Senior Design 491 Weekly Report 4

Week 3 (9/21/15 – 9/27/15)

May1624 -- Programmable Wireless Sensor Package for CprE Education

Advisor/Client: Dr. Thomas Daniels

Team Members -- Roles:

Yidong Liu – Team Leader

Xinian Bo – Team Webmaster

Niklas Jorve – Team Communication Leader

Branden Sammons – Key Concept Holder

Jonathan Krueger – Key Concept Holder

Weekly Summary:

For this week, our group focused on presenting potential solutions to our advisor. As a group we came up with 3 potential options that could satisfy the requirements of the project including the iRobot Create 2, a Playstation 4 controller, and a compact size Raspberry Pi module. During our weekly advisor meeting we discussed the pros and cons of each idea, and decided that the Playstation 4 controller would be the best idea to move forward with at this point. We also met as a group later in the week to construct an outline for our project plan. The project plan will be presented to our advisor during the next week to review our ideas and will be submitted on Friday.

Weekly Accomplishments:

1. Found 3 potential solutions to our project to research and test
2. Decided on a primary idea (PS4 controller) to focus on
3. Created the outline for a project plan and split the sections up within the group to complete

Advisor Meeting (9/21/15):

Duration: 1 Hour

Members Attending: Niklas Jorve, Yidong Liu, Jonathan Krueger, Branden Sammons, Xianian Bo

Notes: For our advisor meeting this week, we discussed the ideas that each group member came up with that would satisfy the requirements of the new lab tool. Based on our requirements gathering from the previous week, we researched sensor modules that could be wireless and communicate with a Windows 8 computer. The 3 main ideas that our group found were the iRobot Create 2 robot which is the next generation of the robot used in the CprE 288 class. This robot has some good beginner functionality with a option to add a secondary board for more sensors and wireless communication. Our second idea was a Playstation 4 controller. The PS4 controller was a good mix of the Nintendo Wii controller and the Arduino Esplora boards that are currently used in the CprE 185 labs. The PS4 controller is wireless and has a long enough battery life to last several hours. Our third idea was a compact Raspberry Pi in the form of a DDR2 memory stick. The Pi would need to be added to a second board to implement the functionality needed to satisfy the requirements.

Group Meeting (9/24/15):

Duration: 1 Hour

Members Attending: Niklas Jorve, Yidong Liu, Jonathan Krueger, Branden Sammons, Xianian Bo

Notes: During the group meeting we discussed our project plan and developed a rough outline. After brainstorming the necessary components of the plan, we organized them and split them up within the group. The project plan will be discussed in the next advisor meeting and necessary revisions will be made.

Plans for Next Week:

1. Discuss the current project plan with our advisor
2. Submit the first draft of the project plan on Friday
3. Continue research on PS4 controller to see if it has the necessary drivers to be used with a Windows 8 computer

Individual Contributions:

Niklas Jorve: Attended meetings, compiled weekly report, worked on project plan
Yidong Liu: attended meetings, worked on project plan
Branden Sammons: Attended meetings
Jonathan Krueger: Attended meetings, prepared meeting agendas, worked on project plan
Xinian Bo: Working on ps4 controll research.

Project Contributions:

Member	Project Time this week (hours)	Total Project Time (hours)
Niklas Jorve	3	9
Yidong Liu	2	6
Branden Sammons	2	5
Jonathan Krueger	2	6
Xinian Bo	2	4