

CHAPTER 3

RESEARCH METHODOLOGY

Tools and sensors to be needed in this project :

1. Toy Car

For toy cars there must be two dc motor in the car. one for the front tire, to turn right or left. And one more dc motor for the rear tire which is to go back and forth. Motor is controlled by MotorShield which can control dc motor when forward, backward, left or right.

This toy car will be assembled and tested as a module. Test program for toy car, this program is uploaded into micro controller with shield motor and 2 dc motor, hence toy car can go forward, backward, left or right without input.

2. Connection to the Internet

For connection to the internet, there is a module named ESP 8266 that used for established connection to the internet via WiFi for get or post a value to Thingspeak IoT server or another IoT server.

The connection to the internet will be assembled and test as a module. Test program for connection to the internet is uploaded into the micro controller with ESP8266, then the micro controller can establish connection to the internet via Wifi that not limited to cable LAN

3. Test Program

The toy car and the connection of the internet module are assembled into one set. If there a command from application mobile phone, the Thingspeak IoT update the value of the field. Then the micro controller read the last value of the field on the Thingspeak IoT

and translate it so the toy car can run depends of commands on what we want.

