

## Hardware Progress Report Week 6

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- Printed the right hand side over Friday night and picked it up in the morning of Monday.
- The 3D scaffolding base that the piece is printed onto fused to part of our piece and therefore did not come off properly. We sanded down some of the excess and decided to leave the rest as aesthetic for our Wall-e design.
- Forgot to add the holes into the base of the right hand piece and therefore had to drill two in, so that it can be secured onto the chassis.
- Also printed the sensor mount, the holes we designed into it are not wide enough for the sensor to fit into and therefore we will need to drill an additional hole.
- Painted the right side and sensor mount.
- One of the left hand side panels detached from the top of the case and therefore needs to be glued again.
- We found a design to print out Wall-e's eyes online, scaled it down to fit onto the case as it was originally 400mm wide and our case is roughly 100mm wide. We then sent it to "fuji xerox" who printed it for us. After receiving the printed out eyes we painted them silver with some other colours for a rust effect.
- The door we had for the side of our case did not have a handle and therefore was hard to open. To fix this we found a small cylindrical piece of plastic which we painted and stuck onto the front of the door.
- Note: Due to the wires from the battery pack the door does not close properly – Wires need to be placed delicately and out of the way and then the door will close.
- We had some problems with the wheels of our robot and found that they were too tight and therefore their movement was restricted. We loosened them which worked slightly better however now they sometimes become too loose and curve away at an angle so we have to correct this sometimes before running.
- Our camera arm was relatively loose and so before each run we would have to adjust it to ensure it was angled correctly. We fixed this this week by tightening the screws that hold it in place and this solved the problem. – Had to ensure it was angled to not see the IR sensor as well.
- Our top panel for our case has two raised parts which were designed for mounting Wall-e's neck once we printed it. As we changed our design to not include a neck due to a lack of time and the eyes being too heavy these parts are now unnecessary. We could remove them if we were so inclined however the eyes cover them well and we do not have time to spare. – eyes were too heavy, would not be able to hold the weight.
- Had to replace the SD card on the Monday of testing due to errors with the camera not being read even though the code had not been changed since the last time it worked.