Individual Report, Milestone 1

Group 8 - Infinity

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Allocation

For the first milestone, I was allocated to the sub-team responsible for Robot Design & Construction, working along side with one other of our team members. The team were extremely keen on adopting the idea of holonomic wheels from previous years. It was decided that it was not feasible to have this ready in-time for the milestone for a number of reasons, so the sub-teams main objective was to have a practical robot ready for the first milestone using conventional designs, and for the time being postpone our more ambitious concepts.

Contributions

We promptly had a prototype robot, that formed the base of our design, from this we identified issues that would need to be rectified to improve our design to its optimal. The main issue to overcome was being able to keep the robot parallel to the sides whilst moving in a straight line, this was the most time consuming of our problems and most of my contribution was in this area.

>•**Numerous rebuilds to try and improve stability and sturdiness of the wheels to minimize movement errors that would cause the robot to deviate from its line.**
>•**Trying to compensate for the design by altering the programming of the NXT brick using Tachometers, motor speeds, differential pilots.**
>•**The implementation of two Ultrasonic Sensors, that would both measure the distance to the edge of the pitch, compare values and accordingly change motor speeds to adjust the robots angle, to keep the robot parallel. The idea itself would seem to solve our problem but in practice it was unreliable.**

Goals

Our next goal is pursue the idea of holonomic wheels.

Performance Review: 2-3

Exceptional Contribution: Ian Johnston.

Ian has put in countless late nights into the project so far, and with none of our attempts to keep the robot in a straight line arriving at any useful conclusion. Ian worked late into the early hours of the morning on the day before the first milestone, completely rebuilding the robot and successfully managed to get it into a very nice position for the milestone ahead. - **5**