Proposal 13th SC@RUG
The impact of user interface design of eco-feedback systems on consumer behavior

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Abstract

Saving energy in buildings has become and remains a major issue for the planet. The last decade, eco-feedback systems have been developed to provide consumers with information about their electricity consumption. Research has shown that the type of information displayed and the techniques used to present it have an impact on the user energy saving. This raises the question about how to display the information to the consumer in a comprehensive, attractive and non-intrusive way.

In this paper we compare and discuss the various methods of visualizing energy usage for consumers. Some of the design components of user interfaces such as historical comparisons and presentation of costs are more likely to aid in providing the consumer with an understanding of his energy usage and changing his behavior. We will extract the most effective methods from research and surveys.

The comparison of the different methods is based on the reduction of energy usage of consumers using such eco-feedback systems and if consumers keep using the eco-feedback systems for longer periods of time. Additionally, the results of interviews with users of such eco-feedback systems will also be taken into account.

We expect to find the most effective methods to visualize energy consumption data for future eco-feedback systems.

Keywords: Eco-Feedback, interface design, energy consumption, consumption feedback systems, energy feedback

Field of research: Ubiquitous Computing, Energy & buildings

Topic: User Interfaces for Eco-Feedback Systems

The specific focus/research question: What is the effect of user interface design of eco-feedback systems on consumer behavior?

Expected findings/results: We expect to find the most effective methods to visualize energy consumption data for future eco-feedback systems.