Traumatic Brain Injury Reducing Army Combat Helmet

Team 6
Week 9
March 30, 2009
Damian Frankiewicz
Work Completed:

About four and a half hours were spent in the machine shop cutting the third outer shell’s Kevlar down to the desired lengths. An electronic jigsaw is used to cut around the stenciled edges.

The first block of Expanded Polystyrene was also cut this week as shown in Figure 1. There were some issues with the Freehand Router cutting tool, however, which slowed down the process.

![Figure 1: Cut Expanded Polystyrene](image)

Due to the small thickness of the heated wire, the cutting tool cannot take much force before damage is done to it. Therefore, cutting and shaping is considerably slower than if the tool was more reliable. In addition, one of the tool’s electrical wires broke and must be soldered immediately so EPS cutting can continue.

The paint idea was finalized this week as well. Because the paint is a low priority for the project, the four test helmets will not be painted. The one helmet that will be on display will be spray painted using a can in the Senior Design lab. The closest color to Olive Drab is Krylon Hunter Green Gloss. Figure 2 shows the paint on a Kevlar sample.
Future Work:

Due to the increased amount of helmets that need to be tested, two more helmets must be quickly created. Figure 3 is a generalized flow chart of creating a single helmet.
Figure 3: Kevlar Helmet Processes

One helmet takes approximately 20 hours to complete from start to finish. Therefore, the majority of the next two weeks will be devoted to building two more helmets.

**Hours Worked:**

A total of 12 hours have been worked on the ninth week.