# Safe Walk – Gait Monitoring System

(17S WSN Project)

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# 1 Contents

- Motivation
- Introduction
- Sensors
- Communication

# 2 Resources

- Proposal PPT
- Proposal
- Initial Proposal

# 3 Schedule

				March 6, 8 Initial Presentation			Intermediate						May 1, 3 Final Demo 8 Presentation	
		JAN									Α	MAY		
Dev. Environment setup	Project Proposal													
	Study existing technology and literature													
	Platform setup													
Communication	Comm. Between node and data PC (Iljoo)													
	Comm. Between IMU and Node (Emily)													
	Define protocol (Iljoo)													
Calibration	Search IMU Product (Alex, Emily)													
	Individual IMU calibration (Emily, Alex)													
	Multiple IMU calibration (Emily, Alex)													
Analysis	Algorithm to extract Gait information													
	Visualize gait information (Iljoo)													
Fabrication	Attach node to body													

#### 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

