Workout Gadgets Will Soon Be Battery-Free and Powered by You

Enter battery-free gadgets powered by body heat. If you run hard, bike for miles or work up a daily sweat, TEGwear technology will reward you with power.

Lightweight, wearable gadgets have changed our workout routines. Some of us consider it an integral part of every workout to monitor our heart rates, activity and calories burned in real time. Future devices may become even more enmeshed in our fitness routines.

Perpetua [1], a company that specializes in renewable energy solutions for wireless sensors, is marketing an insertable chip that converts body heat into electric energy.

The magic behind the chip is based on thermoelectric energy. TEGWear technology relies on two different temperatures — body heat and the coolness surrounding the device. It converts the difference between the two into usable energy.

The hardware can be easily integrated into lightweight, ultra-low power gadgets (it won't be able to power your cell phone) that exercise buffs are already using. Perpetua is looking for product development partners to develop battery-free medical, fitness and safety gear worn on the body, according to the company's marketing VP Jerry Wiant.

By 2014, fitness watches, strap-on sensors and on-body pedometers utilizing the technology will be available. The equipment is able to produce microwatts (one-millionth of a watt) or nearly a milliwatt (one thousandth of a watt) of power, which is enough to run ultra-low power devices such as a heart rate monitor.

"It can be compared to a coin cell battery," Wiant tells Mashable. "This technology will last, if not longer, than the electronics it's powering, up to 10 to 20 years."

www.mashable.com [2]

July 17, 2012

Source URL (retrieved on *07/29/2014 - 9:28am*):
http://www.wirelessdesignmag.com/news/2012/07/workout-gadgets-will-soon-be-battery-free-and-powered-you

Links:
[1] http://www.perpetuapower.com/
[2] http://mashable.com/2012/07/14/tegwear-technology/