# Abstract

Smart Home is a combination of information technology and computing technologies applied in homes or buildings inhabited by humans by relying on efficiency, automation devices, comfort, safety, and savings of home electronic devices. In accordance with technological developments, the current production of smart home has been much developed with various concepts and systems in the wake. Smart home can be integrated with other production technologies that are currently being widely used as integrating it with the Arduino Uno and the operating system is open source in the Android mobile platform.

At this final project, it has designed a prototype of Smart Home system with client-server-based user interface arduino uno with android that will perform data communication via wireless (without cable). Construction stage begins with build a server, build interfaces, as well as its smart home control system. On the server side will use the programming languages C and C ++ while the user side using Java programming language. On the server will use a method or protocol Common Gateway Interface berfungi as a liaison between the android platform with modules used arduino uno. Server and client will communicate via wireless after pensettingan IP so as to have the same local network.

By using a system that has been adopted allows the Smart Home can be accessed by multiclient. The results showed there is a delay that is influenced by distance, type of room and obstacle. The average value of the lowest delay and delay is 0.061641 s high of 0.1242242 s. While the highest RSSI is worth -52 dBm and -86 dBm weakest worth. Expected output for further study is to obtain an analysis that is able to serve as a reference concept of Smart Home or home automation more efficient that can be applied in real application.

**Keyword :** *Smart Home , Common Gateway Interface , Android , Client-Server*