Innopolis University | Software Architecture | Spring 2016

Using Avatars for Reducing Electrical Consumption at Home

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Rudimentary Project Description

Sustainability is a global important issue today. This project explores how Software Engineering (SE) and Information Technology (IT) techniques can be used to support people in consuming fewer resources at home and in behaving more sustainably. It will do so through the design, development and evaluation of persuasive technology in the form of an interactive application. The application will represent an Avatar person that can persuade householders of modifying their energy consumption habitats by changing the Avatar's aspect. Thus, the Avatar person can, for instance, adopt a grumpy red face if energy consumption at home surpasses certain threshold during some period of time.

The main goal of this project is to implement visualisation technology for home energy consumption that has positive effects on the attitudes of people at home. Overall, you will produce functional and evaluated interactive technology in the form of a programming library that supports people in improving their energy consumption behaviour at home. The produced technology may be able to integrate with household sensing of energy consumption at home. You will implement the core functionality of the Avatar in either Java or Eiffel, yet the core functionality may interface with other type of technology which might or might not be written in other programming languages.

The interactive system may integrate with online social network systems such as Facebook (`www.facebook.com`) or StepGreen (`www.stepgreen.org/`), or be implemented as an Android application.