

# Safe Walk – Gait Monitoring System

(17S WSN Project)

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March 4, 2017



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- [Motivation](#)
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- [Communication](#)

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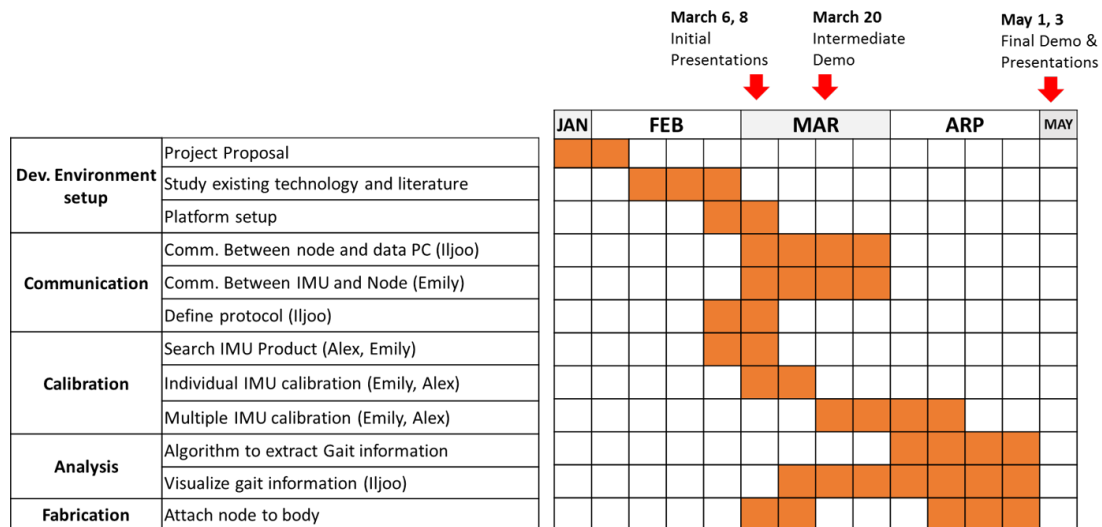
## 2 Resources

- [Proposal PPT](#)
- [Proposal](#)

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## 3 Schedule

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## 4 Events

### 4.1 2017-03-03 Meeting

- Done
  - Finished the proposal documentation
  - Built a website on GitHub
  - IMU Sensor:
    - \* Got 4 Razor IMU sensors
    - \* Tested it with ROS, and checked its output
    - \* Decided to transmit binary data stream via RF and serial port
- TODO
  - Develop an interface between serial port and ROS
  - Modify the IMU firmware to output raw + calculated data
  - Build the communication from IMU to Firefly
  - Build the communication from Firefly to PC
  - Solve the time synchronization problem

### 4.2 2017-03-04 Camera+IMU Development Based on ROS+RobotSDK

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Activities | Robot-X | Sat Mar 4, 02:33:52 | +7.3 °C | en

roscore http://ThinkStation-PS10:11311/

File Edit View Search Terminal Tabs Help

alexanderhbw@ThinkStation-PS10:~\$ roscore  
... logging to /home/alexanderhbw/.ros/log/d63be642-60a9-11e7-88b0-6c0b846530b0  
10-5855.log  
Checking log directory for disk usage. This may take awhile.  
Press Ctrl-C to interrupt  
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://ThinkStation-PS10:42689/  
ros\_comm version 1.12.6

SUMMARY  
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PARAMETERS  
\* /roslaunch: kinetic  
\* /rosversion: 1.12.6

NODES

auto-starting new master  
process[master]: started with pid [5866]  
ROS\_MASTER\_URI=http://ThinkStation-PS10:11311/  
setting /run\_id to d63be642-60a9-11e7-88b0-6c0b846530b0  
process[roscout-1]: started with pid [5879]  
started core service [/roscout]

ImageView: Viewer  
07:33:52:109 640 x 400

IMU Message Viewer  
IMU Messages

593757	2824	8936	13968	-6	5	11	-217	-22	22	309.39	22.98	207.57
593767	2840	9048	13880	0	5	11	-222	-22	13	309.39	22.98	207.56
593778	2864	9008	14104	0	5	11	-217	-20	18	309.39	22.99	207.55
593788	2952	8976	14016	-4	5	9	-226	-23	21	309.39	22.99	207.54
593797	2760	9072	14128	-3	4	11	-226	-28	21	309.40	22.99	207.54
593807	2784	8960	14264	0	3	11	-223	-14	21	309.41	22.99	207.53
593818	2864	8832	14016	1	6	11	-211	-18	14	309.41	23.00	207.52
593828	2832	8984	14000	-3	4	11	-217	-24	22	309.42	23.00	207.51
593837	2952	9008	14232	-2	4	9	-217	-22	20	309.43	23.00	207.51

Robot-X: Calibration