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Scalable interconnected home automation system

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Abstract:

Home Automation Systems have been continuously evolving in the past few years: some of the systems are focusing their attention on providing remote access and control of the system, while others are more focused on the interconnectivity of the devices and on integrating them into greater systems, like smart cities. In this paper we propose a hierarchical architecture for Home Automation Systems, which aims at integrating both approaches. We propose a modular and scalable system, with multiple layers, each layer having its own distinct structure, functionality and challenges.

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I. Introduction

More and more people choose to leave behind their traditional desktop computers and connect to the world using small gadgets like mobile smartphones, tablets and smartwatches. The demand for smart homes and environments is increasing and we are slowly entering the era of the Internet of Things. Sensor network and cloud computing technologies will need to rise to meet the new challenges, as more and more, small embedded systems start collaborating to enhance our everyday life.

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IEEE Keywords

Computer architecture, Servers, Home automation, Cloud computing, Systems architecture, Wireless sensor networks, Computers

INSPEC: Controlled Indexing

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INSPEC: Non-Controlled Indexing

device interconnectivity, system control, remote access, Home Automation Systems, scalable interconnected home automation system

Author Keywords

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