(B)
Development and Testing of Virtual Reality Model for Dual Arm Manipulator

Abstract

Objective

The project aims at developing a virtual model for a dual arm manipulator. The virtual model will be used to evaluate the kinematics manipulator and control algorithm. An operator interface will also be developed for joystick based control of the virtual model. Forward and Inverse kinematics of will also be integrated with the model.

Scope of Work

The project scope includes developing a virtual model of the dual arm manipulator from existing CAD model. This will include model rigging, definition of joints, environment development, etc. This work will be carried out in a VR platform like Blender or Gazebo. The model will be used further used in a game development platform such as Unity3D for developing kinematics and inverse kinematics control of the manipulator. Integration of various virtual camera and physical joystick. A separate operator interface will be modeled along with the virtual model for control and parameter monitoring of the VR assembly.

Project Duration:
4 months

No. of Students: 02 (Max.)

Eligibility: Only students of B.E./ B.Tech in Electronics/ Control/ Computer Science/ EC branches can submit their application at following email addresses

pramit@ipr.res.in [Guide e-mail address] and

project_ee@ipr.res.in [Project coordinator's e-mail address]

Phone Number: 079-23281022 , 8154085372   [Guide phone number]