gear@sunday-times.co.uk TECHNOLOGY NEWS

You have the power to recharge

Using energy from our own bodies to fuel gadgets is only a step away, says Mark Harris

orget nuclear power stations, the future of energy could be closer to home. A combination of low-power devices and smart new "energy harvesting" technology is promising a world in which gadgets get all the power they need from our day-to-day activities. Solar energy is the most promising

free power source, but traditional solar panels are complicated, rigid and fragile. This week, Konarka, an American energy company, unveiled an alternative: working solar cells printed directly onto flexible plastic. using familiar inkiet technology.

Dr Christoph Brabec, Konarka's chief technology officer, predicts: "These foldable solar cells will be ideal for portable applications, allowing you to roll up solar cells around your

phone or MP3 player. Or you could make sunhats that generate electricity.

are made from cheap organic polymers printed directly onto a wide range of materials, from fabrics to metals. Along with your solar sunhat, why not wear a power shirt? Scientists at the Georgia Institute of Technology are developing a soft, flexible shirt whose

Unlike traditional solar panels made

from costly silicon, Konarka's solar cells

fibres are coated with invisible Thanks to an effect called piezo-electricity, these generate electric currents when flexed, rubbed or simply worn while walking about. Although in its early stages, its inventors aim to improve the design to

provide enough electricity from a shirt

to charge an MP3 player.



At the beach a new breed of solar panels or even your own body heat could help power an MP3 player

If you don't mind being mistaken for the Bionic Man, climb into the Biomechanical Energy Harvester from Bionic Power. This knee-mounted system creates electricity from the natural motion of walking.

The company estimates that a commercial version of its Harvester (for which there is no release date as vet) could allow walkers to generate up to 7W of power with little effort, enough to operate 14 mobile phones

It is the development of modern low-power gadgets, as much as brand-new energy sources, that is driving the growth in so-called "parasitic power"

Where the cellphones of yesteryear needed suitcase-sized batteries, today's handsets can work for days on a single charge of a tiny battery, even when packed with features such as GPS navigation and video playback.

Devices such as watches, which require only very small amounts of power, can even get all they need from your body heat alone.

It has been a decade since Seiko launched the Thermic, a watch driven entirely by the natural heat of its wearer, but advances in nanotechnology may soon unleash a flood of such hot-stuff gadgets. Researchers at the US Department of Energy's labs have produced silicon nanowires that can recover waste heat energy much more efficiently than

Swedish railway staff are planning to harvest enough heat from passengers passing through Stockholm Central Station to warm nearby offices and

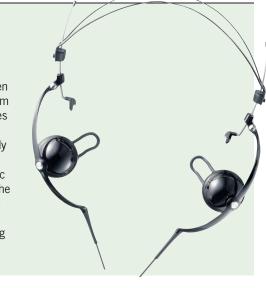
But muscle power for megawatts isn't new: seven years ago, inventor Trevor Bayliss developed an "electric shoe" that produced power through piezo-electricity

"We got it to the stage where you could simply put an insole inside any shoe and generate enough power to make a call or two," he says. "But ever since the shoe bomber, it's just asking for a bullet in the head.

FIELD OF SCREAMS

Sony PFR-V1 Personal Field Speakers \$500 (£252) www.sony.co.uk 08705 111 999

Are you failing to annoy your fellow commuters sufficiently? Then what you clearly need is this strange new audiophile gadget from Sony, which is something halfway between a pair of headphones and a set of loudspeakers. Rubber fittings position twin 1in aluminium speakers about half an inch outside your ear, directly in front of your ear canal. The maker claims these create a "listening field" around your ears that gives the illusion of music being played directly in front of you; apparently, it's similar to the experience of being in a concert hall. However, if you use them for more than a minute in a crowded train carriage, you can probably expect something more akin to the experience of being in Accident & Emergency. The battery-powered PFR-V1 will be launched in the US in April.



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Steve McQueen Triumph T-shirt £25 www.triumphmotorcycles.com 01455 251 700

In The Great Escape, Steve McQueen rode a 1962 Triumph TR6 Trophy motorbike, badly disguised as a BMW. To celebrate what would have been his 78th birthday, you can now buy a special-edition, 100% cotton T-shirt bearing the Triumph logo front and back, and the star's signature on the arm. It will be available from Triumph dealers from March 24.

DONT

NIGEL POWELL ANSWERS YOUR TECH-RELATED QUERIES

■ The videos I load onto my new-generation iPod have no sound. Can you help? Jonny Martin, Ipswich

There are many different types of video file out there, not all of which iPods can handle. Try converting your video clips to its preferred MP4 format using the free Internet Video Converter program from tinyurl.com/yvg6pc.

I received an e-mail, supposedly from the Halifax bank, asking me to click to unfreeze my account, which I did. Have I done something I'll regret? **BK Willcock, Taunton**

 ■ Unfortunately, yes. You have been the victim of a "phishing" attack, in which criminals entice you into clicking on links either to grab account details or to deliver a computer virus. Seek professional advice from a computer specialist right now.

Meanwhile, do not use you PC for banking, shopping or e-mail, and disconnect it from the internet if possible Never click on links in suspicious messages, and update your Windows and antivirus software regularly.

> dontpanic@ sunday-times.co.uk



Lost Odyssey ★★★☆☆ Xbox 360, £45. Age 16+

This stylish role-playing game has a similarly epic feel to the popular Final Fantasy series. You play as Kaim, an archetypal hero who is a dab hand with spells, lethal with a sword and suffering from amnesia (a sort of Japanese Jason Bourne then)

Cue lots of wandering round a gargantuan

world, repeatedly fighting battles while you fill in the blanks of his past. The controls are simple, but the combat mechanics feel archaic. At the start of each battle you are given choices such as attack, defend or heal. You must make a selection, perform the action and then choose another Lost Odyssey is no ground-breaker and the

plot is predictable, but it is never dull. There is a huge range of lavish spells to try out many of which go to town on the special effects - plus myriad creatures to fight, and the way that your character develops is also intriguing. Lost Odyssey looks good, has a well-crafted score and it spans four DVDs.

The game has its flaws, yet it certainly delivers a journey that will keep fans of this genre busy for several weeks as they seek to unravel all its mysteries. **Daniel Emery**



Destroy All Humans: Big Willy Unleashed ★★☆☆ Nintendo Wii, £40. Age 16+

The original Destroy All Humans game was a witty sci-fi spoof where you played Crypto, a cackling alien antihero, determined to rid the world of humans. In a sharp pastiche of 1950s America, Crypto ran amok, blasting sinister government agents and hicks to

deliver some innovative gameplay - even the cartoon-style violence was amusing.

★★★★★ KO ★★★★ A-OK ★★★ OK ★★ So-so ★ No-no

Three years later, the lovable bug-eved rascal is back in an uninspired journey to the 1970s that is packed with recycled concepts and plenty of blunt, gutter humour. The new premise — an amalgam of Fast Food Nation and Soylent Green — is funny, and there are some great bits where you get to rampage through the population in a giant robot mascot.

Sadly, the game is let down by finicky Wii controls, lazy graphics and some horrid mission design. Either your task is over before you know it, or you are saddled with so many tricky conditions that you need inhuman levels of persistence to succeed. Big Willy Unleashed is best tucked out of sight. Stuart Andrews



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