Senior Design Group May15-03 Weekly Report

Week 5 9/29/14-10/5/14

Advisor: Leland Harker Client: Hitachi Global Storage Technologies

Name	Major	E-mail(@iastate.edu)	Role
Jacob (JD) Mayer	EE	jdmayer	Team Leader
Matt Eckes	EE	mweckes	Communicator
Jacob Schulz	EE	jschulz	Key Concept Holder
Trevor Boone	SE	tdboone	Web master/ Key Concept Holder
Shawn LaGrotta	Cpr E	lagrotta	Webmaster

Past week accomplishments

Task description	Person	Completion date
Put together weekly report	ALL	9/29
Combined Project Plan • Reviewed individual contribution of project plan report • Edited report as a group for final submission	ALL	9/29 and 10/3

Client Lunch Meeting (face to face)
• Introduction with client face to face
• Read through project plan to ensure specifications and deliverables were correct
• Showed rendering of robot design
• Showed GUI
  ○ Liked initial design
  ○ Asked for the ability to click on pin as well as directly input coordinate
• Talked about documentation
• Discussed how the robot would be used
  ○ How important is multiple probe use
  ▪ Most readings are >4 probes at once
  ○ What are their intentions for future use of the project
  ▪ Would like to be able to expand project to operate multiple probes at once
	ALL	10/1

Wrote code for coordinate translation in Matlab and tested accuracy	Matt	9/30

Modeling of robot • Autodesk inventor	JD	9/29 and 9/30
Website development • Created structure and style	Shawn	10/3
Created mockup of GUI to show client	Trevor	9/30

Plan for next week

Task description	Person	Goal date
Website development • Populate with up to date content • Get the website up	Shawn	10/10
Research G-code	Shawn	10/10
Research Gerber/drill files	Trevor	10/10
Research probe holder	Matt	10/10

Continue Modeling
• Jig
  ○ Shorter walls
  ○ Spring loaded pogo pins
	JD	10/10

Motor shield specifications	Matt	10/10
Purchasing information • LED indicators • LCD screen	Jacob	10/10
Get pricing/features of Raspberry Pi	Jacob, Trevor	10/10
Research Single arm robot pricing • After client meeting, current design is not scalable to a multi-probe platform • Need to research a single arm robot that can move all three directions	ALL	10/10

Future issues

Task description	Person	Goal date
Calibrating the robot remotely	ALL	-Thanksgiving
Determining to go to a single arm robot design	ALL	-10/17

Individual hourly contributions

Name	Weekly	Cumulative
Jacob (JD) Mayer	15	31
Matt Eckes	6	19
Jacob Schulz	4	16
Trevor Boone	7	22
Shawn LaGrotta	9	32

Summary

Lunch meeting with client brought up concerns of whether or not the current design is scalable to a multiple probe platform. The specifications for the project can be met by a 3D printer design, however, cannot operate more than 2 probes. Due to these reasons the group is going to research single arm robots that can place a probe accurately and consistently.