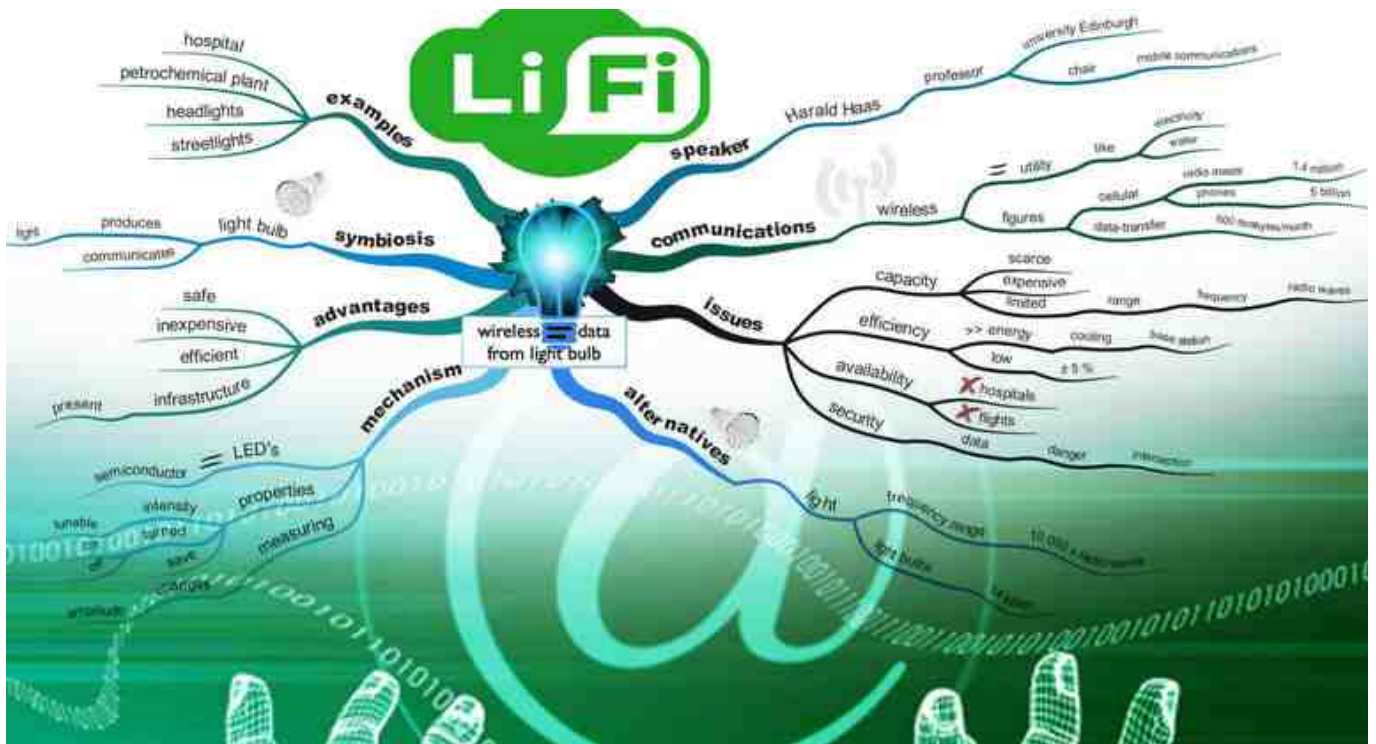


Could Li-Fi Be the New & Improved Wi-Fi?



By Bec Crew | [Science Alert](#)

Expect to hear a whole lot more about Li-Fi – a wireless technology that transmits high-speed data using visible light communication (VLC) – in the coming months. With scientists achieving speeds of 224 gigabits per second in the lab using Li-Fi [earlier this year](#), the potential for this technology to change everything about the way we use the Internet is huge.

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And now, scientists have taken Li-Fi out of the lab for the first time, trialling it in offices and industrial environments in Tallinn, Estonia, reporting that they can achieve data transmission at 1 GB per second – that's 100 times faster [than current average Wi-Fi speeds](#).

“We are doing a few pilot projects within different industries

where we can utilise the VLC (visible light communication) technology,” Deepak Solanki, CEO of Estonian tech company, Velmenni, [told IBTimes UK](#).

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“Currently we have designed a smart lighting solution for an industrial environment where the data communication is done through light. We are also doing a pilot project with a private client where we are setting up a Li-Fi network to access the Internet in their office space.”

Li-Fi was invented by Harald Haas from the University of Edinburgh, Scotland [back in 2011](#), when he demonstrated for the first time that by flickering the light from a single LED, he could transmit [far more data than a cellular tower](#). Think back to that lab-based record of 224 gigabits per second – that’s 18 movies of 1.5 GB each being downloaded [every single second](#).

The technology uses Visible Light Communication (VLC), a medium that uses visible light between 400 and 800 terahertz (THz). It works basically like an incredibly advanced form of Morse code – just like switching a torch on and off according to a certain pattern can relay a secret message, flicking an LED on and off at extreme speeds can be used to write and transmit things in binary code.

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And while you might be worried about how all that flickering in an office environment would drive you crazy, don’t worry – we’re talking LEDs that can be switched on and off at speeds imperceptible to the naked eye.

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