Power Saver Servant

Group# 4
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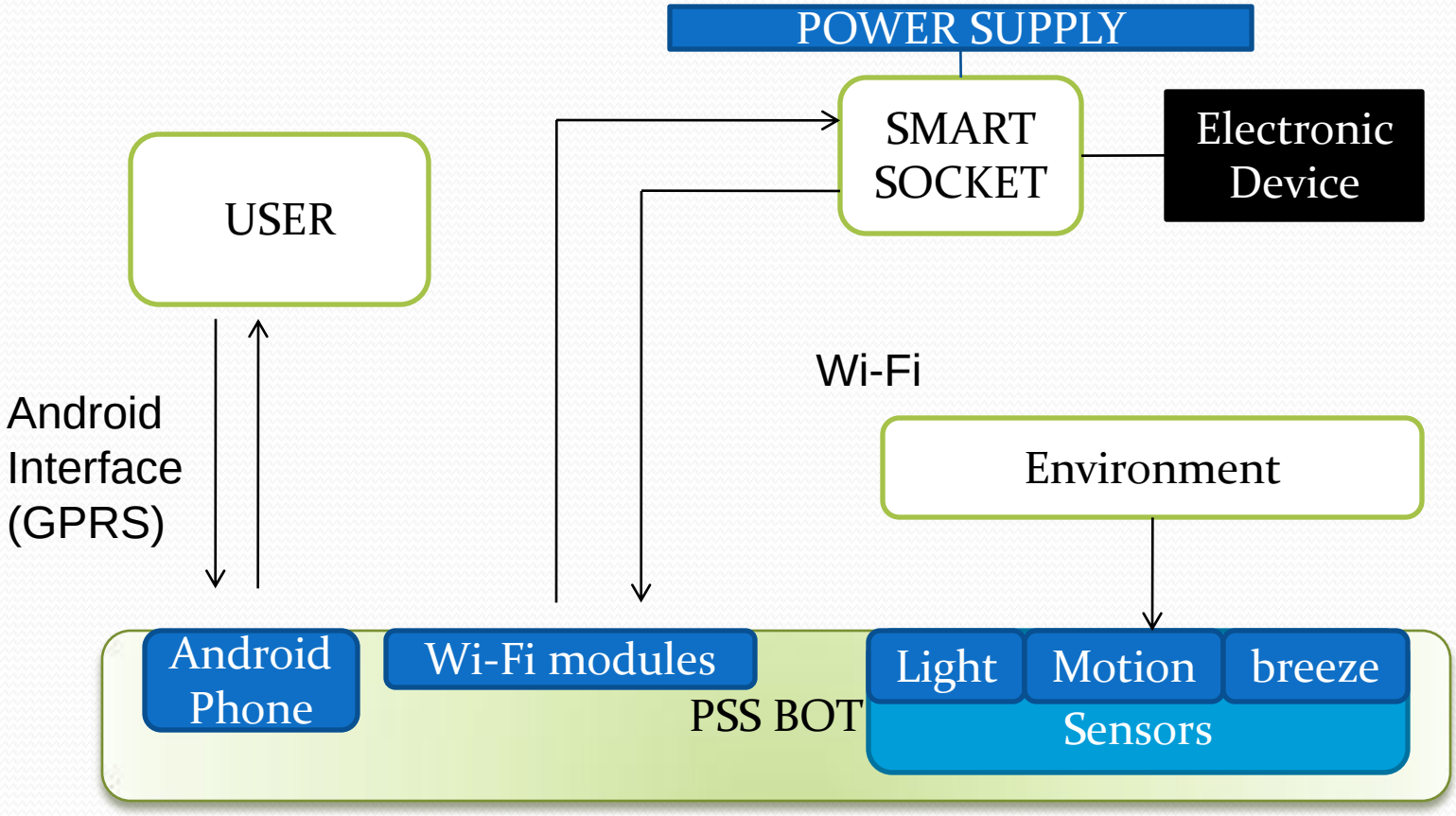
The Idea

- A robot which roams around in your house and detects unnecessarily “ON” devices and shuts them off, and notifies the owner.
- Robot will be a servant bot controlled by an Android Phone.
- User interacts with bot using his own Android phone.
- The idea is to make a smart and ingenious servant to Stop electricity wastage in households.

The Idea (ctd…)


POWER SUPPLY
SMART SOCKET
Electronic Device
USER
Android Interface (GPRS)
Wi-Fi
Environment
Android Phone
Wi-Fi modules
PSS BOT
Light
Motion
breeze
Sensors

Key Challenges

1. Building a communication interface between Firebird and Android Phone.
2. Accurate sensing of the environment.
3. Wireless communication between sockets and the bot.
4. Path traversing.
5. Tackling the externalities, or any outside interference.
6. Abstracted implementation.

Response

- Accurate sensing of the environment.

  - Properly calibrated sensors are assumed to be available.

Response

1. Wireless communication between sockets and the bot.

   - Smart Sockets are assumed to be of this capability. Robot will communicate with them. Wi-Fi communication API's of firebird to be used.

Response

1. Path traversing.

   - We plan to demonstrate the robot on white lines , which eliminates this challenge.

   - GPS navigation

   - Manual Drive

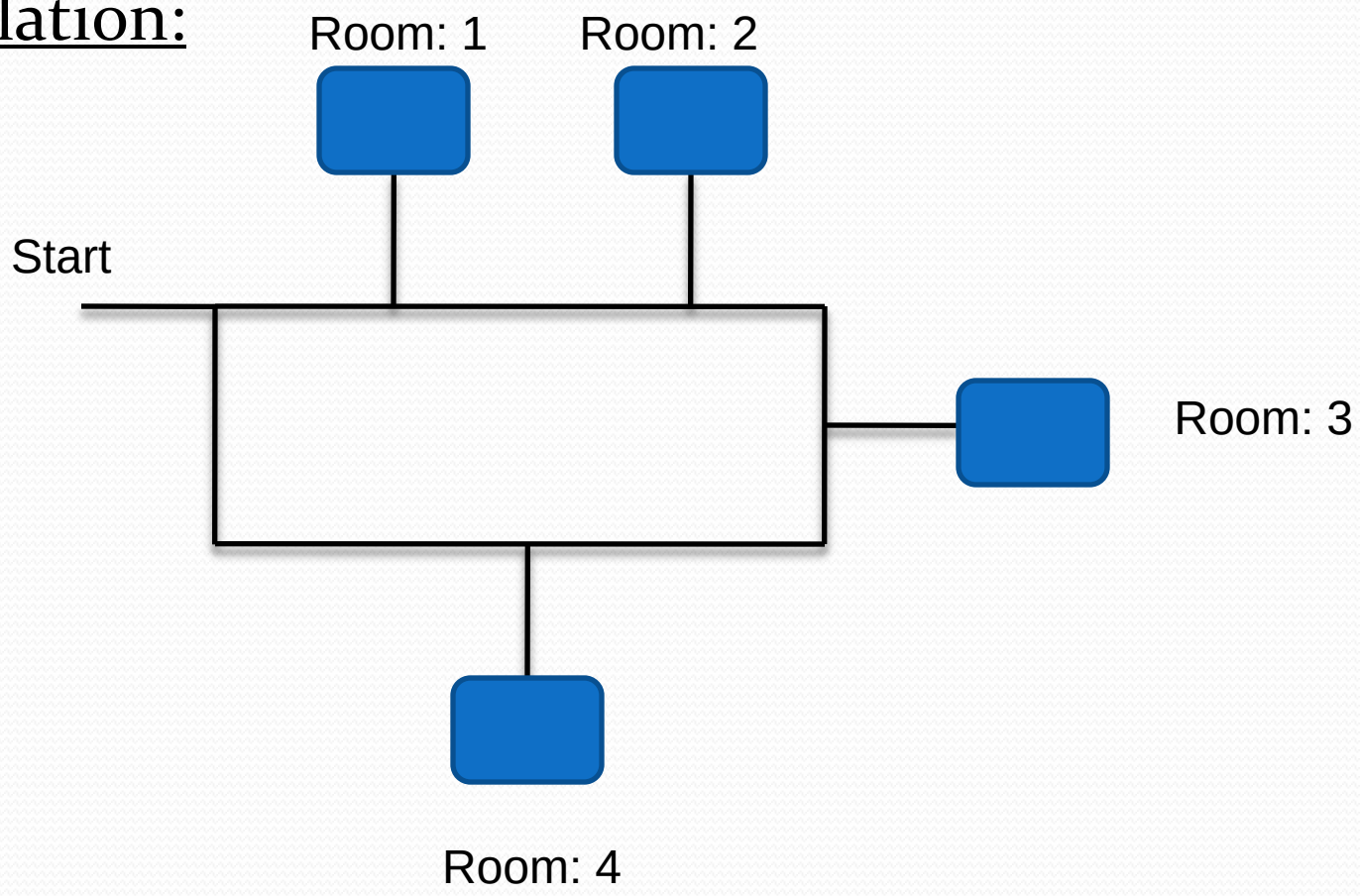
Response

1. Externalities

   - Bot should never enter , unwanted states.
   - Communication failure
   - Power failure
   - Hardware Failure
     - Pre-coded commands / orders.

Response

Simulation:



Additional Hardware

- Motion Sensor
- Light sensor
- Breeze sensor
- Smart Socket
- Android Phones
- Wireless communication module.

Where can we fail

1. Sensor failure.
2. Improper command by user.
3. Lack of Network (GSM) coverage.
4. Hardware failure.

THANK YOU !