Project Brief
SolarRemote

Strand, Johan

johstr@student.chalmers.se

Svedberg, Pär

svpar@student.chalmers.se

Åkergren, Oskar

akergren@student.chalmers.se

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Background and Aim

Solution

The main issue in this project is to develop a device that will be able to communicate with the panel.

One problem that most likely will arise is the communication over a serial link and what ways there are to handle this type of communication.

The solution to this will be to read up on this type of communication and see how others have solved this type of communication. We will also be able to test our method by connecting our device to a panel available to us in the company office.

Another problem is that depending on the type of micro controller we decide upon there will be different library's to use and different methods and languages to program the controller. So before we decide on one controller we don't know how difficult it will be to develop our device.

The solution to this problem will be to use a standardised Arduino board so that the information will be easy to find and the controller will have have numerous of compatible accessories.

As we have no previous experience with the panel, we do not know how to set different commands over the serial link and then receive the reply so that will be yet another problem. Because the panel and its controller is custom build by the company, is there sparse with information sources of how the panel works.

The solution to this will be to read the documentation send to us by the company and to utilize the 'trial-and-error'approach.

The likely result of this project will be a hand held device that will be able to communicate over a serial link to the company's panel. The device will be based on an Arduino board and will be able to send commands with a push of a button and the command will travel over a connected USB-cable. The device will also contain a screen that will be able to display information requested from the panel. Most likely will our device be based on an Arduino board because of the comprehensive documentation and compatible accessories for these.

A drawback on using an Arduino board as the base for the system is that our device can become relatively large compared to other devices for a similar purpose. The size will be dependent on the fact that the different boards from Arduino are multipurpose units and contains ports that will be left unused. A better base system could be to use a touch screen device but it is not trivial to find such device that can act as a USB-host and then the cost would be higher then the Arduino system.

Organisation