

Internet in your electrical outlet?

Now that it's good enough for Trump Tower residents, BPL may come to your home, too.

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by Katie Benner, CNN/Money staff writer

NEW YORK (CNN/Money) - Web surfers unable to hook up to limited high-speed connections have quietly suffered the pains of clunky, slow Internet service because they had no choice; and they had to stay connected.

But thanks to broadband over powerline (BPL) technology, high-speed connections may soon be available to anyone with electricity.

For example, the prestigious Trump Place in New York City has hired [Telkonet](#) (up \$0.22 to \$6.02, [Research](#)), a company that provides broadband access via electrical wiring, and Microwave Satellite Technologies to provide its residents with Internet access that's as easy to use as plugging in a toaster.

Once the BPL system is installed, it "will enable (the delivery of) high-speed data services, Internet gaming and Internet telephony VoIP," said Microwave Satellite Technologies president Frank Matarazzo.

"We are excited about Telkonet's breakthrough technology because we can broadband-enable an entire building within a few days and without new wiring. (And residents) can enjoy broadband access from every electrical outlet in their apartment," Matarazzo added.

The MST/Telkonet system will also be installed in other apartments and in an assisted living facility in the New York area, picking up the trend set in a handful of small cities nationwide.

BPL feeds low-power radio signals over power lines. A BPL modem plugs into a regular electrical outlet, receives the radio signals from power lines and converts them into a digital Internet connection.

"Watching someone plug in their modem and see their computer come up with hi-speed Internet access is very rewarding," said Allen Todd, director of the Manassas Utilities Department. Manassas, Va. was the first U.S. locale to offer BPL services citywide, beginning its pilot program in early 2003.

Manassas utilities workers have installed nearly 1,000 BPL modems in both commercial and residential locations, while the city's partner, privately-held [COMtek Communications Technology](#), takes care of service, customer relations and billing.

While there are still bugs to be worked out, BPL quietly marches on with city pilot programs opening in Detroit, Cincinnati and Sault St. Marie, Ontario; and businesses like the Sandman Hotel chain in Canada installing Internet access customers can plug-in to.

Small cost, far reach

The costs of rolling out the service should be relatively small, since the electrical grid is widespread and the potential returns are high, the Federal Communications Commission said in a statement late last year after changing its rules to encourage the development of BPL.

"This new technology holds great promise as a low-cost broadband competitor. The pervasiveness of the utility grid means that almost every home in America can be accessed by this type of service," FCC Chairman Michael Powell and Commissioner Kathleen Abernathy said in a statement.

And the service may prove less expensive than some other Internet service options. For example, Manassas resident pay \$28.99 a month for BPL, while residential hi-speed cable modem from Comcast costs \$42.99 a month. Moreover, most homes and businesses are on the grid, but do not have a pre-existing cable modem infrastructure.

While no major players have surfaced as leaders in the new technology, 50 companies have joined together to form the HomePlug Powerline Alliance, established to create the standard products for BPL home networking.

This consortium includes [Comcast](#) (up \$0.33 to \$33.33, [Research](#)), [Conexant](#) (up \$0.02 to \$1.55, [Research](#)), [EarthLink](#) (up \$0.12 to \$10.19, [Research](#)), [RadioShack](#) (up \$0.02 to \$32.19, [Research](#)) and Sharp, as well as utilities companies

[Con Edison](#) (up \$0.02 to \$43.60, [Research](#)) has also thrown its hat in the BPL ring as the majority shareholder of Ambient Corp., a development stage company that designs, develops and markets technologies that use electric networks to deliver broadband services.

Radio operators worry

Short wave radio operators have opposed the technology, saying it can interfere with radio waves. They also have said that when certain short wave frequencies are used it can interfere with Internet access in nearby homes.

In order to address these concerns, the new FCC rules establish excluded frequency bands that BPL must avoid to protect aeronautical and aircraft communications. Exclusion zones were also established in locations close to sensitive operations like coast guard stations.

Manassas has also dealt with problems posed to hobbyists by "notching" or removing the frequencies used by short wave radio users.

"The SEC announcement is a win-win for radio operators, since it puts enough restrictions and controls to make sure radio hobbyists are protected. But it's not so restrictive that BPL can't provide high-speed Internet access to customers," said Manassas Utilities Department director Allen Todd.

Earlier in the month, HomePlug addressed this problem, unveiling its standard BPL networking technology that allows enough bandwidth to provide efficient BPL operations, but does not interfere with ham radio operators. ■

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