Development of Robotic Rover with controller & vision system

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Abstract:
Rover is a robotic system which integrated simple system that implemented electrical and mechanical components together. In this study, a rover using mechanical components consist of robotic arm, joint and mechanical gripper, backbone chassis and continues track while electrical components include servo motor, servo controller, transmitter and receiver for vision system and wireless controller via USB host as its control system is proposed. The purpose of this project is for monitoring and safety purposes. In addition, the main goal of this project is to make a simple robotic rover that are easy to build and manufacture as well as cost-effective. In order to add more functionality on this rover, it is equipped with robotic arm and real-time view camera integration. This rover is equipped with first person view (FPV) camera, an integrated camera on the rover can give a clear visibility and direction to the rover pilot. The live feed can be viewed on the monitor inside the command station box. It can be used to assist safety authorities to collect information & insights, work lift to collect and remove load and to make search and rescue operation. As for the result, the mobility system of the robotic rover at terrain surfaces and analyses the capabilities of the chassis during lifting load had been tested.