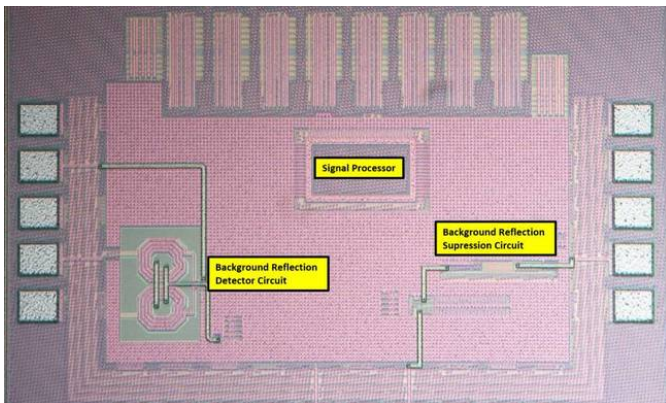


NASA's Low-Power Wifi "Reflector"

Written by Marco Attard
30 July 2015

Researchers at the NASA Jet Propulsion Laboratory (JPL) design a wifi chip to bring great power savings to connected mobile devices through the use of reflections instead of the regular transmitter/receiver component.



"The idea is if the wearable device only needs to reflect the wifi signal from a router or cell tower, instead of generate it, the power consumption can go way down (and the battery life can go way up)," researcher Adrian Tang says.

In a few words, the concept uses a simple switch mechanism where incoming energy absorbed the circuit is "0" and reflected energy is "1." Such a system uses very little power and allows for fast data transfer between a wearable device and any other device capable of receiving data.

The chip is also able to suppress interference in the shape of reflections from surrounding objects.

According to the scientists the system operates at distances of up to 6m, with data transfer rates reaching up to 330mbps at 2.5m distance, all while using "about a thousand times less power" than regular wifi. However the device the wearable is communicating with must have a long battery life or be plugged in, while the wifi base station or router uses more power.

Currently NASA is looking into using the technology on devices used by astronauts, but it should also reach the consumer sphere at some point, since commercialisation agreements already in place.

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