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Fire Evacuation System using IOT

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ABSTRACT: With the advancement of technology, the internet is changing and so is the online development of things. Buildings are getting smarter and this trend is gaining momentum. Wireless nerve networks play a major role in this concept. This concept works with one of the most widely used applications for wireless sensor networks namely in the field of navigation. When an emergency arises, the wireless sensors detect the danger and direct the evacuees to more remote locations via physical contact via cyber. Emergency navigation is
it is important to get rid of users trapped in the immediate exit. Our focus is not only on directing users who provide a shorter route but also on a safer route. This helps to avoid congestion and leads to the use of alternatives that are often left unused thus improving the survival rate of survivors.

I. INTRODUCTION

We suggest that Smart Escape, a real-time, powerful, intelligent and user-friendly exit system with a portable interface for emergency cases like fire. Unlike previous work, we examine changing conditions and calculate a personal route who escapes by observing his features. Smart Escape, fast, cheap, multi-functional and mobile-supported, collects a variety of natural sensory information and takes into account the characteristics of survivors, using implants neural network (ANN) calculates the personal use risk of each link in the site, removes that risk, and calculates the appropriate escape route under current conditions. After that, our program leads those who are excluded from the exit through the calculations route with voice and visual commands on the smartphone.

II. LITERATURE SURVEY

Subject: Mobile Fire Extraction Program for large public buildings based on Artificial Intelligence and IoT

In this case, artificial intelligence technology is used to build an efficient and logical solution solution model, and the smart mobile migration system is designed for large public buildings based on artificial technology.

Subject: IoT system based on Intelligent Fire Evacuation System
In this paper, an IoT fire-based system is developed that directs people on the way out in the event of accidents _re. The search algorithm was used control the central module of the proposed model. This helps people get out of danger by directing a short, safe route.

Subject: RFID-Based Hybrid Building Fire Evacuation Program on Mobile Phone
In this work, a hybrid building _re evacuation system (HBFES) on a mobile phone using Radio Frequency Identification (RFID) techniques has been developed. Location Based Service (LBS) and many existing computer or mobile applications used in the system to quickly calculate reliable exit routes in the event of a fire.

III. METHODOLOGY

Smart systems used in buildings increase user comfort and resource management work better. These systems are referred to as building dynamic systems (BAS). Automatic management of functions such as temperature, ventilation, lighting, safety and power management is provided via BAS through hardware and software techniques.
The Emergency Evacuation Service model is proposed as part of the BaaS project and details of this model are explained. In emergencies, especially in densely populated buildings, relocating people to safer areas is a daunting task because of the complexity of building plans. Paramedics were referred to this study to resolve the issue

IV. SYSTEM ARCHITECTURE DIAGRAM

The users equipped with mobile phones or PDA's interact with the sensors through Wi-Fi. GPS is inadequate for indoor location positioning. Wi-Fi is a technique used for location tracking with wireless access points (AP's). The centralized control/sever

has the location details of the building (for path navigation and also mapping details to exit). On occurrence of hazardous accidents like _re or gas leakage, sensor value set goes beyond threshold and emergency is triggered. The source/initiator (sensor

which detected danger) broadcasts the message which is directed to server control. The neighbouring sensors to pass the received information to the centralized system via gateway nodes. On reception of information, the server _nds the source-id of the

sensor belonging to danger zone and based on hop count, shortest path computed is sent to the users in that location along with alert message for evacuation. The users in that zone are then directed to nearby safe exit.
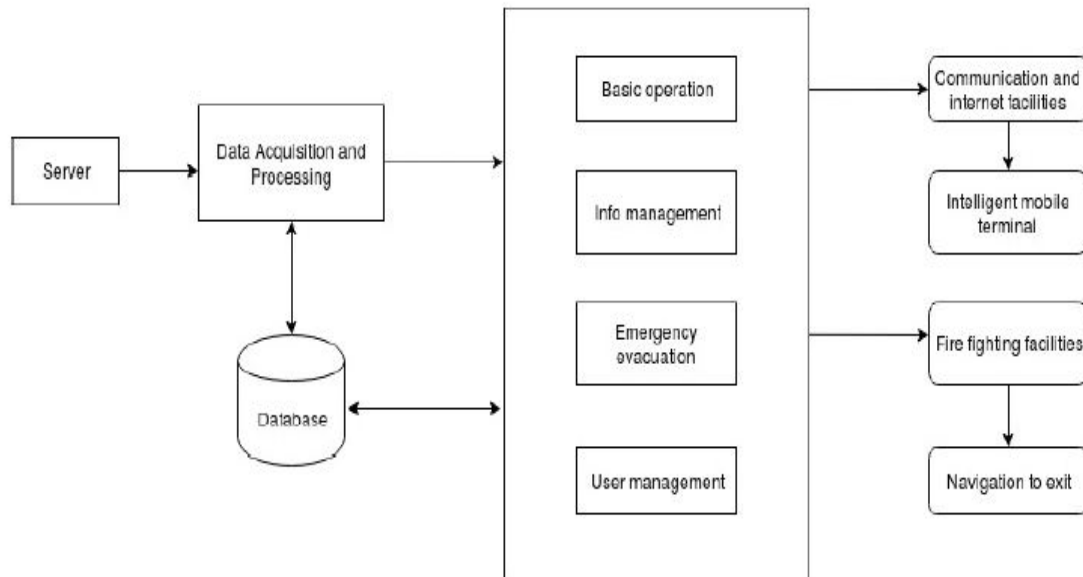
 MODULE DESCRIPTION

User login: To log in to the system, the user will enter the username and password, if the entered information is correct the system will redirect him to the home page or it will show an error message.

Registration: User will register in the system with standard information.During registration, the password will be automatically created and provided by the user's post.

Prediction system: It will predict a method based on an indoor placement system. It will help if any road is blocked.

Computer hardware: In this section the sensor will detect if a certain level has been exceeded. If the buzz is over it will start.

V. PROBLEM DEFINITION

There is a problem linking the route to the urgent eviction of large smart buildings. The timing of evacuation is important in saving lives in emergencies caused by natural or man-made threats and disasters. The most common methods of linking the expulsion route have been prepared and described in advance.

VI. CONCLUSION

Users equipped with mobile phones or PDA interactions with sensors via Wi-Fi. Wi-Fi is a process used for location tracking by wireless access points (AP's).

REFERENCES

[1] Huixian Jiang, \ The Great Mobile Fire Transfer Program for Public Buildings Based on Artificial Intelligence and IoT ", National Key of Research and Development under Grant 2016YFC0502905, 2019.

[2] Maninder Jeet Kaur and Piyush Maheshwari, "Building Smart Cities Applications using IoT and Cloud-based Architectures \, International Conference on Industrial Informatics and Computer systems (CIICS), pages 1-5,2016

[3] Afsana Khan, Afrida Anzum Aesha, "An IoT Based Intelligent Fire Evacuation System", 21st International Conference on Technology and Computers (ICCIT) 2018.

[4] Swarnadeep Majumder, Sean O'Neil, smart transport equipment | IoT-based IoT Emergency Monitoring System, "IEEE MIT Undergraduate Research Technology Conference (URTC).

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