Energy research to create 'Greener' teens

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Student on the University campus with mobile device

Computer scientists at the University of Birmingham have won funding from the Engineering and Physical Sciences Research Council to work on a groundbreaking study into teenage energy consumption that could change the behaviour of a whole generation.

Dr Russell Beale and research colleagues from the **School of Computer Science (http://www.cs.bham.ac.uk)** have won funding of £327,343, of which £261,875 comes from the EPSRC, to carry out the research under the Transforming Energy Demand through Digital Innovation (TEDDI) scheme.

The Birmingham team will be working in collaboration with partners from the Universities of Swansea, Central Lancashire and Nottingham plus the Institute of Education to assess teens' attitudes to using domestic energy, measure how much they use daily and find novel ways to encourage them to make savings. The partners in the study, led by UCLan, share a total TEDDI grant of £1.5 million.

Teenagers will be encouraged to take part in the research via an energy-awareness competition being run in some UK secondary schools. It is hoped to track their energy consumption while making them aware of how often they, for example, switch on the kettle or the TV, use their hairdryer, leave a light on or open the fridge door.

Using web-based, mobile phone and wireless technology, the project aims to develop two digital products - one for younger teens and one to interest older teenagers - which will help to change behaviour towards energy use. The technology could also lead to the development of games which would encourage the competitive aspects of both social peer pressure and individual aspirations while carrying an important educational message.

Dr Beale explains: 'Our work is in the creative design of interfaces and interaction styles in an attempt to engage, entertain, enlighten and empower teenagers to change their energy-use habits. We will use a variety of techniques to design systems that test the strength of social pressures, persistent information and on-going educational support in changing people's behaviours.

'This participatory research will gather stories and data about energy use, deliver innovative mobile technologies to educate and influence teenagers about energy behaviours and use teenagers as co-investigators in designing solutions that could change the habits of a generation.

'Our aim is to create fun, cool things, especially on mobile phones, that actually make a real difference to people's lives; that they like having around and that help the users to engage others in the process of change.'

Devices could eventually incorporate applications to interpret teens' energy use, for example turning their mobile phone energy profile from a red tint to a green tint as consumption decreases.

Dr Beale adds: 'It's rewarding to be doing work that not only has research importance where we learn about design processes but to have something that can have a big social impact in terms of adapting people's energy use for the future and talking to a group that can be very influential in changing families' behaviour.'

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