were approved by a 7-0 vote, with Karen Holman and Gail Price absent.

The council approved the plans with much enthusiasm and little discussion, following the recommendation of its newly created Technology and the Connected City Committee. Members of the committee have been exploring other cities with fiber networks over the past year and are hopeful that Palo Alto can soon join the small but growing club that now includes Kansas City, Mo., Chattanooga, Tenn., and Austin.

Councilwoman Liz Kniss, who chairs the committee and who attended a recent conference on fiber in Kansas City, called the effort "exciting stuff," but warned of the "pitfalls" that could pop up along the way. Some cities, for example, had to withstand lawsuits from incumbent Internet providers before they could get their systems up and running. Others, including Kansas City and Austin, are relying on Google to build their Internet systems.

"As enthusiastic as a lot of them are, there's usually a secret sauce that a lot of them have," Kniss said.

The city is already well familiar with pitfalls. After talking about a citywide fiber system for nearly a decade, Palo Alto signed on with a private consortium in 2008 to actually build and operate one. That deal died in 2009 when the consortium's financing collapsed and the companies demanded a greater financial contribution from the city. The council refused, effectively killing the deal.

The city had also applied for federal grants and for Google's coveted citywide fiber program (which Kansas City ultimately landed). It failed in both endeavors.

Last year, the fiber dream suffered another setback when a pair of reports commissioned by the Utilities Department confirmed that a fiber system would require ongoing subsidies from the city. Most people, the consultants found, just aren't willing to pay for ultra-high-speed Internet.

"A measurable number of homeowners are interested in adding telecom to the list of services they can purchase from CPAU, but a commitment to invest in a fiber connection is very limited."

The council's commitment, however, faces no such limitations. Earlier this year, the council unanimously adopted "technology and the connected city" as one of its three annual priorities, with a citywide fiber system at the top of the agenda. Last month, a committee charged with exploring this idea approved a staff request to commission a new master plan, which would cost between \$100,000 and \$350,000 (depending on how much environmental review will need to be conducted). The funds will come out of the city's dark-fiber reserve, which collects fees from commercial users of the network and which had a balance of \$15.3 million as of last summer.

Utilities officials also believe a proposed fiber network would attract interest from third-party providers, who would potentially build the system.

"Given the upturn in the economy, the City believes that there is renewed interest from telecommunications service providers in building an advanced competitive broadband network in Palo Alto," a new report from the Utilities Department states.

The brightening financial picture, as well as the growing number of cities adopting fiber networks, has given the council fresh reasons for optimism. Councilman Larry Klein said Monday he was "delighted" to support the latest proposal and stressed the need to educate the public about the difference between fiber and WiFi.

"The bigger point is that this is where the world is going and if we want to continue to be the leader in innovation, we need to be there as well," Klein said. "I'm very excited to see us move forward."

The wireless plan, meanwhile, would proceed on a parallel wavelength. It would cost up to \$100,000 to create and would take between six and nine months to complete.

Staff estimates that it would cost between \$3 million to \$5 million to build a citywide wireless network. The wireless network could benefit significantly from a fiber system, which would support "backhaul" transmission links to allow high-speed Internet.

"With appropriate design and sufficient budget, municipal networks can support remote and mobile broadband needs for public safety personnel and other field-based staff, in addition to potentially offering WiFi Internet access for the general public," a recent city report states. "Furthermore, specialized uses such as a wireless communications system for smart grid applications can also be accommodated by a multifunctional wireless network with the proper design and technology."

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