

Abstract

As we have searched the way out to implement our project based on SMS or Short Message Service from service provider and the result turns out to be unsatisfactory. We need to know SMS coding and programming of service provider in order to proceed our project, which is confidential and proprietary for each service provider. Therefore we make a decision to implement our project using service of WAP or Wireless Application protocol instead, because it is now prevailing and even cheaper in terms of service charge. Majority of mobile phone in the market nowadays is already WAP-enabled and the trend is going to be the whole mobile phone very soon.

Basically we are adapting WAP to our project to take control of our relay board, which is simply the board consisting of 8 relays with microcontroller to interpret user commands and order each corresponding relays to function accordingly. The end-users need to have WAP-enabled device in hand in order to take control the relay board. Our project testing is based on WAP emulator software running on our own machine. For real application, all of the program (wml, PHP and Visual basic code) need to be properly installed in web server and end-users have to complete WAP setting correctly according to their service provider before taking control of relay board.

The operation starts after user picking up one choice on WAP page by clicking on “Submit..” command. This is simply a link to invoke PHP program according to user’s choice, first one is ON_all or OFF_all, and another one is each switch assignment. These two options are treated separately in order to reduce complexity of PHP program. Then PHP program will store user’s choice in one temporary file, with the end of PHP program executing visual basic application. The reason we choose visual basic program is that it is easier to understand and simpler than other language to open and communicate via serial or communication port. Next, visual basic will read user’s choice from that temporary file and send it out to microcontroller. Lastly microcontroller will send command according to user’s choice to turn on or off the LED connected at each relay. The flowchart of overall process is shown on the following page, together with PHP and Visual basic flowchart on the next following page.