Foreword and Editorial

International Journal of Smart Home

We are very happy to publish this issue of an International Journal of Smart Home by Science & Engineering Research Support soCiety.

This issue contains 3 articles. Achieving such a high quality of papers would have been impossible without the huge work that was undertaken by the Editorial Board members and External Reviewers. We take this opportunity to thank them for their great support and cooperation.

In the article entitled "A Review: Electric Field Sensing for Human-Computer Interaction Applications", Human- computer interaction (HCI) in invasive computing system has been proving as a dynamic research interest since the late nineties. The interference of a human body intercepting the way between a transmitting electrode having low frequency and a receiving electrode changes the displaced current which is computed at the receiving electrode. The procedure of human body interfacing with electric fields of low frequency could be implemented to make an extensive area of interactive fields namely human computer interface, virtual reality, interactive surfaces as well as automotive applications. This paper aims to make an overview of some electric field sensing techniques along with their applications including Human-Computer Interaction (HCI) procedure as well as the evaluation of the robustness of the applied techniques.

In the paper "Design an Intelligent System for Measurement and Monitoring Using Wireless Sensor Network", a Building Management System (BMS) is designed using NI-WSN to reduce the energy consumption using graphical software named LabVIEW. This system provides a low cost, in addition to a great flexibility of monitor and control for the buildings. The system is designed a real time for monitoring and controlling using NI-3202 nodes and the NI-9791 gateway to measure and control on temperature, gas flow, motion and light, in addition to the camera, then using the mobile device to show these data in the dangerous state.

The study "'Nearest Zero-Point' Algorithm for Cooperative Robotic Search Missions", states that four path planning and data exchange algorithms for cooperative search and coverage robotic missions are proposed and modified. The introduced methods are simulated using C++ programming environment and the results are discussed in detail for environments with static obstacles. It has been shown that using the "nearest zero-point" algorithm can greatly optimize the mission duration and also overlapping of the search trajectories. Finally, the results are compared with several existing algorithms.

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