Home Challenge #3: TinyOS

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1 Tiny-OS Code

We created the file *foo.h* which conatains the structure of the messages, composed by the variable *id* (which represents the sender id) and the variable *counter* to count the number of messages received. We then created the file *fooC.nc* which contains the model of the application. We defined some variables:

- *bool lock*: to make sure that the same sender does not send multiple messages at the same time..

- *uint16_t counter*: to represent the local counter of each mote (initialized with 0).

- *bool led0, led1, le2*: to represent the mote's LEDs state.

We configured the frequency of each mote as specified and implemented the functions to send and receive the messages.

2 Cooja Simulation

We started a new simulation by creating 3 new sky motes using the main.exe file compiled using the *make telosb* command. Using the *printf* functions we made sure that the messages were sent and received properly. We, finally, printed the first 20 values received by the mode #2 in order (*led2 led1 led0*): 000,100,101,001,101,001,101,001,000,100, 000,100,000,100,101,000,100,000,100,000.