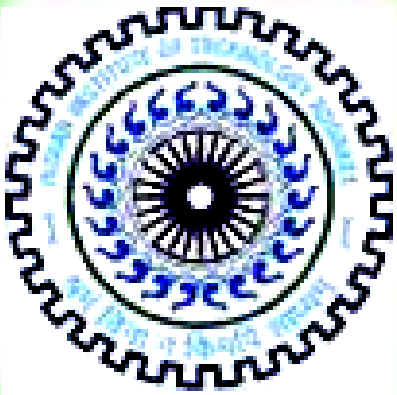


TEAM ROBOCON IIT ROORKEE

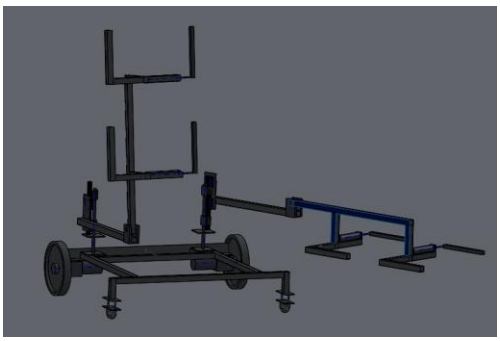
-monthly update

PROGRESS REPORT

(FEB-2013)

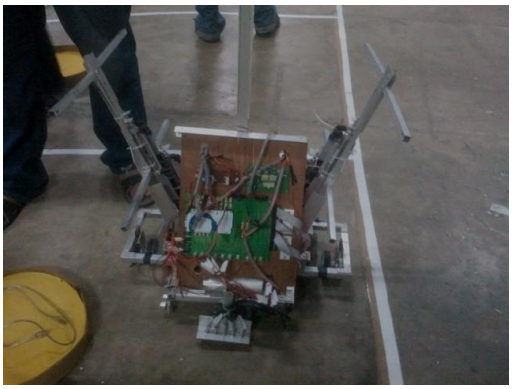
DESIGN AMENDMENTS

I. AUTOMATIC ROBOT :



This is the design of solidworks made by us but it had to changed due to following reasons.

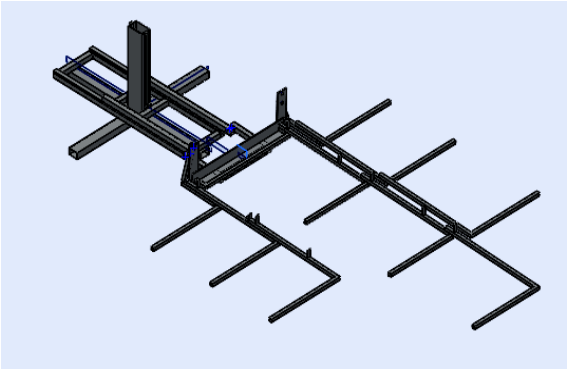
- The chasis of the robot was very big which created errors in using encoders.
- The stratergy of going above the rings was not successful due to very less tolerance.
- The hanging arms were giving errors due to vibrations.



This is the new design fabricated in less than 20 days by working vigrously all night. It has great advantages of its own.

- Due its small size, the encoders are working with negligible errors.
- The new grippers are rigidly mounted on the chasis to overcome vibrations.
- Line sensors and magnetometer are used along with encoders

II. MANUAL ROBOT :



This is the solidworks design which also few limitations.

- The omni drive which was planned earlier could not work due to the concentrated load on the centre of the chasis.
- Due to exceesive weight on one square channel in the centre it had the risk of bending.

Following changes are made to overcome the hurdles.

- The drive has been changed to the orthodox differntial drive.
- Another square channel is added in front to support the load.
- The grippers have been fully tested to pick seven leaves succesfully.

OUR ROBOTS BEING REPEATEDLY TESTED IN MODELS AND ROBOTICS SECTION IIT ROORKEE.