Safe Walk – Gait Monitoring System

(17S WSN Project)

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1 Contents

- Motivation
- Introduction
- Sensors
- Communication

2 Resources

- Proposal PPT
- Proposal

3 Schedule

		March 6, 8 Initial Presentations						March 20 Intermediate Demo				May 1, 3 Final Demo & Presentations			
		JAN		FEB			_	MAR				Al	MAY		
Dev. Environment setup	Project Proposal														٦
	Study existing technology and literature														7
	Platform setup														7
Communication	Comm. Between node and data PC (Iljoo)														7
	Comm. Between IMU and Node (Emily)														7
	Define protocol (Iljoo)														٦
Calibration	Search IMU Product (Alex, Emily)														٦
	Individual IMU calibration (Emily, Alex)														7
	Multiple IMU calibration (Emily, Alex)														7
Analysis	Algorithm to extract Gait information														7
	Visualize gait information (Iljoo)														7
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