Industry-specific intelligent fire management system
LITERATURE SURVEY

Ahmed Imteaj et.al. Studied the problems faced by factory workers in times when fire breaks out. They proposed a system using Raspberry Pi 3 which is capable of detecting fire and providing information about area of fire. The Raspberry Pi controls multiple Arduino boards which are connected with several motors and cameras to capture the fire incident.In this, they discussed about the modern technology that can be used to reduce extremely unfortunate accidents caused by fire. We designed the whole system and calculated its effectiveness. [1]. Ondrej Krejcar proposed a model for location enhancement and personnel tracking using Wi-Fi networks. In this, he has represented the control system concept that is used in handling information of location and control unit operations. The location of the user present in the building, is obtained through Wi-Fi access points [2]. We have studied this to understand the usability of the Wi-Fi networks in live tracking and then have utilized this functionality to track fire and give information about location of fire to various devices intimating people about the mishap. Authors in [3]have studied the safety features in home and industrial areas. They have designed new model using WSN. Not only have they incorporated temperature and humidity sensors but also included fire andsmoke sensors while developing the model. They present a precedingstudy of WSN is able to detect fire alarm. It is for setting up a wireless sensor network with three sensors. An application was developed for getting home information. Azka Ihsan Nurrahman, Kusprasapta Mutijarsa have proposed a prototype for a centralized management system for homes or offices which helps better in managing the safety features. In this, home management system is required. This system controls the room lights by turning on and off automatically, it keeps the record of use of electronic device status, turning on and off the ac regulator automatically, it displays the room temperature in home. If fire is detected in the house, it turn on sprinkler at home, it supervises at home via surveillance cameras, take photos and store them including recordings of surveillance at home, it detects the movements of people at home, and provide notification when someone enters the house[4]. The Arduino will start on transmitting data to the Wi-Fi module ESP8266. This module is a smallchip used for making connection between microcontroller and Wi-Fi Network. ESP8266 is then sending the collected data to the website, where authorized persons can take an action and take appropriate measures to reduce the fire (Al Mamari, Al Mamari, Kazmi, Pandey, & Al Hinai, 2019).[5]. To identify the location device ID is used which is a unique identifier given to this device that will definitely provide opportunity for personnel to be aware of location information, where detection of fire is detected (Ahmed, Kazmi, & Pandey, 2018)

References

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