

Helping, Informing or Coaxing the Consumer? – Exploring Persuasive Technology as Applied to Households’ Energy Use

Örjan Svane

Environmental Strategies Research - fms

Royal Institute of Technology, Sweden

svane@infra.kth.se

Let us assume, that people could be persuaded to reduce their energy use in the home through a “dialogue” with a computer. What information, what means of persuasion could the dialogue consist of? Which is the technical hardware? Who persuades, and what about personal integrity? In this paper we explore the merging of two computer-based technologies – “smart homes” and “persuasive technology”.

There are computer programmes that persuade children to brush their teeth, and others that support regular physical exercise. Persuasive technology combines the persuasive powers of TV advertising with the computers’ interactive information handling. Smart homes technology provides residents with information and control, to keep a good indoor climate and a small energy bill. However, the merging of these two concepts has not been explored. Energy use in housing is a considerable part of society’s whole and the potentials for reduction through changes in the consumers’ habits are large. Often, dwellings’ indoor climate could become better through simple measures. There might be a conflict between low energy use and good indoor climate; but on the whole, better control can achieve both. Therefore it is worthwhile to explore how “smart homes” technology could be developed to include computerized persuasion.

Based on a “Master’s Class” at TU Eindhoven and a literature review, we discuss:

- How can households be persuaded to reduce their energy use through interaction with a computer?
- Which are the technical prerequisites?
- How much could be saved?
- What forms could the persuasive dialogue take?

- What differences in control and persuasion follow from the form of tenure?
- Which are the ethical restrictions?

We don't assume that this kind of persuasion is by necessity a good thing. Instead, we explore the issue to enable discussion on its merits and shortcomings – in terms of environmental impacts, comfort, health, technology and consumer ethics.

Paper published in: Svane Ö. (2009) Helping, Informing or Coaxing the Consumer? – Exploring Persuasive Technology as Applied to Households' Energy Use; Varma A 2008: Domotics: Smart Technology, Smarter Homes; ICFAI.