

# ANDROID MEETS LED BULBS IN SMART HOME AUTOMATION

## INTRODUCTION

Android is a free, open source mobile platform. It is a Linux-based, multiprocess, multithreaded Operating System.

Android is a software stack for mobile devices that includes an operating system, middleware and key applications. By providing an open development platform, Android offers developers the ability to build extremely rich and innovative applications.

The Android SDK provides the tools and APIs necessary to begin developing applications on the Android platform using the Java programming language.

## PRODUCT PERSPECTIVE

Smart Home Technology can be implemented using various techniques, such as, by using an X10 device or WiFi. But, they have certain limitations. Communicating over electrical lines is not always reliable because the lines get "noisy" from powering other devices and an X10 device could interpret electronic interference as a command and react, or it might not receive the command at all.

Bluetooth is selected as our way of communicating PDA/Mobile with the central system. Bluetooth is selected over WiFi for various reasons: First of all, Bluetooth security is less complex and more stable than that of WiFi. Bluetooth manages a security measure of only permitting certain selected devices to interact with them; WiFi, on the other hand, establishes a WEP key that has been known to be cracked. Another reason for Bluetooth to be selected over WiFi is that, Bluetooth has a shorter range of signal emission than WiFi. This is a pro because

the shorter the range, the less is the amount of intruders who will try to infiltrate your home system.