

New Wi-Fi standard will speed up video streaming

June 28 2012, By John Boudreau

It wasn't long ago families squabbled over who was hogging the TV remote control. Now they face off over who's hogging the bandwidth.

As the number of wireless devices increases in homes - multiple TVs, smartphones, tablets, laptops - networks are getting bogged down.

But help is on the way.

A new Wi-Fi [protocol](#) - dubbed 802.11ac - will increase data speeds by as much as three times over the most recent standard to 1.3 gigabytes per second. It is also six times more power-efficient and will provide faster and more reliable Wi-Fi coverage throughout the home.

[Broadcom](#) is the first [wireless chip](#) manufacturer to come out with what it is calling 5G Wi-Fi. While the new standard won't increase the speed of data coming in through the so-called Internet pipes to the home - such as DSL or [fiber optic cables](#) - it will enable people to view and stream video already stored on, say, PCs or DVRs, much more quickly.

"If you are paying for 50 [megabytes](#) per second from AT&T, having a 5G Wi-Fi router in your home doesn't change that," said Dino Bekis, Broadcom's senior director for access and wireless entertainment. "What it does do is allow you to share content between devices - smartphones, smart TVs, etc. - much faster and more reliably than before."

The new standard underscores the surging demand for [bandwidth](#) to

handle the large amounts of video Americans are consuming every day. "Video use has been growing exponentially," he said.

According to research by Cisco Systems, 1 million minutes of video content will race across networks every second by 2015, and the number of gadgets connected to the Internet will be twice the world's population. Between 2010 and 2015, mobile data traffic is expected to soar 26 times.

"The need to stream multiple videos simultaneously (in homes) is there," said Philip Solis, analyst with ABI Research. "There is a need for 802.11ac."

A number of manufacturers, including San Jose-based Netgear, are now rolling out routers embedded with Broadcom's 5G Wi-Fi chips. And makers of devices, from smartphones to laptops and smart TVs, will start embedding the new chips in coming months. Taiwan computer maker Asus recently launched the first [laptop](#) equipped with the new Wi-Fi protocol.

The new technology could add to the momentum of Americans turning away from cable TV for their entertainment, said David Henry, Netgear vice president of product management. "If folks are going to cut the cord, they need to be able to stream multiple videos at the same time," he said.

The new Wi-Fi standard, which operates on the wider 5 GHz radio spectrum provides more room to transfer data with less traffic, Bekis explained. "Think about it as a brand new freeway opening up with no cars," he said.

It's a faster and more efficient way to move information, Bekis added. So it would be like packing a bus that can move down the highway at the speed of a Ferrari.

In the home, that would mean the kids can watch a video in the family room, Dad can stream a movie from the DVR to his bedroom TV, and a visiting cousin could transfer a vacation [video](#) from a tablet to another [TV](#) - all simultaneously, he explained.

Because the protocol is able to transfer data more quickly and more efficiently, it uses significantly less power, Bekis said. "For a given amount of data, you can transmit it at one-sixth the power," he said.

The new protocol will make Wi-Fi signals faster and more reliable throughout the home, which usually get weaker the further one is from the router, said Netgear's Henry.

Routers sold with the new 5G Wi-Fi chip are expected to be compatible with devices that don't have the new technology and operate on the more congested 2.4 GHz radio spectrum.

"When you put this in your home, you won't notice anything different," Bekis said. But "as soon as you have a device that is embedded with 5G [Wi-Fi](#), you are immediately going to be able to transmit data at these higher rates."

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