

Group 5

MEETING AGENDA

Meeting Time: 11:30 AM	Location: AQ 5050	Date: 02/07/2019
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Meeting called by	Jerry
Kind of Meeting	Design Doc updates
Facilitator	Jerry
Note Taker	Jeff
Time Management	Jerry
Attendees:	Keith, Scott, Ryne, Jeffery, Jerry

Topics

Time	Discussion Topic	Presenter	Deadline
9:30am	Introduction		
10:00am	Project Discussion		
10:30pm	System Architecture		
11:00pm	Testing		
11:30am	Meeting End		

Notes:

MEETING MINUTES

Agenda (2h) :

1. Introduction (30min)
 - a. Programming UWB through the Arduino IDE
 - b. Buy the parts - cheap \$\$\$
 - c. ESP32 deep sleep cut off power to UWB modules
2. Software (30min)
 - a. Scott is crying for help
 - b. Use Linux to use Rust libraries and files
 - c. Set statically assigned or set a range of IP addresses
 - d. Rely on Wifi MAC address
3. Trilateration Calculations (45min)
 - a. **"Constants"**
 - b. All values are calculated from coordinates and radiuses
 - c. A,B,D,E are constants; Calculated at the beginning of the calibration
 - d. Only C and F requires calculation based on ID tag radiuses
4. Wifi "Mesh"
 - a. Look at the ESP wifi mesh documentation
 - b. <https://docs.espressif.com/projects/esp-idf/en/latest/api-guides/mesh.html>
5. Design Documentation
 - a. Software completion - 70% (10 pages)
 - b. Jerry is the new overlord (Ryne has been banished)
 - i. Ryne - complete
 - ii. Keith to add RSSI paragraph
 - c. Battery life (for 4000mAh)
 - i. Full broadcasting: 260mA - 15hours
 - ii. Deep sleep: 10uA - 17000days ~ 45yrs
 - iii. Deep sleep (pos.):100uA - 1700days ~ 4.5yrs
6. LED indicator (2 lights)
 - a. 1st LED indicator: G/Y/R battery levels - (60/40/20%)
 - b. 2nd LED indicator: Tx/Rx transmission statuses
 - c. Testing on LEDs brightness/current drawn
7. Conclusion (5min)
 - a. **Presentation Date: Aug 1, 2019**
 - b.

Conclusion:

Action Items	Person Responsible	Deadline
Complete design Doc (July 2nd)	ALL	
Upload scanning beacon code	Keith	