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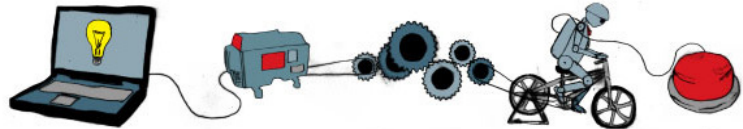
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One Per Cent

Taking the sweat out of technology

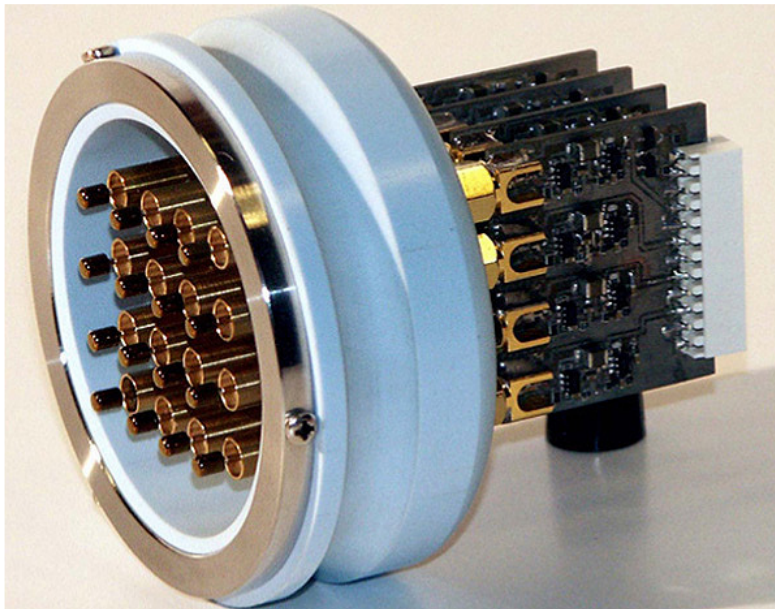


Biosensor can monitor your heartbeat from a distance

17:44 16 November 2011

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Madhumita Venkataramanan, contributor



(Image: Plessey Semiconductors)

A new type of sensor can continuously monitor your heart rate without actually touching you.

The chip, known as the Electric Potential Integrated Circuit (EPIC) biosensor, is essentially a super-sensitive digital voltmeter which can measure tiny changes in electrical fields around all muscles and nerves.

The final product will be integrated into hospital beds, from where it will unobtrusively monitor a patient's vital signs, doing away with pesky tubes, leads and wires. It can track movement not only in heart muscles, but also muscles in the lungs, limbs and eyes.

The sensor's special twist is a filtering technology which isolates and spits out the exact measurement you want. So, if you're looking for eyeball movements, the sensor will comply, without confusing you with an ECG reading.

Plessey's scientists hope it can be used to help paraplegics. Because the EPIC chip can track eye movements, you could hook it up to a computer or a wheelchair, allowing quadriplegics to control a mouse cursor or move a motorised wheelchair, simply by shifting their gaze. Amputees could also benefit - those who have residual electrical activity could use the EPIC sensor to redirect this activity to a prosthetic limb, allowing natural movement.

Moving from the clinic to the couch, the EPIC chip is also a video game developer's fantasy - it can be integrated into new hands-free gaming controllers, like the Microsoft Kinect, by tracking slight physiological changes.

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