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Abstract:

This Invention aims in designing a sentry robot and door access which is capable of operating for three modes of security using a wireless Zigbee communication network. The project aims in designing a sentry robot that is wirelessly controlled through a joystick and using Zigbee wireless technology. The system also facilitates for security-based door-accessing mechanism using three combinations of sensing inputs that can achieve the following innovative features. 1. Face recognition-based person detection and authentication 2. Finger print based authorized authentication details 3. Keypad based password accessing When the three features get accessed then the robot section sends the signal for door access using the ZigBee network.

Complete Specification

DESC:Field of the Invention:

The current invention relates to sentry robots, more specifically, to sentry robots that can perform wide and narrow monitoring at close and far distances while automatically alerting the command control room.

Description of the Related Art:

In the 21st century, intelligent robotics is one of the most promising new technologies that will influence the fields of industry and defense. The development of AI has allowed for this to happen. Specifically, a monitoring and sentinel system is a complex setup that employs numerous technologies, including ultra-low brightness cameras, image recognition, image processing and storage, voice recognition, servo technology, image tracking, and system control. Strategic national infrastructure like airports, harbors, and nuclear power plants have seen a rise in the requirement for intelligent monitoring and sentry robot systems in tandem with the expansion of the security business. In particular, the military wants a system like this to improve sentry efficiency during peacetime. A variety of unmanned equipment that can take over soldiers' 3D (dangerous, dirty, and boring) tasks has been developed and put to use to increase their safety and effectiveness during times of war. Artificial intelligence (AI)-based unmanned robots can effectively replace human labor and make a significant improvement to military competitiveness. Specifically, monitoring and sentry robots can play a significant role in the creation of a military strategy. Robots are also immune to fatigue and reduced focus brought on by soldiers performing repetitive tasks while on sentry duty, which is important for monitoring and sentry. Additionally, when given access to weapons, the system is capable of precise tracking, quick responses, and high-speed, accurate shooting—abilities that are particularly useful in times of conflict. A camera's field of view is limited, which is a problem for the shooting control system. Also, the traditional sentry and monitoring system, which is based on a single video

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