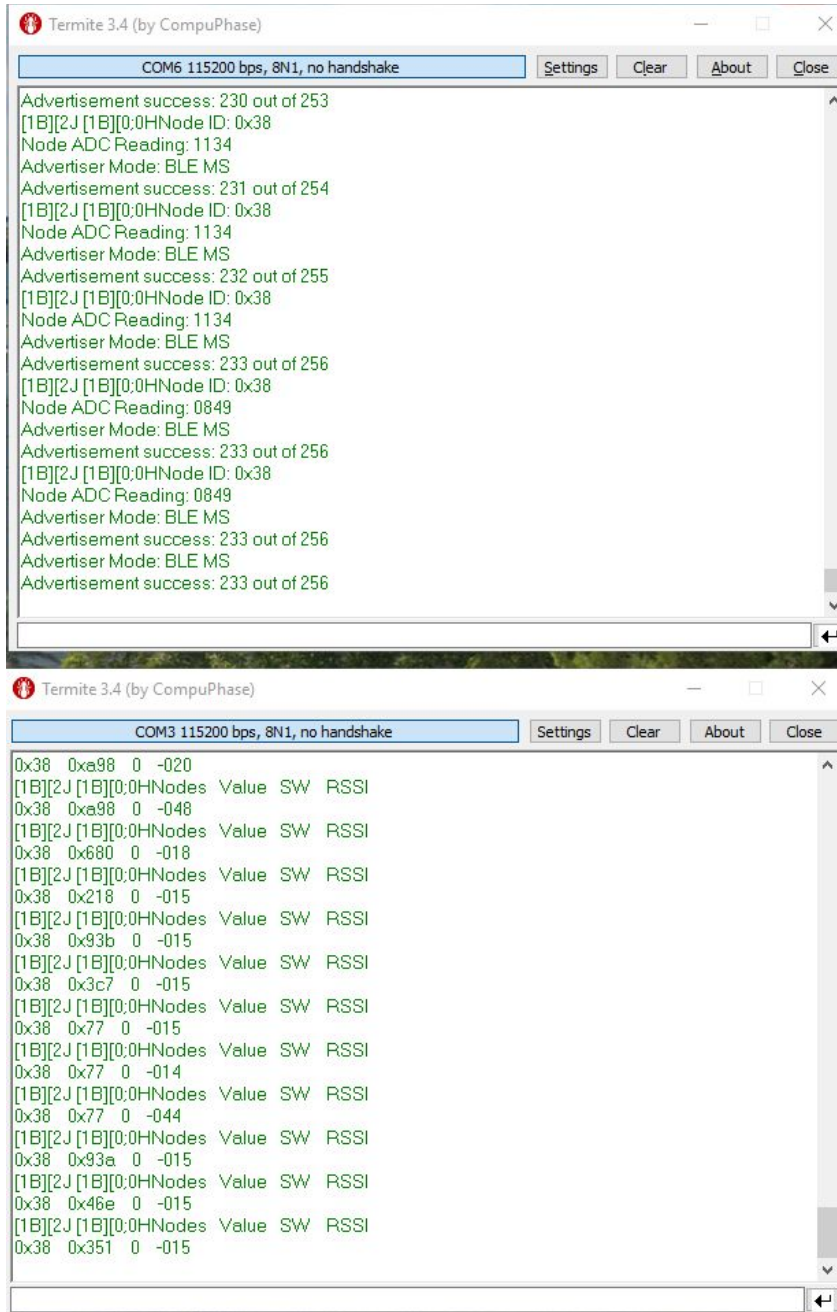


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CpE 403 Section 1001
Date Submitted: 11/21/2018

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

Task 2:

UART:



```
Termitte 3.4 (by CompuPhase)
COM6 115200 bps, 8N1, no handshake
Settings Clear About Close

Advertisement success: 230 out of 253
[1B][2J [1B][0:0HNode ID: 0x38
Node ADC Reading: 1134
Advertiser Mode: BLE MS
Advertisement success: 231 out of 254
[1B][2J [1B][0:0HNode ID: 0x38
Node ADC Reading: 1134
Advertiser Mode: BLE MS
Advertisement success: 232 out of 255
[1B][2J [1B][0:0HNode ID: 0x38
Node ADC Reading: 1134
Advertiser Mode: BLE MS
Advertisement success: 233 out of 256
[1B][2J [1B][0:0HNode ID: 0x38
Node ADC Reading: 0849
Advertiser Mode: BLE MS
Advertisement success: 233 out of 256
[1B][2J [1B][0:0HNode ID: 0x38
Node ADC Reading: 0849
Advertiser Mode: BLE MS
Advertisement success: 233 out of 256
Advertiser Mode: BLE MS
Advertisement success: 233 out of 256

Termitte 3.4 (by CompuPhase)
COM3 115200 bps, 8N1, no handshake
Settings Clear About Close

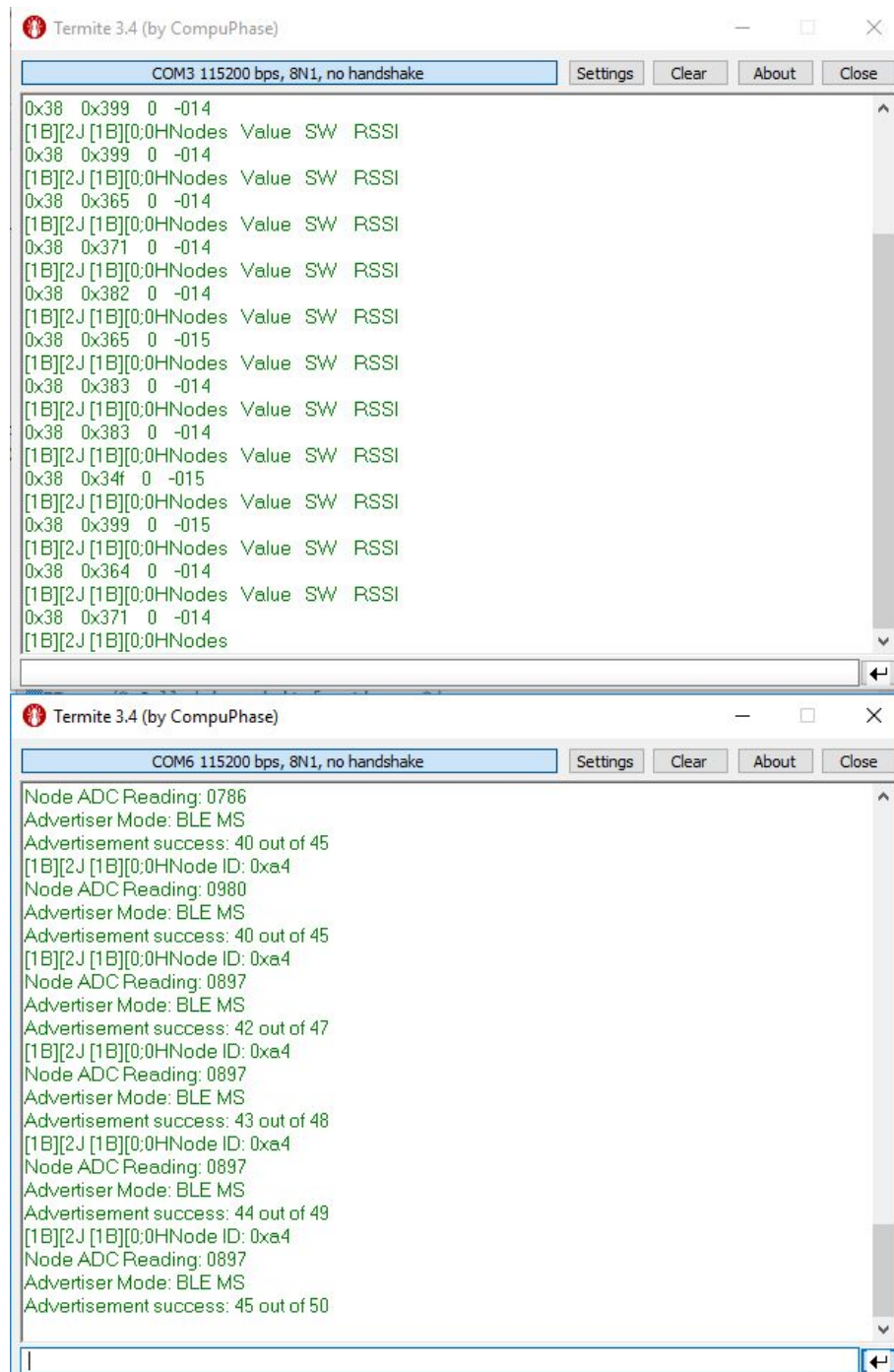
0x38 0xa98 0 -020
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0xa98 0 -048
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x680 0 -018
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x218 0 -015
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x93b 0 -015
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x3c7 0 -015
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x77 0 -015
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x77 0 -014
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x77 0 -044
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x93a 0 -015
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x46e 0 -015
[1B][2J [1B][0:0HNodes Value SW RSSI
0x38 0x351 0 -015
```

Task 3:

ConcentratorRadioTask.c:

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

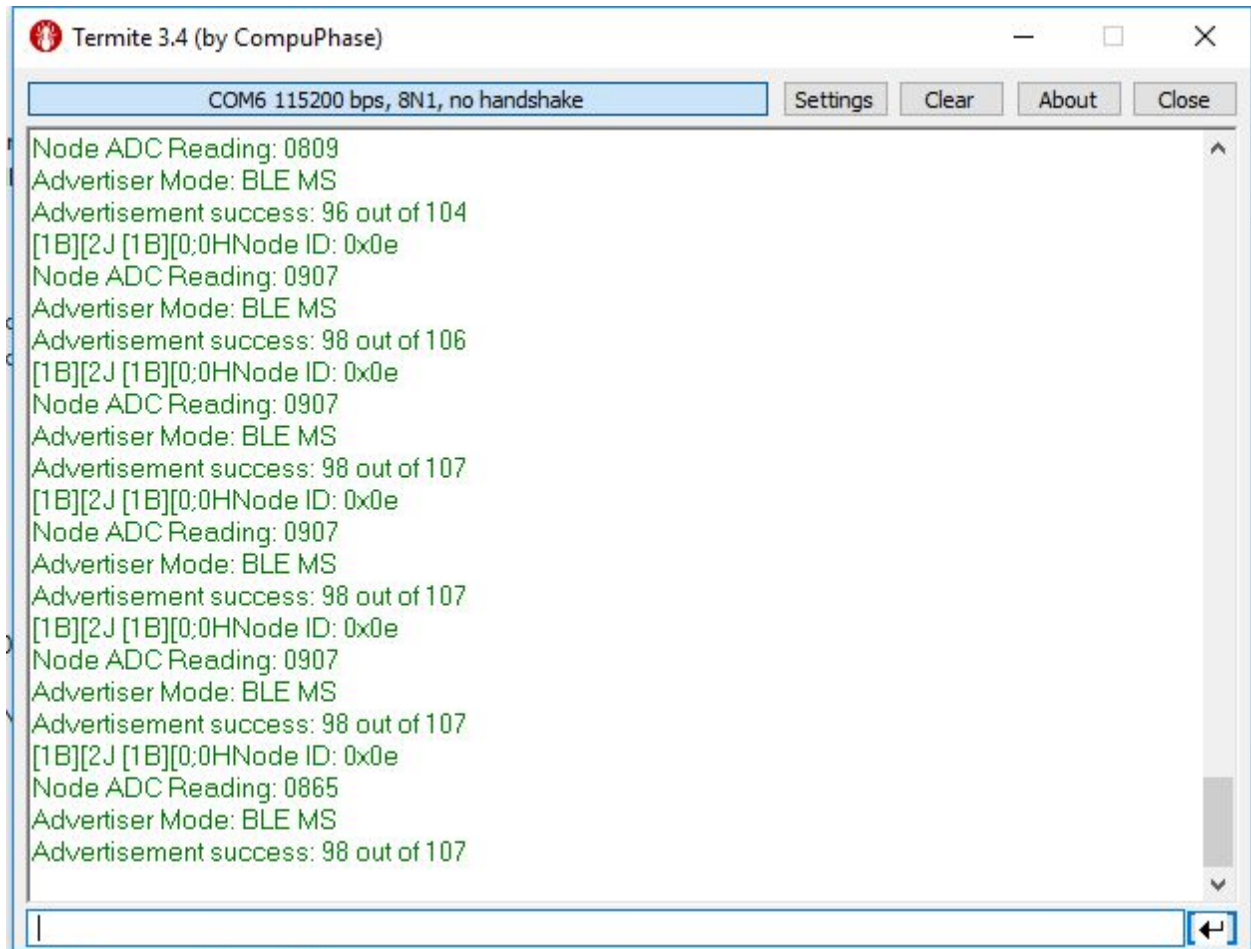
UART:



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);

```