Accessible Syringe Dosing
Week # 5
2/17/05-2/23/05
Karen Young

Work completed:

During the week since the last report I was able to purchase the tap for the holes of the linear actuator from Mansfield Supply. I was then able to drill and tap the holes of the aluminum angle iron for the linear actuator attachment. Next I measured and drilled holes into the right side, battery bottom and the end pieces. I accidentally measured the location of the holes and drilled them vertically instead of horizontally in the side pieces; therefore I used the other side piece that I happened to cut the cut-out from last week. The hardest part was making sure the holes were aligned and straight. Once the holes were drilled and aligned I was able to tap the holes in the battery bottom and end pieces. I made a clearance space for head of the screws and then drilled a little smaller hole so that the screw would fit into the piece. Megan and I also went to Mansfield Supply and purchased three different length screws of size M3 x 0.5 this is due to the fact that we already have the proper drill and tap needed to make the appropriate holes for the screws. While we were there we looked at glues and silicone to fill the syringe piece to get rid of the horizontal slag. I was able to attempt this by filling the syringe piece with clear glue using a large nail wrapped in plastic wrap. It took 24-36 hrs to dry and harden. The syringe does fit into the piece with little slag. I also inquired about how to obtain an insulin bottle. Which I found out we can purchase from the local pharmacy or order directly from a company.
Currently, I am still working on drilling and tapping the holes for the left side, battery bottom, and end pieces. The angle iron is ready to be mounted to the side after holes are drilled into the side piece. Also, I am currently looking into other types of glues or silicone.
Future work:

During the next week, plans are continue to drill the holes on the bottom part of the case and the angle iron and mount the actuator. Once this is completed the battery bottom and end pieces are to be milled down to fit the syringe diameter. Decide if the syringe piece is acceptable for use after it was filled, if not I will have to remake the piece and test a new material. And drill the holes for the PCB board and driver.

Project review:

This week the size of the screws was decided upon, using M3 x 0.5 and just adjusting the length. The drilling process was started and continues. The actuator piece was put on hold until the proper screw size for the actuator was obtained to determine where the best position for the screws into the side would be.

Hours worked: 12