Hardware Report  
Week 4  
Fergus Williams

This week one main consideration was the “body” encasement for our robot. We decided to add doors on hinges to the side and rear of our bot, so that the components inside could be accessed easily.  
The hinges were designed so that the doors can be removed and replaced with ease, and were created using an L-shaped cut-out that two cylinders can slip into and upwards to lock the door into place. We were careful not to make the “wall” of this cutout area too thin, as this would result in the door breaking and falling off with any stress placed on it. The doors are 5mm thick, the same as the case.

We also added the holes to allow for IR sensors to be attached to the body on the front and left hand sides. These were done by measuring the IR sensor and its screw-holes, then creating the holes to attach them around the centre of the two wall sections being utilised. During this process we also designed a shorter section of wall to be attached to the front where the IR sensor would sit, as we did not want the wall there to interfere with our camera. These pieces have yet to be printed.

As our robot is being modelled after the character WALL-E from the movie of the same name, we decided we would paint our bot to match – and that we would be as aesthetically correct as possible. Acrylic paint will be used next week to colour the body pieces, and we finished designing the head piece this week, ready for printing.

Next week we will be painting the case and ensuring that all the pieces fit together, as well as general maintenance to ensure that software and hardware are still cooperative for our robot. As the case is almost done, the hardware crew may also spend some time working with software on the code, as otherwise we will be left doing nothing for large periods of time, which is inefficient as a group.