Implementation of Tracking System for Human Detection based on Pyroelectric Infrared (PIR) Sensor

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Authors:
Manal H. Jassim, Saeed R. Saeed

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Abstract

In this paper, tracking of human has described. It has a great importance for detection security and robotics, beside that it can be used for sensing the abnormal behavior of patients in hospital. The aim of this work is to design and implementation of the human detection and tracking system. The design of tracking system has the ability to rotate a camera toward any position in a horizontal axis in both clockwise and anticlockwise directions. The experimental work shows that the direction of rotation can be obtained by determining which one of the four pyroelectric infrared sensor (PIR) is interrupted by the objective. Also the stepper motor controlled the AVR microcontroller based Arduino board which makes the camera track the objective movement. High performance of the proposed system under practice test. To reduce the power consumption of the tracking system a power control unit has been designed, to switch the power off when there is no human detected and switched the power on when a human is detected by a PIR sensor.

References
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Index Terms

Computer Science Wireless

Keywords

PIR sensor, stepper motor, AVR microcontroller, webcam.