Design & Development of Wireless Smart Fire Fighting Robot for Social Safety

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Abstract*: The security of home, laboratory, office, factory and building is important to human life. We develop an intelligent multi sensor based security system that contains a fire fighting robot in our daily life. The destructive burnt cause by electrical is the highest source. It is because security system can't detect abnormal and dangerous situation and notify us. Besides, user had difficulties to detect the small burnt cause by electrical appliances. User may take a late time to extinguish fire like finding the water source to extinguish fire when want to extinguish the fire. The fire difficulties to detect the small burnt area and location that is hard to be reach by the user Sometimes tough fire extinguished for example spaces are hard to see. So, "Autonomous Fire Protection Robot With Notification" design with extinguisher for the intelligent building to controlled by microcontroller PIC18F4520.. This robot equipped with 3 flame sensor where each sensors has its own function and commanded control by PIC18F4520. This robot will move to the fire source when the flame sensor detected the fire. This robot also programmed to stop before the robot hit the flame. This robot also can extinguish fire at 45 degree for upper side and 45 degree for lower side. This robot implicated the function of finger to clip the fireextinguisher clipper.*

Keywords: Robotic Vehicle, Fire detection, Bluetooth Module, Microcontroller.

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