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Survey on Modest Sensory Network Utility Device Watcher Using Android Database System

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Abstract: This report introduces the android application using a modest sensor device. The objective of this project is to develop a system to collect data from sensors, and to send this data broadcast through a network which passes the data to an application. Wireless transmission methods have been detected, and it was decided that a HTTP GET method would be used. This report also says the progress made to date on the project, and proposes a timeline for the completion of the project.

The aim of this project was to design and build a wireless sensor network. These are the exploration of personal area networks and mesh networking, this system was implemented to detect physical intrusion. This network communicates with the generic infrastructure, resilient to future wireless sensor projects, which stored sensor data in a database. Also it was a user interface to monitor the status of the entire application

Keywords: data broadcast, detect physical intrusion, generic infrastructure, wireless sensor, user interface

I. INTRODUCTION

While analyzing the project we thought about importance with A to monitoring the data. Since everything is getting digitized, we are designing the application to monitor the heavy-duty machines and their performance. In today's situation data is stored in a spreadsheet or sometimes manually by hand. For this we are going to implement software modules that can store data collected from sensors and monitor performance.

The IoT based component will collect the data in the form of signals and using parameters like temperature, fuel consumption, etc. So, this will make better communication between workers and management, also increases the transparency in the whole management process.

Initially, create an application for user who can register and login with their credentials and provide a portal for admin and workers

Important aspects of a system are as follows:

- 1) **Management Module:** This module has administrator authority, like managing, planning, data security, and maintaining the data. Admin can log in and add machines, workers' details in software. Admin will be able to overview active and inactive machines. The location of all machines and workers can be displayed in this module. Admin will get daily updates about machine performance and workers' performance
- 2) **Worker Module:** This module starts when the worker login with his credential given by the management module. In this module, a worker has to update the daily performance of the machine and his active working time details. The daily update contains machines working session time, fuel consumption updating, and location update. Also, he can add details of overtime work, temperature, and power consumption by machine.
- 3) **Watcher:** This module is an IoT based component, which contains sensors, microcontroller, battery, wires and GSM. It will be connected to the machine and send data to the worker module. This will calculate the temperature, power consumption and rpm of the machine that can circulate the data to the workers module.

II. LITERATURE SURVEY

A. *Research on Iot Enabled Transport System Using Android Application* K.S Prabhu Devi Sabitha T, Justin Job P, Akshara Fathima

The Android Application which is developed for owners to track their Heavy-Duty Machineries and also the route Machineroutes online. It helps the user to get the location of the Machine which helps the user to not to get delayed. The development technology also increased the Frauds. This causes a huge amount of loss and also increases the Transparency between Owner and Worker. This paper also helps in solving this drawback. The paper will result in producing the project with an android application for the Owner And Worker. The IoT device will be on boarded in the Heavy machineries along with the GPS and also the vibration

sensor.

Keywords –Android Application, GPS, Vibration sensor.

B. Research on GPS: Location Tracking Technology. Author: Rashmi Bajaj, Samantha Lalinda Ranaweera, Dharma P. Agrawal.

Today, GPS has a wide range of other applications including tracking Heavy-Duty Machineries, mobile commerce, emergency response, exploration, surveying resource management and so on. Tracking methods are generally based on a moving object’s distance, direction, or both. While the Machineries are moving from one place to another place then the owner will be able to track the machine, so that no fraud happens.

C. IOT Based Remote Health Monitoring System for Elderly People Prof. Shilpa S, V Aishwarya, Varnitha M V, Prathiksha Shetty
Taking the capability of IoT technology into account, it is possible to overcome the difficulties faced by workers from their owners on a regular basis. This work has led to a prototype of IoT Based Remote Based Monitoring System for workers. This prototype consists of: Vibration sensors, temperature sensor. All these sensors were merged together into a single system with Arduino kit. The data acquired from the sensors is transferred to an Application via the GUI. The GUI is continuously being updated in the real time database. An Android Application was developed using Android Studio which could access the database and show a representation on the machineries parameters. IoT integrated with the Heavy-Duties wearables can overcome the need of visiting hospitals for primary health issues.

D. Real-Time Monitoring System Using Smartphone-Based Sensors and NoSQL Database for Perishable Supply Chain Author - Ganjar Alfian 1, Muhammad Syafrudin 2 and Jongtae Rhee 2.

The use of Internet of Things (IOT) sensors has greatly increased due to being cheaper, smaller, less power-consuming, and easy to use. The IOT sensors typically collect a large amount of data and send it to a remote server. The data collected by the sensors must be examined and introduced for different purposes. Various IOT architectures have been applied to many different areas and have shown the potential of the IOT for improving the quality work. All the applications require one or more sensors to gather data from the environment.

E. Research on Android-Based Data Management System for Fitness Equipment. Author - School of Information and Electrical Engineering Shandong Jianzhu University Jinan, China e-mail: henryyu@sdjzu.edu.cn

Mobile terminal operating system is Android. Apps installed on the terminal which will interact with the database through HTTP transport. This paper introduces how to manage data from the IOT device based on the Android platform for the Sensors, which can display, store and manage machinery data. The server for this system is Pre-Cluster, some authors instead pleaded for an approach related to Android principles, often due to the evidence of the work already made by the worker. Nevertheless, in the context of the literature review, in our opinion some analyses emerged more than others. They clarify the close correlation between the legitimization factor. the ability to create useful and efficient models.

| Sr. No | Paper Name | Publisher | Techniques | Merits | Demerits |
|--------|--|--|---|---|--|
| 1 | Research on IOT Enabled Transport System Using Android Application | K.S Prabhu, Devi Sabitha, Justin Job P, Akshara Fathima T | -Android Application. -Vibration sensor -GPS Receiver | - Explained how the GPS works as well as the use of vibration sensor to detect the work of machine by using android application | -Some applications require verification of user identity and as there is no central authority to verify the user identity. it becomes an issue while developing such applications. |
| 2 | Research on GPS: Location Tracking Technology. | Rashmi Bajaj, Samantha Lalinda Ranaweera, Dharma P. Agrawal. | -GPS Tracking. | - It will give the information about the driver as well as the machines to check whether they both are safe or not. | -GPS can cause problem because of the suffer of signal failure. GPS takes much power so if your battery goes out of power it is difficult to track the locations. |

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|---|--|--|---|---|---|
| 3 | IOT Based Remote Health Monitoring System for Elderly People. | Prof. Shilpa S, V Aishwarya, Varnitha M V, Prathiksha Shetty | - IOT -Temperature sensor. -vibration sensor. | - with the use of IOT lot of human work will minimize | -Some IOT sensors are expensive |
| 4 | Real-Time Monitoring System Using Smartphone-Based Sensors and NoSQL Database for Perishable Supply Chain. | Ganjar Alfian, Muhammad Syafrudin and Jongtae | - IOT Sensors | -Power Consumption is low as Sensors used | -NO-SQL is still not widely used database |
| 5 | Research on Android-Based Data Management System for Fitness Equipment. | School of Information and Electrical Engineering Shandong Jianzhu University Jinan, China e-mail: henryyu@sdjzu.edu.cn Rhee 2. | - IOT -HTTP Transport Protocol -Android | -Android technology makes all things portable | -Need a smartphone to run Android app |

III. CONCLUSION

We studied the management system as a very important part of any business unit. This project based on the management system, the android-based application will make managing and maintaining the data much uncomplicated. This will provide user friendly GUI for both Worker and Management modules. It can be implemented at any machine operating business unit like JCB contactors, Lathe machine workshops or at food processing factories.

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