Smart Houses in Cloud4all: from simulation to reality

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Abstract. The Global Public Inclusive Infrastructure (GPII), which is being developed by the Cloud4all project and several other R&D projects, is a framework to ensure that everyone who faces accessibility barriers due to disability, ageing, etc. can use computers, mobile devices, the Internet and all the information and services available through these media. One of the goals of the Cloud4all project is to investigate this "auto-personalisation from preference sets" (APfP) in a domestic environment. To this end, the project is developing an online simulation of a smart house containing several devices with adaptive user interfaces such as a multimedia system and a washing machine with a display. For demonstration purposes, the simulation allows visitors to select the preference sets of seven personas with a variety of disabilities, i.e. visual, auditory, cognitive and motor impairments.
The Smart House Living Lab is a real accessible house equipped with the usual services of a conventional house where different ICT technologies (sensors and actuators) are distributed extensively in the living lab technical areas such as ceilings and walls, remaining invisible to users. It is managed by the Life Supporting Technologies Group of the Universidad Politécnica de Madrid; and it is also a member of the European Network of Living Labs [1].
This presentation shows the Smart Houses online simulation developed within Cloud4all and its integration with the Smart House Living Lab at UPM.