

Tio

Increasing children's awareness of energy consumption

In collaboration with Onzo and designer Tim Holley



Tio is a lightswitch which provides a simple way to engage and educate children about their lighting's energy consumption and its effect on the environment. Tio encourages children to turn lights off, and becomes more irritable the longer they are left on. Information is sent to a computer by Tio, allowing energy use to be tracked over time. This engages children to make a personal contribution to reducing energy consumption.

Lighting accounts for up to 15% of electricity use in the home, and increasing the younger generation's awareness of energy consumption now will help to effect change in the future.

Brief

The core of the brief set by Onzo was to research, design and develop a sustainable, low-cost solution which engages, educates, empowers and rewards the next generation of young energy users to reduce their energy consumption in the home and beyond.

The brief was unusually broad, allowing Holley to investigate a wide range of potential avenues. While children have long been educated about environmental issues such as pollution, melting ice caps, etc, the link between these issues and the child's personal energy consumption was the key focus of the project.

Approach

Such a broad brief required an extensive research period to fully understand the potential of any product development. Holley and the Onzo team together developed a thorough design process, resulting in a very efficient, focused progression of the product.

Result

Following sketch development and user research the final concept of an 'energy saving light switch' was reached. The concept aims to make children more aware of the energy they use in lighting their rooms. Energy is given a personality through a face featured on the light switch. The character will get progressively more angry the longer the lights are on. This display of emotion will encourage the child to turn off their lights when they are not needed, for example during the day, or when they are not in the room.

Figure 1 below highlights the three main emotional states of the product; happy, indifferent and angry. These emotions

correspond to the colours green, yellow and red respectively.

A key feature of the concept is that it is a 'product system'. The wall mounted light switch communicates with a computer to record the child's lighting behaviour. The information received by the computer is then interpreted and displayed as an engaging graphic representation of energy use. The interface demonstrates the effect that the child's energy use has on the environment. The emotional stimulus of the character on the light switch, combined with a general concern for the environment will act as motivating factors for the child to reduce their lighting use in their room.

The project was awarded an HSBC Sustainability Prize 2009. The Onzo team are now exploring commercialisation options.



Figure 1: Emotional States

