

Creating an Intelligent System through Internet of Things for Smart City

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Abstract – Smart city provides the enhanced vision with the help of internet of things (IoT), and the improvement in the existing systems operations. This project requires the involvement of latest technology, to interact with physical environment and provide services of information transfer and storage. The development of cities is dependent on the sensory information, which contributes to citizens and city management. The efficiency is increased by exchanging and saving the data over cloud, the data management, processing and analytics aids internet of things (IoT) infrastructure, which is further converted to usable knowledge. Our paper represent the idea to make the city smart through internet of things (IoT).The topic revolves around the technology used, the hardware required for overall improvement in the sensory devices to capture data and store, so user can use for their own benefit

Keywords – Information Management, Internet of Things (IOT), Network Architecture, Noise Mapping, Smart Cities.

I. INTRODUCTION

Now a day's cities need to be smart, if only to survive as platforms that enable economic, social and environmental well-being. This paper represents a framework for the realization for the smart cities through the internet of things. This IOT vision of smart city is applied to a noise mapping case study to illustrate a new method for existing operations. That can be adopted for the enhancement and delivery of important city services. We are making a smart system using sensors to monitor the traffic conditions. We are going to collect data using sensors and provide services to the user. When we look around in our society we observe that there are no ways to control street lights, there is no system to monitor bridge capacity, and accidents are also detected manually. So to overcome all the above problems this smart system can be used in which we can intelligently control the street light, the bridge capacity to handle load is always out crossed, accidents can be auto detected, and even we can get information about the environment conditions of a particular street. So in short by making use of this app we are making our city smart

II. RELATED WORK

Smarter cities of all sizes are capitalizing on new technologies and insights to transform their systems, operations and service delivery.

Competition among cities to engage and attract new residents, businesses and visitors means constant attention to providing a high quality of life and vibrant economic climate. Forward-thinking leaders recognize that although tight budgets, scarce resources and legacy systems frequently challenge their goals, new and innovative technologies can help turn challenges into opportunities.

These leaders see transformative possibilities in using big data and analytics for deeper insights. Cloud for collaboration among disparate agencies. Mobile to gather data and address problems directly at the source. Social technologies for better engagement with citizens. Being smarter can change the way their cities work and help deliver on their potential as never before.

[1] UDOT Traffic is an amazing traffic app for android but it is only available for resident of Utah. The traffic app provides

[2] Mobile access information for Utah for road ways directly from the Utah department of transportation. The app can be zoomed and scored around with easy and shows exactly what is happening on the road of the state. Current traffic condition on the freeways and the main surface streets is also presented in time. This traffic app for android is last because I is available only for one state.

[3] USA Traffic Cameras- is not essentially a traffic app for android but it comes close. If you fear that the road going down town is going to be clustered, you can check this app for guidance. Of course you will have to know

what camera to consult but once you get it right, this app will be a life saver. The fact that the app lets you actually see what happenings on the road is makes it one of the best traffic apps for android.

III. FRAME WORK

This is a Hardware as well As Software Based project which consists of an android app named smart app. This app is fixed on the hardware, the kit is then placed on the desired location where we want to monitor the environmental conditions. The inputs from the environment is collected by various sensors. The sensors such as light sensor, humidity sensor, gas sensor, temperature sensor, noise sensor. The inputs are given to the micro controller then from micro controller it is given to the app which is in the android phone using Bluetooth connection.

This app takes in the inputs process it and gives necessary outputs. These outputs are then given to the device drivers and through the device driver actions are taken.

Smart app is use to measure air pollution, noise pollution, gas pollution, humidity, intelligent street light control, traffic conditions, bridge capacity, and accident detection. The data which is collected can be stored on the server for further use. The connection between the server and the android app is done by wifi where as the connection between the app and the micro controller is done by Bluetooth.

IV. FUTURE SCOPE

We plan to expand the project domain from primarily being interactive. Though the proposed system would sound costly and inaccessible for masses, our primary aim would be to incorporate every kind of users into using the systems. We are using the hardware so we can expand our hardware to achieved advanced features. Further plans may also include design of smart systems which could be controlled by the use of our system.

V. CONCLUSION

With rapid development in the emerging IoT technology, we give, in this paper, a comprehensive blueprint of developing a smart city using IoT, which is actually motivated and strongly demanded from city councils as they seek to ensure the provision of essential services and quality of life for city inhabitants. In this context, we identify the key IoT building blocks of smart cities, as well as provide the approaches and resolutions to meet their respective communications, computing, and computation requirements. Furthermore, IoT-enabled noise mapping work in association with the City of Melbourne is presented as a case study to highlight the practical usage and merit of our proposed framework.

Finally, in order to push the development forward, the proper business model of smart city is believed to be equally important as technological advancement.

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