

## Hemodynamic Simulator II (P09026)

<b>Status Report (Week 8)</b>		
<b>Progress &amp; Day's Feedback</b>	<p>After the morning presentations, Mark once again contacted Yaskawa to inquire about the Mechatrolink II board. Dr. Phillips presented the team with an alternative connectivity option between the controller and actuator, recently introduced by Yaskawa, called Mechatrolink II. As per Yaskawa, the board is only compatible with Sigma III, IV motors, hence the current Sigma II motor will be replaced a Sigma III motor, without any increase in the cost.</p> <p>In order to prepare for the design review, all individual team members were provided with "specific &amp; concise" tasks. The tasks included compiling all documentation from their part 3 weeks of work.</p> <p>Alex began working on formalizing the process of empirically determining dynamics of the system, in order to tune the system for the desired output waveform.</p>	<p><b>Friday 10/24/08</b> Gaurav Zirath</p>
<b>Project Objectives</b>	<ul style="list-style-type: none"> <li>● Develop a firm understanding of the individual components design and purpose and also the system as a whole</li> <li>● Weekly meetings with Dr. Schwartz, in order to review the status of the project.</li> <li>● After fully understanding the modular system, the pump would be redesigned in order to better replicate the pumping of the heart, which includes appropriate blood pressure and volume from the heart.</li> <li>● The final product would contain a data acquisition system that would monitor blood pressures, volumes, flow rates at desired locations. In addition, the measured data must be easily accessible to the user.</li> <li>● Furthermore, a computer system would be developed that would allow a user, access to all the parameters of the flow simulator. Hence, providing the user with a better control of the entire unit.</li> </ul>	<p><b>Friday 9/5/08</b> Gaurav Zirath</p>
<b>Action Items</b>	<ul style="list-style-type: none"> <li>● Update BOM with new price quote from Yaskawa, include Mechtrolink II board.</li> <li>● Compile all documents, sketches, calculations etc. for the design review.</li> <li>● Identify a new Sigma III or higher grade motor</li> <li>● Find alternative source for NI 6008-USB board</li> <li>● Finalize designs for heart, cylinder stand.</li> <li>● Develop a system for mounting the cylinder and actuator in the cart.</li> <li>● Search for NI Data Acquisition boards, Flowmeters, &amp; Pressure Sensors</li> </ul>	<p><b>Friday 10/24/08</b> Gaurav Zirath</p>
<b>Week 7 Schedule</b>	<p><b>Sat - Sun:</b> Compile all documents for the design review</p> <p><b>Mon-Tue:</b> Review the final report, &amp; rehearse the presentation</p> <p><b>Wed:</b> Meet with Dr. Phillips, &amp; Dr. Schwarz</p> <p><b>Thu:</b> Team Meeting, prepare for the Design Review</p> <p><b>Fri:</b> DESIGN REVIEW</p>	<p><b>Friday, 10/24/08</b> Gaurav Zirath</p>