IOT BASED SMART GLOVES FOR FIRE-FIGHTERS

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Keywords

Internet of Things, Rescue People and Fire-Fighters, Emergency Service agent.

Introduction

IoT is one of the dominant technologies all over the world. It is another information industry following computer, Internet, and mobile communication. By Using Internet of Things technology, the application like firefighting, fire monitoring and safety management system can be implemented. It majorly briefs about IoT system framework for fire - fighting, planning to rescue and monitoring the entire loop. This project mainly deals on the requirements of user and issues of wireless network hardware and software for monitoring Fire and Fire fighter. Prevention of fire risks are increasing day by day. Firefighting and monitoring situations are very complex process in daily life. By Considering the Public Security as major issue we need to upgrade the technology in firefighting and monitoring system. It gives special knock to improve the science and technology in prohibiting the fire disasters. It Majorly cares about the application of new technology known as IoT and wireless sensor network in firefighting and monitoring field. It is much suitable for firefighting with wide scope along with wireless sensor network. It merges with WSN which plays a crucial role in the fire prevention monitoring and fire equipment management. This technology merges with fire fighting for hazard source monitoring. It is used more comfortably to enhance the fire fighting and emergency rescue capabilities of fire disasters. Fire accidents are becoming more serious in day today's life because of bigger building density and Industries. Annually 6% of people loses their lives due to unnatural cause of fire accidents in 1ndia. There are various reasons for fire accidents such as exploding gas cylinders, Electrical short circuits, Leakages in Industries etc

Objectives

The objectives of the proposed work are as follows:

(a) The main aim of this project is to rescue people and fire fighters from the fire accident who will be stuck inside the building.

(b) To develop android and web application, to show the building map and firefighters building internal location on the map.

(c) To send the information about the progress of rescue operation will be sent as notification to fire fighters which will help in carrying out the operation.

(d) To develop an application for the social cause.

Methodology
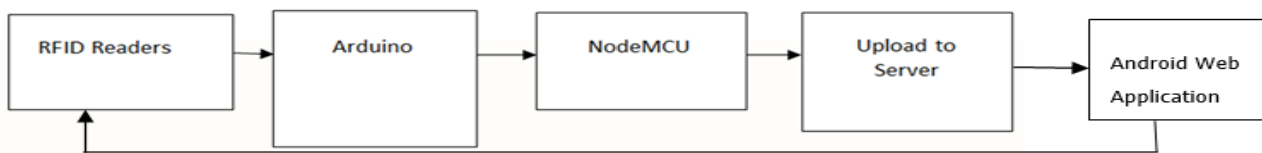
Proposed Methodology for Smart fire fighter gloves

Figure 4.2: RFID Hand Gloves

(a) The hand gloves consist of RFID Reader. Once the Fire fighter taps on RFID tags present inside the building then that RFID tag unique number can be accessed.

(b) Once these hand Gloves get the RFID tag unique number then that will be uploaded to the server. This server will be consisting of unique tags and location information.

(c) Once we get this information about location, we can update that in the Android and web application so that each and every Fire fighter is connected. Hand Gloves will be provided with a special feature called "HELP".

(d) Hand Gloves will be provided with a special feature called "HELP". by which fire fighters can ask for help from other fire fighters to rescue him from a bad situation.

Here in the proposed model, we will be creating a system that has 3 nodes

namely: RFID Hand Gloves, Android APP, Web Application

Architecture:
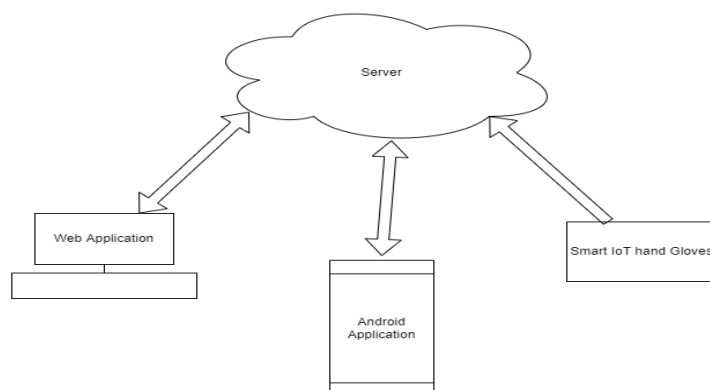
Results, Conclusion and Future Work

After surveying all the papers, we introduced the proposed system which includes three modules RFID Hand Gloves, Android, and Web Application. And the outcome of our proposed model is as follows

The system will guide the firefighters to know their exact location when they will be stuck inside the building and also guide to the nearby exit.

Android and web application will show the building map and firefighters building internal location on the map. Proposed model will save many unexpected fatalities.