Bluetooth Hardware Controller

"Control your world through bluetooth"

Sean Penney, penneys@onid.oregonstate.edu
Aaron Egger, eggera@onid.oregonstate.edu
Paul Atkinson atkinspa@onid.oregonstate.edu
Client: Don Heer, heer@eecs.oregonstate.edu

OSU CS Capstone Projects

Introduction and Background

We wanted more experience designing user interfaces and working with bluetooth devices in Android.

Don Heer wanted a framework to allow general users to control hardware through bluetooth without programming. Advanced users could create the software modules for specific bluetooth hardware. This project was a collaboration between our CS senior project group and an ECE senior project group. Collaboration allowed us to utilize hardware that wouldn't have been available otherwise.

Diagram of framework

Project Description

We setup a framework to create modules, along with a website where modules can be uploaded/downloaded.

List steps later

We used our framework to develop some modules for a bluetooth gamepad, keyboard, and Arduino.

We chose bluetooth low energy to minimize battery usage, and learn new technologies.

Doing The Project

We learned about bluetooth low energy and different profiles.

For the plugin framework, we made each plugin into an .apk file which can be downloaded from the website. The main app can figure out which plugins are installed, and launch any of them.

Later we will fill in more material here.

Importance

Control of bluetooth devices can be consolidated by using this app. This will allow people to automate household items .

Results

In this section we will talk about how the project went. This will be filled in later.

Graphs, charts, imagery

Graphs, charts, imagery

Conclusions

Conclusion will be filled in later