Design and Implementation of Home Energy Management System with Appliance State Detection Support

指導教授: 曹孝櫟 教授
學生: 唐心駿
Motivation

- Watching TV program is an entertainment for the whole family, so we want to build our system on it.
- We hope to complete following functions doing on the appliances just by press some buttons on your TV controller:
  - Monitoring
  - Control and Management
  - Analysis
Approaches

- **Construct Data Base**
  - Use MySQL
  - Appliances information
    - appId, appType, power, timestamp

- **Program Interface**
  - Use GTK
  - Show appliances information
    - Show icons to indicate the state of appliances
    - Chick button to turn on/off appliances
Problem station

• Now the web TV program and the appliance monitor are working separately

• Now we should integrate the two programs together
  ◦ Include MySQL library in web TV’s source code and add the appliance monitor’s code, so that the program can get the information from our DB
    • Search how to modify files used by ‘automake’
Goals

- Add the appliance monitor as a tool (or function) in web TV.
- Add more function, like power consumption analysis.
- After all functions can work with our DB well, we’ll replace it by connect to the server which can get ‘real’ appliances information.