

Guide to use Telos B

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1. Go to this link: <http://anrg.usc.edu/contiki/index.php/Installation>
2. Follow on screen instructions and install Instant Contiki and VMWare Workstation 15
3. Follow the instructions about installing the appropriate packages for the TMote
4. The TMote = Sky Mote = TelosB Mote, they are all the same thing and confusingly are referenced interchangeably.
5. Go to this link: http://anrg.usc.edu/contiki/index.php/Contiki_tutorials
6. Complete the “Hello World” and “Broadcast Example” tutorials to get you familiar with the terminal application.
7. Complete the “Sensor Acquisition” tutorial as well.

I have combined the Sensor Acquisition and Broadcast example programs into a single program that takes in data from the sensors and broadcasts them to any motes within a certain range. Right now I am modifying the many header files to try to change the functions used in the broadcast program to accept the data from the sensors and send them. I am now focused on the electrical engineering portion of my senior project with my other two teammates and we are trying to finish that portion soon so I can go back to focusing on the sensor portion. After the sensor broadcast is figured out, the main task will be to somehow send the info gathered to the cloud or some data server. This practice and set of tutorials should get you familiar with the actual programming. There is another program called Cooja that is located in the Instant Contiki virtual machine. It can be used to simulate the code instead of actually downloading it to the mote. I have used it to determine the distance and placement of each signal to utilize the directional sending of sensor data so that it kind of creates a chain. You can learn a Cooja with this short tutorial here: http://anrg.usc.edu/contiki/index.php/Cooja_Simulator

The extent of my knowledge comes from trial and error with the Instant Contiki Virtual Machine since there is such little documentation. Don't forget to use the command: “sudo -s” to access the terminal as root before doing any programming to your TelosB Mote. When prompted for a user password it is: “user”.

Let me know if you have any questions,

Jared