Landmine Detecting Robot

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Abstract: *The Landmine detecting robots are designed to cover maximum possible area of landmine field for detection of landmines. The detected landmines along with scanned and leftover area are represented on a visual map with accuracy in millimeters. This paper presents a prototype model of land mine detecting robot that is powerful yet low cost and easily controllable. A graphical user interface is developed for plotting the landmines, scanned & leftover area presentation, PID tuning and camera alignment. Emphasis is placed on the control of the differential drive robot in auto mode, semi-auto mode and the manual mode. Image processing technique is employed to find the accurate position of robot which provides the live reckoning feedback to the dead reckoning servo control of the robot. Metal detector is the sensor used to detect landmines. The graphical user interface for the remote terminal computer provides the effective control for the robot. The system is simple but powerful and intelligible to achieve the required results.*

Keywords: Metal detector, Robot, Military Bomb disposal, GPS, Aurdunio, Microcontroller