

Why developers are bringing gigabit speeds to residential buildings

By John Pletz
August 05, 2013

chicagobusiness.com



The Shoreland apartment building in Hyde Park has been outfitted with 1-gigabit Internet service, 10 times as fast as the speediest residential service. Kendall Karmanian

Matt Womack loved the Lake Michigan views, granite counters and stainless-steel appliances at the Shoreland, a sprawling, **roaring '20s-era hotel** in Hyde Park that's been converted to high-end apartments. But what stopped him in his tracks was the Internet connection.

"I was on a tour, and I asked: 'Did you say 1-gigabit?' " the 36-year-old programmer says. "One thousand megabits per second is pretty crazy."

It's the kind of bandwidth that many businesses only now are getting, 10 times faster than the best residential speeds offered by cable providers, and

50 to 100 times faster than what most consumers have. The 330-unit Shoreland, being readied for a September opening by Antheus Capital LLC, based in Englewood, N.J., is believed to be the first residential deployment of "1-gig" broadband in Chicago. Others will follow soon.

For the moment, 1 gig is more gimmick than necessity. But it's the type of infrastructure that will be required if consumers want to drop cable or satellite-dish subscriptions and stream all their TV content over the Internet.

While you can stream a high-definition movie from Netflix with the broadband that's widely available, good luck trying to stream content simultaneously to the three TVs that are in the average U.S. home. Not to mention watching YouTube videos, streaming a college course or playing video games—plus handling other Internet-connected devices such as home-security systems and phones.

"It's really not overkill," says **Dennis Roberson**, vice provost for research at the Illinois Institute of Technology and interim chairman of the Federal Communications Commission's technology advisory council. "Having four or five different family members doing their own thing, at 100 megabits, it's still a bit of a stretch. At 1 gigabit, that's real."

MOVING TO 1-GIG SERVICE

Only a **handful of cities**—including Seattle, Minneapolis, Chattanooga, Tenn., Cedar Falls, Iowa, and East Lansing, Mich.—are experimenting with such service. In a development unrelated to the Shoreland, Gigabit Squared, a Cincinnati-based nonprofit, is partnering with the University of Chicago and the state of Illinois to bring 1-gigabit service to **several thousand South Side homes**, businesses and other facilities. Organizers expect deployments by year-end.

The move to 1-gig Internet is akin to the switch from dial-up to broadband, which made possible such things as online banking and shopping. But it will be long and costly, requiring major infrastructure upgrades, and replacing coaxial cable and copper phone lines with fiber-optic cable. Analysts estimate New York-based Verizon Communications Inc. spends more than \$3,000 per home to upgrade its network with fiber-optic cable. Bringing fiber to a single high-rise can cost \$300,000.

“It's at least 10 times the cost (of current speeds),” says Gunnar Kauke, owner of American Wireless Broadband LLC, which outfitted the Shoreland and plans to bring 1-gigabit service to three other city high-rises by year-end. “You have to change the equipment in the data center, switches and routers.”

The Shoreland isn't paying an upfront fee but is guaranteeing Chicago-based American Wireless a minimum number of customers over the next three years. The 1-gig service is free to residents for the first year but will cost \$100 a month afterward.

Over the long term, consumers will need new modems, Wi-Fi routers, computers and TVs to handle the firehose of data. Mr. Roberson figures it will take about a decade for 1-gig service to become broadly available.

Critics question the need for such speed. “At the end of the day, you really can't utilize that much bandwidth at the residential level right now,” says Collin DeMerritt, director of business development at [Everywhere Wireless LLC](#), which is based in River North and also provides broadband to multifamily buildings. “It's sexy and great to have that access for future demand and growth.”

But perception is reality, as Antheus discovered in Kansas City, Mo., where it has properties similar to the Shoreland and where Google Inc. recently began offering gigabit-speed residential service. Potential renters began asking whether buildings would have the superfast service. That's when Antheus started looking for a partner in Chicago to provide gigabit-level service to the Shoreland.

'TOP OF THE MARKET'

“We're targeting the top of the market: young, educated, tech-savvy working professionals and graduate students,” says Peter Cassel, director of community development at Antheus, noting that a two-bedroom apartment at the Shoreland will fetch \$2,000 a month and up. “They're very demanding about having the ability to work at home and have access to the best in entertainment. If they can't get a fast connection, they're not renting the apartment.”

Antheus offers free 8-megabit-per-second broadband at its 100 Chicago properties. “It's like hot water,” Mr. Cassel says. Residents pay more for higher speeds.

Mr. Kauke, whose company supplies broadband to about 45,000 customers in more than 500 Chicago-area high-rises, recalls people questioning 50-megabit service when he began offering it a few years ago. “Now we have buildings where two-thirds of the residents have it,” he says.

▶ **Read more from John Pletz in his [technology blog](#).**

