

Final Year Project Report
Smart environment development kit



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Dedication

To the courage & never losing hope

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Final Approval

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ABSTRACT

The paradigm shift from traditional computing towards the ubiquitous computing is introducing the idea of smart space. The ease in availability of numerous miniature devices and the wide-scale development of micro controllers have boosted the development of smart spaces. Although the hardware devices are mature but the designing, development and deployment frameworks are still lacking behind in forming a complete sophisticated deployable smart system.

The thesis focuses on figuring out and forming an appropriate approach to resolve the issues reside in the development & deployment of smart environment. The requirement of smart environment development framework is to cover all the phases from design to the deployment of the diversified smart spaces.

Our System will offer a layered architecture covering the seamless and transparent connectivity of physical objects with the simulated environment, development of customized simulation and visualization of the simulated environment will also be ensured. Simulated environment will contribute in analyzing the behavior of developed smart system in different situations before it is actually deployed in the physical world.

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DEFINITIONS AND ACRONYMS

Acronyms	Definition
UbiCom	Ubiquitous Computing
SE	Smart Environment
SEDK	Smart Environment Development Kit

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1 INTRODUCTION

It is the beginning of the era of Calm Technology

“...the age of calm technology, when technology reside in the background of our lives.” [1]

- Mark Weiser.

The result to tremendous amount of development and transformation in the world of technology in the last few decades, technical advancement have gained so much maturity that every device supports mobility, connectivity and smartness. With such properties these devices as an individual have established a significant space in our day to day life e.g. smart phones, tablets, smart wearable gadgets etc. Due to the low cost availability and mini sizes of device like wireless communication modules, parallel processing modules, multiple sensing devices, actuating devices and micro controllers opened up a path to an incredible development phase. The next major millstone is to elevate the identity of these devices from an individual smart device to the cluster of smart devices giving a shape to a smart eco system.