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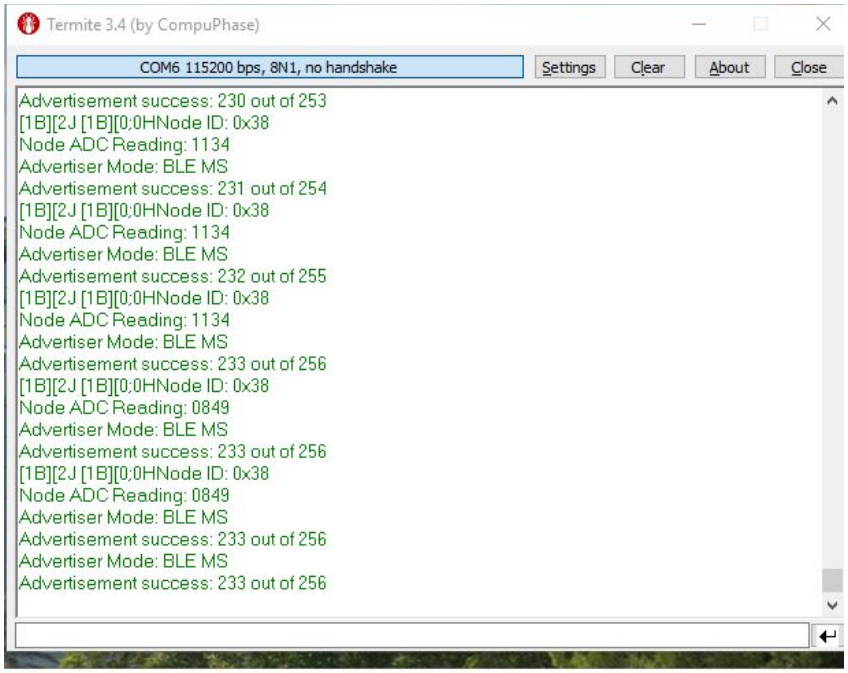
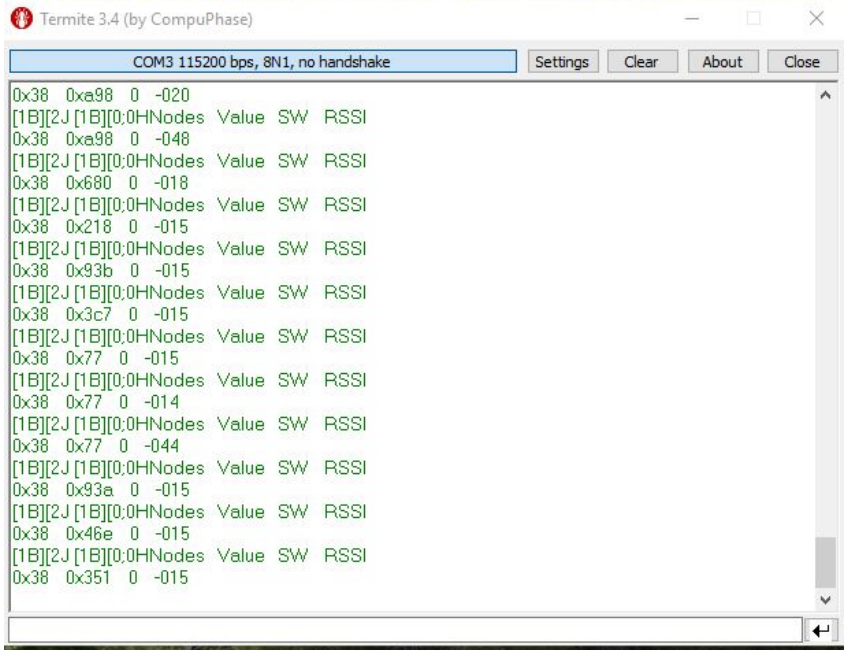
CpE 403 Section 1001
Date Submitted: 11/21/2018

Youtube Link Task 2: https://youtu.be/p5O8x58CPg4

Task 2:
UART:



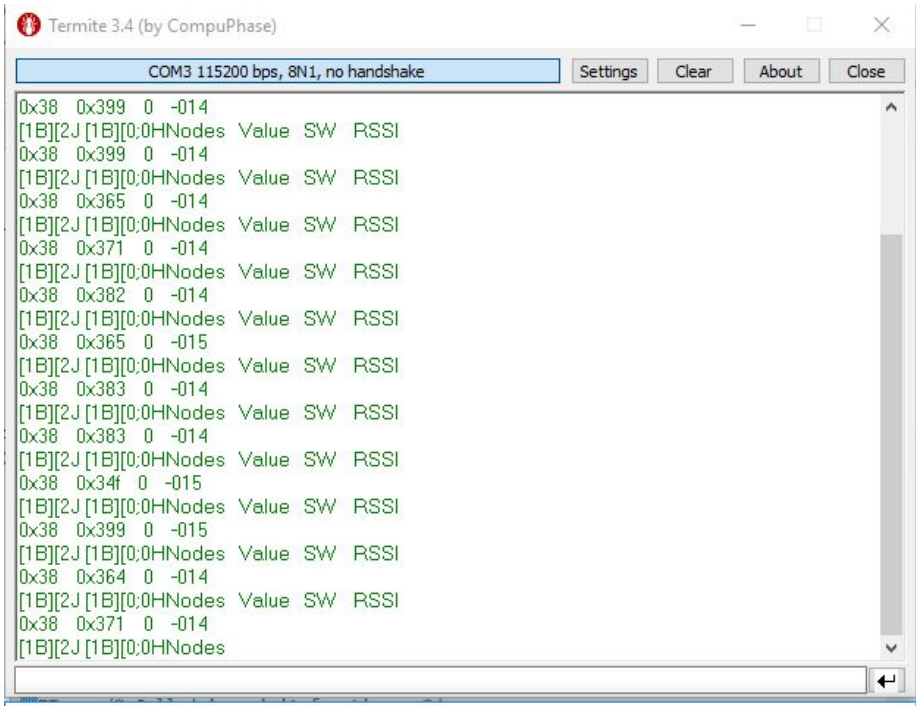


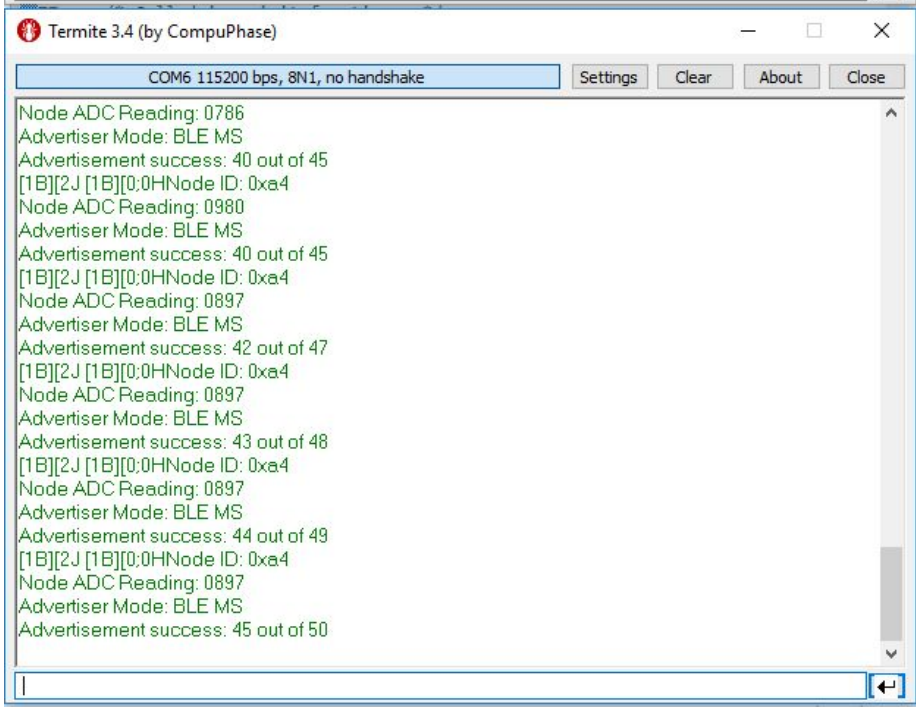
Task 3:

ConcentratorRadioTask.c:

```
  // If you wich to use a frequency other than the default use
  // the below API
EasyLink_setFrequency(868300000);
```

UART:



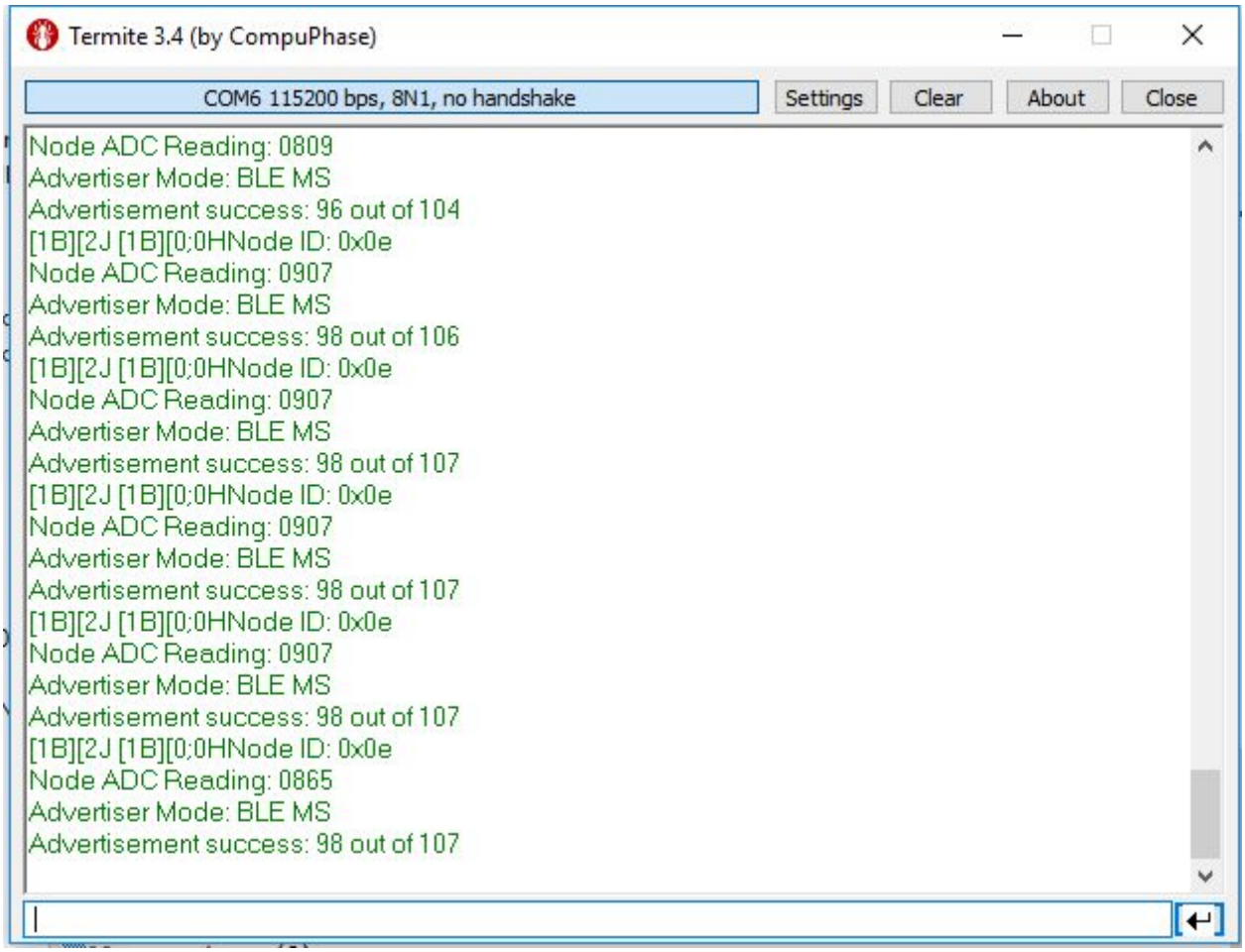


Task 4:

RadioProtocol.h

```
#define RADIO_CONCENTRATOR_ADDRESS      0x00
#define RADIO_EASYLINK_MODULATION       EasyLink_Phy_625bpsLrm
```

UART:



Task 6:

Sensor Controller Studio:

```
// Enable the ADC
adcEnableSync(ADC_REF_FIXED, ADC_SAMPLE_TIME_2P7_US,
ADC_TRIGGER_MANUAL);

// Sample the ADC
S16 adcValue;
adcGenManualTrigger();
adcReadFifo(adcValue);
output.adcValue = adcValue;

// Disable the ADC
adcDisable();

// Alert the driver if outside of change mask
U16 adcMaskedBits = adcValue & cfg.changeMask;
if (adcMaskedBits != state.oldAdcMaskedBits) {
    fwGenAlertInterrupt();
    state.samplesSinceLastReport = 0;
} else {
    state.samplesSinceLastReport = state.samplesSinceLastReport + 1;
}

//Alert driver if minimum report interval has expired
if(cfg.minReportInterval != 0) {
    if(state.samplesSinceLastReport >= cfg.minReportInterval) {
        fwGenAlertInterrupt();
        state.samplesSinceLastReport = 0;
    }
}

// Save old masked ADC value
state.oldAdcMaskedBits = adcValue & cfg.changeMask;

// Schedule the next execution
fwScheduleTask(2);
```