

EE / CprE / SE 492 – sdmay24-25

## Distributed Sniffer Nodes for Batteryless Sensor Nodes

### Week N Report

*Jan 30 - Feb 11*

*Client: Professor Duwe*

*Faculty Advisor: Professor Duwe*

#### Team Members:

*Thomas Gaul- Team Lead, Software Lead*

*Spencer Sutton- Software Member*

*Tori Kittleson- Hardware Lead*

*Ian Hollingworth- Software Member*

*Mathew Crabb- Hardware Member*

#### Past Week Accomplishments

Ian- Got SPI demo to work started looking at custom SPI interface for two CC1352s: Found out receive and transmit buffer for SPI working on custom SPI communication.

Tori- Finalized Pinout for the MSP430 REV2. Working on the new layout. Met with hardware to talk through an updated timeline.

Matt- Finished reading CC1352R hardware implementation documentation. Completed detailed Sniffer PCB requirements. Reviewed optional functionality with clients. Researched battery systems and recommended the hardware team. Started Sniffer PCB schematic. Made schematic symbols and footprints for Sniffer PCB. Made 2.4 GHz antenna PCB footprint.

Spencer- Wrote framework of faux bob code and some custom functions, currently fighting and debugging radio connections using new code.

Thomas- Completed first revision of Sink code and tested it with another cc1352 with reliable communication from the Host to sink over CC1352 via UART and then to two CC1352 over 2.4GHz.

#### Pending Issues

Spencer fought code breaking while testing communication of the sub-1GHz and debugging tool behaving unreliably.

## Individual Contributions

Team Member	Contribution	Bi-Weekly Hours	Total Hours(starting tracking week 3)
Thomas Gaul	Attended client and team meetings, Sink node code, sink testing, updated host code, and packet setup	15	15
Tori Kittleson	Updated pinout, again. Client meetings, HW planning meetings	9.25	9.25
Mathew Crabb	Attended full team meetings and hardware team meetings. Completed research and requirements compilation for Sniffer PCB. Started Sniffer PCB design.	12	12
Ian Hollingworth	Attended Client meetings. Attended team meetings. Successfully transfer data between two cc1352 chips via SPI communication. Identified pre-defined functions and structures in C used in the SPI.h file provided by TI. Currently working on custom SPI.	12	12
Spencer Sutton	Client meeting, team meeting, faux bob framework	12	12

## Plans for Coming Week

Hardware: REV2 of the MSP submitted. First revision of the schematic for the Sniffer board.

Software: Get custom SPI setup and running, Faux BOB code running reliably, and have Sniffer network set up. Ideally get the portions running together.