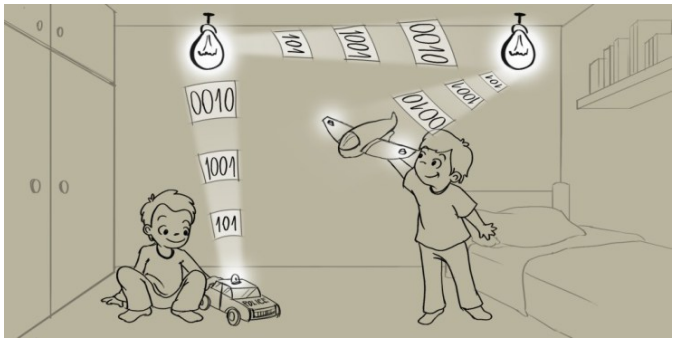
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Disney Research presents a means for enable gadgets to communicate with each other inside smart indoor environments-- the Linux Light Bulb, an LED flashing out data using visible light.



The technology, dubbed Visible Light Communication (VLC) is not actually new. What the Disney researchers add is an IP stack and other networking protocols inside a Linux-based VLC system-on-a-chip (SoC) one can integrate into existing LED lamps.

Such a means of communications bypasses other wireless channels used in the so-called Internet of Things (IoT), such as ZigBee, wifi or Bluetooth, and can be supported by any device able to switch an LED on and off.

"Communication with light enables a true IoT as consumer devices that are equipped with LEDs but not radio links could be transformed into interactive communication nodes," researcher Stefan Mangold says. "We're not just talking about sensors, smartphones and appliances. This easily could include toys that have LEDs, creating an Internet of Toys in which toys can be accessed, monitored and acted on remotely."

In addition the Linux Light Bulb can flash out codes in binary, meaning the system can be supported by older lighting system to easily build visible light mesh networks around the home or a number of objects. The only issue? Currently the technology only reaches communications speeds of up to 1Kbps.

This being Disney Research such technology will surely find its way in toys, but it can also find use in other consumer implementations of the IoT.

Go Linux Light Bulbs: Enabling IP Connectivity for Light Bulb Networks