

Intel's new fiber-optic cables promise speed boost

April 7 2010, By Steve Johnson

Envisioning a data traffic jam looming as consumers shuttle increasing amounts of information among their home PCs, televisions and other gadgets, Intel plans to introduce new technology in a few months that could keep everything racing along for years.

The Santa Clara, Calif., chip-maker says the Light Peak system it is developing with other companies would connect home electronic equipment with fiber-optic cables, which initially could send data at 10 gigabits per second, speedy enough to transfer a full-length Blu-ray movie from one gadget to another in about 30 seconds.

That's 20 times faster than is possible with the USB connectors ubiquitous on PCs today, and the company says a more advanced version of Light Peak that it eventually will offer would be able to transfer the same movie in just three seconds.

Moreover, Intel says the fiber-optic system will allow laptops and other electronic gear to be made thinner, while enabling consumers to hook up their gadgets at much greater distances and without cluttering their homes with the confusing array of [cable](#) types and sizes they are forced to use now.

"Our goal and expectation is that it's the beginning of a new generation" of cable connections, said Jason Ziller, an Intel director working on the concept. He added that the advantages the technology offers will be something "everybody is going to want and need over the next 10 to 20

years."

The impetus for Light Peak stems largely from the proliferation of electronic consumer products -- from PCs, printers and scanners to smartphones, digital cameras and HDTVs. Because of the growing amount of video and other data being sent back and forth by these devices, the cables connecting them require faster and faster bandwidth. But Intel says today's electrical cables are approaching speed limits due to electromagnetic interference, which can disrupt what's being transmitted.

Because such interference often worsens as data is sent over longer distances, some cables now must be under 10 feet, which limits flexibility in hooking up gadgets. By contrast, fiber-optic cables are unhindered by electromagnetic interference, allowing those used in homes to be stretched more than 300 feet.

Fiber-optic cables and their connectors also can be made extremely thin. Intel says that would let companies make much skinnier laptops or other gizmos that currently can't be reduced because of the size of their cable connectors.

A single Light Peak cable in some cases could do the job of several cables in use today, eliminating what has become a bewildering jumble of cable types, from USB and DVI to VGA and HDMI.

Intel also is developing wireless connections for home electronic devices. But that's primarily for gadgets not requiring a lot of bandwidth, the company says. For devices needing to transfer a lot of data quickly, Intel says, wired connections make more sense.

Late this year, Intel plans to introduce a microchip to work specifically with Light Peak. It also has designed another key component, an optical

module, which is being manufactured by other companies and which should be on the market this year. Still other companies would supply the fiber-optic cables.

But to generate significant business, Light Peak would have to be adopted by companies that make computers, printers and other gadgets, because those machines would have to be built to accommodate the fiber-optic connections. Ziller acknowledged that it could take several years for the concept to win widespread acceptance, but he said some devices incorporating Light Peak will be on the market next year.

He wouldn't reveal what products might be sold or which manufacturers might be involved. However, two major consumer electronics firms -- Sony and Nokia -- have lent their enthusiastic support for Light Peak to an Intel brochure. And the blogosphere has been buzzing with rumors that Apple is interested, too, though Intel and Apple wouldn't comment on that.

Ziller also was vague about how much the fiber-optic cables might cost, saying only that the price would exceed that for existing cables. That makes some analysts question how well Light Peak would sell, since they say most consumers might not need its blinding speed.

"10 gigabits per second is pretty fast," said Roger Kay of Endpoint Technologies Associates. "Most people are happy with a few megabits. People can run a whole corporation on 10 gigabits."

That may be true now, but home gadgets are sure to require increasing bandwidth in the future, said Martin Reynolds, managing vice president of the research firm Gartner. Also, if gadgets inside homes get linked with fiber-optic cable, he said, Internet service companies would be encouraged to link those homes to the Web via fiber, which would result in even quicker downloads and uploads.

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Citation: Intel's new fiber-optic cables promise speed boost (2010, April 7) retrieved 2 May 2024
from <https://phys.org/news/2010-04-intel-fiber-optic-cables-boost.html>

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