

INSIGHT Ethical electronics



Poor conditions support our gadget habit

Gadgetry without the guilt

The fair-trade smartphone doesn't yet exist, but it may be getting closer

ETHICALLY sourced coffee is easy to find nowadays, but it is hard to feel good about where your smartphone comes from. The industry is beset by allegations of factory-worker abuse, of raw materials being sourced from conflict zones, and of generating mountains of electronic waste.

Taiwanese manufacturing giant Foxconn, which produces about 40 per cent of the world's electronics products, including iPhones, has recently come under fire over poor working conditions and high suicide rates at its plants in China.

On 29 March, the firm announced that its employees would be working shorter hours and enjoying higher wages. It is a step in the right direction, but when *New Scientist* tried to find out whether an ethically produced cellphone exists, the answer was a resounding "no".

Most of the major electronics producers, Foxconn among them, have now signed the Electronic Industry Citizenship Coalition code of conduct, which includes undertakings to abide by local labour laws and lessen the environmental impact of their activities. The EICC helps to develop the code, but its role does not extend to auditing its members' compliance.

Although much attention has focused on manufacturing, less is known about working conditions at the mines that supply raw materials for phones. In China, the world's main producer of rare-earth metals, mines are prone to cave-ins and child labour is common, as it is at mines in the Democratic Republic of the Congo. The DRC produces half the world's cobalt, used in batteries, and is also an important source of gold and the "three Ts" - tungsten, tin and tantalum - which are present in the capacitors

"In China, the main producer of rare-earth metals, mines are prone to cave-ins and child labour is common"

and circuitry in phones. Profits from mining these "conflict minerals" often go towards funding armed factions.

A 2010 US financial reform bill known as the Dodd-Frank act requires companies to carry out due diligence to ensure their metals are not sourced from conflict areas. Sasha Lezhnev, an analyst with the Enough Project in Washington DC, which campaigns to end "crimes against humanity", says the act has had some success. Production of tantalum from conflict areas has

since fallen by 75 per cent. And because US electronics companies - the biggest buyers - are going elsewhere, the price of minerals from such conflict areas has dropped by two-thirds, making them less appealing to rebel groups as a source of funds. Apple has been one of the leaders in auditing its supply chain, says Lezhnev.

"In the DRC, there have been 4 million deaths in the last 10 years: there's a relationship between phones and that problem," says Bas van Abel, founder of FairPhone, a Dutch initiative. By working with communities in the DRC and online, Fairphone hopes to design what it believes will be the world's first cellphone that will be both open-source and responsibly manufactured. The question is: will consumers really pay extra for one?

Yes, says Patricia Jurewicz of the Responsible Sourcing Network, a non-profit organisation in San Francisco. The clothing industry demonstrates that people are willing to pay more if they know a product is ethically sourced, she says. "Consumers want good products that are not exploiting people and not trashing the planet. But they have no idea which companies are good or bad," she says. **Sara Reardon** ■

How to catch a thief with cash and crowds

TRACKING criminals across the globe could one day be as easy as harnessing the power of the crowds. In the Tag Challenge, run last week by the US State Department, five mock jewel thieves were set loose in five international cities. Teams were given just 12 hours to find them before they disappeared, without knowing their names or what they looked like.

The idea was to see how social media could help federal agencies track real criminals. And the winners delivered: a team led by Manuel Cebrian at the Massachusetts Institute of Technology found three of the suspects in Washington DC, Bratislava in Slovakia, and New York City. The team's trick was to give incentives that encouraged as many people as possible to get involved. If the team won the \$5000 reward, the first participant who sent in an image of a suspect wearing a tell-tale T-shirt with a logo and a secret code printed on it (see photo) would receive \$500. On top of that, the recruiters of the first 2000 volunteers would be given \$1 for each person they signed up.

The team also built a smartphone app for the Android mobile operating system that allowed people to view the list of suspects and submit photos of them directly from their phones. **Niall Firth** ■



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