Abstract

In a home environment, human actions consist mainly of routines which are performed at approximately the same time every day, and one routine is broken only to be replaced by another. This paper is based on a pervasive interaction with the inhabitants of a house to provide an enhanced Smart Home experience. This paper proposes a probabilistic model to manipulate the environmental information from sensors and identify the actions of the household inhabitants, by exploiting the fact that household activities encompass routines. This paper also shows the simulation of a smart home system, which uses this probabilistic model to adapt to one’s habits, by identifying one’s intensions and accordingly transforming the household environment to support the user’s intended actions.

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Enhancing the Human-System comprehension in a Smart Home System using Pervasive Computing


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Keywords

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