

WIRELESS ROBOTIC ARM

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ABSTRACT

“Robot” exists in this world around 88 years, the word “ROBOT” was introduced since 1920. It plays an important role for the new generation of life style, so the vision for this project is pushing robot to better future.

The aims are wirelessly control the robotic arm through RF module communication, and it will perform tasks according to command given, but mainly for picking up items. There is several ways to do that, but at the very first, structure is important for robot, and materials to be used must be carefully selected, plywood is chosen for body and acrylic for gripper model, then following will be the design of robot. Idea apply here is using the combination of roverbot, robotic arm and gripper. Roverbot contains DC motor attach with gear and will be basement for whole vehicle, it helps to perform movements and one important role which is “return” system, it will return to marked area automatically. About robotic arm, it just including six servo motors as joint and attach with the structure, but the design make the robotic arm to move along all three axis smoothly and steadily. Last will be gripper, it can be say is an additional feature, so it is replaceable according to different application, for the design here will perform item picking function. Heart of this robotic arm will be the PIC inside it, it follow the command and distribute tasks to the respective sub-systems.

About half year of effort, the product is out and mostly meets the requirement states. There is only some function fail to perform cause by certain factor, there will be auto finding item system, cause by the components is hard to find and replacement circuit is too difficult to operate. Anyway, overall of project is work excellently.