Samraksh eMote TinyOS QuickStart Guide v0.1

SOFTWARE ENVIRONMENT

0. Install CodeSourcery lite edition ARM compiler (arm eabi).
   Free but registration required.
   http://www.mentor.com/embedded-software/sourcery-tools/sourcery-codebench/editions/lite-edition/

   Ensure that the installed binaries (e.g. arm-none-eabi-gcc) are part of your PATH

1. Install TinyOS-2.1.1.
   See instructions for your OS at:
   http://docs.tinyos.net/tinywiki/index.php/Main_Page#Installing_TinyOS_2.1.1
   If on Linux and using deb packages: 'apt-get install tinyos-2.1.1'
   Note that all that is really needed is the TinyOS toolchain (nesC compiler etc), not source.

2. Unpack provided Samraksh source tree, for example on Linux at /home/my_username/TinyOS-STM

3. Edit 'tinyos.sh' to match your install path if not using the default above.
   Source the environment varibles from tinyos.sh, for example on Linux '. tinyos.sh'

4. Your environment should now be setup.
   To build a TinyOS app, navigate to its directory and run
   'make emote'

   Note that the actual binary needed for installation is then found at build/emote/main.exe

TO INSTALL APP TO EMOTE

Plug the eMote into a PC using a microB cable, to the serial port marked 'Serial' (on the left side). Install usb-serial drivers if prompted. Open a terminal on the new serial port (hyperterminal on windows is recommended); settings are 115200, 8, N, 1.

When the eMote boots, there is an approximately 10 second window for the user to enter any input on the serial port and enter bootloader mode. You may either power cycle the eMote or use the provided reset button to start the process. Upon pressing a key you will be presented with menus allowing you to upload a new binary (the main.exe mentioned above) using the Y-modem protocol.