Smart City Base on IOT

Shubham Deshpande¹, Santosh Malavade², Rupesh Ruke³, Prof. Sharan Inamadar⁴

1,2,3 Student, Department of Electronics and Telecommunication, Dr. D. Y. Patil. School of

Engineering and Technology, Pune, India

4 Assistant professor, Department of Electronics and Telecommunication, Dr. D. Y. Patil. School of

Engineering and Technology, Pune, India

Abstract- Due to the growing developments in advanced metering and technologies, smart cities have been equipped with difference electronic devices on the basis of internet of things (Iot), therefore becoming smater than before. The aim of this articles that of providing a comprehensive review on the concepts of smart cities and on their motivation and applications. Moreover, this survey describes the Iot technologies for smart cities and of a smart city, the main components and features of a smart city. Accordingly, the purpose of the Smart Cities Mission is to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to Smart outcomes. Area based development will transform existing areas (retrofit and redevelop), including slums, into better-planned ones, thereby improving the liveability of the whole City.

INTRODUCTION

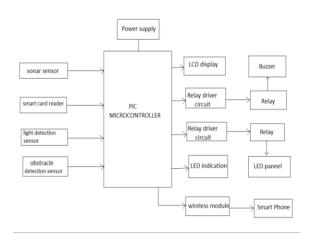
The Smart Cities Mission is an urban renewal and retrofitting program by the Government of India with a mission to develop 100 cities all over the country making them citizen friendly and sustainable. The Union Ministry of Urban Development is responsible for implementing the mission in collaboration with the state governments of the respective cities as per World web. Looking at the Request for Proposals of individual cities submitted by various cities to the Ministry of Urban Development2, it is found that water, energy, and transportation is a huge problem for smart cities. Most of the proposals dealt with improving issues related to the above sectors.

For example, the transportation sector had a multitude of issues such as reducing traffic jams, providing a safe and secure environment for transportation, improving the safety of pedestrians, constructing all amenities essential towards the overall improvement of the transportation scene. Due to the Indian Government's push of the Smart City

mission, the efficient redressal of all issues would significantly improve public quality of life, and make the city more sustainable.

We have identified two major problems about the transportation sector, which if sufficiently addressed, will be a game changer for the transportation sector. Information and Communication Technology (ICT) has been playing a huge role in formulating intelligent solutions. The arrival of Internet of Things (IoT) has only bolstered the usage of ICT and forced the government to seriously consider implementing ICT to achieve better and seamless integration between the various stakeholders of the smart city mission. Along with ICT come huge amounts of data, due to the vast number of connected devices today. Smart analytics, storage, and management of the data generated is of prime importance, as there are many potential privacy and security concerns associated with such vast amounts of data.

BLOCK DIAGRAM



BLOCK DIGRAM DESCRIPTION

PIC MICROCONTROLLER:

The signals from the sensor are given to the Microcontroller. Microcontroller Monitors all these signals and Process according to gives data to input.

LCD DISPLAY:

It is used for the displaying the information to user.

SONAR SENSOR:

The sensor is used to detect garbage movement in container. The movement detector is a popular device for detecting motion in a free space.

RELAY:

It is used to drive AC/DC Load & also used for auto switching purpose. In our project it is Used for all switching operations.

WIRELESS MODULE:

It is used to send garbage status information to PCMC office.

BUZZER:

Buzzer is used for Providing awareness if the garbage inside the container full.

LIGHT DETECTION SENSOR:

The light detection sensor is used for darkness Detection purpose.

OBSTACLE DETECTION SENSOR:

The Obstacle detection sensors are used for Obstacle detection. These sensor sense the obstacle and gives output to Microcontroller.

RELAY DRIVER CIRCUIT:

These relay driver circuits are used for all switching operation. These relay drivers operate on principle on and off Switching.

LED INDICATION:

The LED Indication are used for showing output of Controllers in Understable visual forms. i.e led glow will be in colour form red, green, blue etc.

SMART CARD READER:

The Smart card reader is used for detection. It act as an RFID reader for detection purpose.

EXPECTED OUTCOMES:

To developed Smart city base on internet of things

REFERENCES

- [1] Aditya Gaur et al. "Smart city architecture and its applications based on IOT", Internet of Ubiquitous and Pervasive Things (IUPT 2015).
- [2] angJ et al. "Real time services for future cloud computing enabled vehicle networks", 2011 International Conference of Wireless Communication and Signal Process.
- [3] Petrolo R et al. "Towards a smart city based on cloud of things". In Proceedings of the 2014 ACM international workshop on Wireless and mobile technologies for smart cities – WiMobCity'
- [4] Dr. A. Sumithra, Jane et al. "A Smart Environmental Monitoring System Using Internet Of Things" March 2016 International Journal of Scientific Engineering and Applied Science (IJSEAS).
- [5] J.Sherly et al. "Internet of Things Based Smart Transportation Systems" Oct-2015 International Research Journal of Engineering and Technology (IRJET).