PPP Model for Indian Smart Village

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Abstract: ppp stands for public, private and partnership. The environment monitoring garbage collections and street light management are difficult and complex phenomena to overcome these problems this project has been proposed. With smart technologies it's easy to manage traffic, garbage, environment and we can ease environmental and climate impacts from the growth in mobility. In this project amazon cloud is developed to store the all information for this project through GPRS.

1.INTRODUCTION

There are huge challenges in realization of a rural development that monitors and integrates all of the village infrastructure and services to leverage the collective intelligence. The development of a IOT based smart village includes Cloud based network which can provide a virtual infrastructure to process and integrate the analysis tools monitoring equipment, storage, and visualization platform within the system. IT- OT convergence which intend to Implementation of IOT Based Smart Village for the Rural Development smart billing and data analytics in energy management. Waste collection system enhanced with cloud based IOT services which enable dynamic scheduling and routing in a waste collection system seems to be an efficient system. Locational and competitive advantages, after the development of these clusters which aims to strengthen the rural areas by provisioning of physical infrastructure, economic and social facilities. IOT based smart village can help to reduce cost through improved process efficiency, asset utilization and productivity. The tracking of devices is improved using sensors and communication devices which can be benefited from real-time data's and analytics help them make smarter decisions. The growth and convergence of data, processes and things on the internet would make such connections more relevant and important, creating more opportunities for people, businesses and industries.

2. Related Work

Each country has developed a reputation as a global leader in upgrading their city as smart city initiatives in its larger urban areas. The Rural areas are in need of essential infrastructure like roads, drinking water and power. The future development mainly concentrates on improving big metropolises into connected cities but failed to see where most of the population resides. Villages more than cities need to be made smart for the overall improvement and development of the country. The Development of opportunities for youths in villages, thereby discouraging migration to cities. Farming

remunerates occupation, with guidance and mentoring to farmers on how to get the best yield and market at remunerative prices for the future rural development. Proper implementation which presides over the benefits such as crop insurance, soil health card, and pesticides which can reach the grassroots. To overcome these problems this project has been proposed.
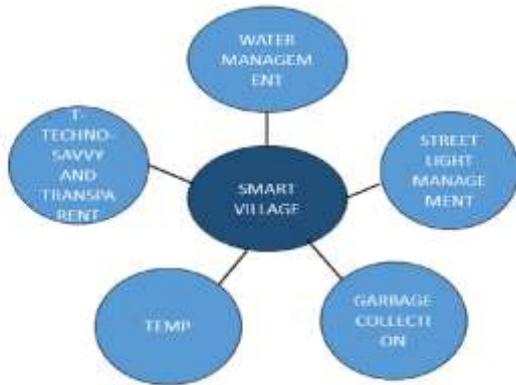
The Smart City (SC) paradigm helps renovate the traditional city concept. In fact, it is possible to realize and develop efficient demand-side strategies integrating the monitoring and automation features ensured by intelligent devices and their communication apparatuses typically used in many applications. Within this concept, public lighting, being a great electrical energy consumer, has recently been attracting the interest of the research community. Scientists, combining the SC paradigm with alternative energies and new lighting technologies, are conceiving systems previously unimaginable, which can increase the efficiency obtaining considerable energy consumption savings and consequently money savings.

In this area, the efforts are focused on the use of alternative energies for the power supply of new lighting technologies, which allow obtaining considerable energy savings. Within lighting technologies, Light Emitting Diodes (LEDs) assure the possibility of switching on the lamp without the preheating typical of halogen ones; a very high lighting efficiency; low power consumption; a superior life time and quick switching times not comparable to those of older technologies (only incandescent lights have a lower lighting time, but with very big power consumption and the shortest time life); less sensitivity to transient phenomena, which have a big impact on other technologies, allowing thousands of lightings without the risk of lamp failure. These innovative characteristics allow development of a new remote-control system based on intelligent lamp posts that also send information to a central control system in order to simplify management and maintenance issues also using holistic and bottom-up design strategies. Within these researches, a relevant topic is the use of new sensor networks (wireless and not) and communication technologies, both to locally manage the lamp posts, but also sensor networks, and to send data towards a remote center.

3. PROPOSED SYSTEM

The proposed design for smart village consists of Renesas Microcontroller Unit, LCD, Ultrasonic sensor, temperature sensor, Humidity sensor, Soil moisture sensor, LDR, LED lamp, Water pump and GPRS.

The environment monitoring, garbage collections and street light management are difficult and complex phenomena to overcome these problems this project has been proposed. With smart technologies it's easy to manage traffic, garbage, environment and we can ease environmental and climate impacts from the growth

in mobility. In this project amazon cloud is developed to store the all information for this project through GPRS.

The Ultrasonic sensor is used to check whether the dustbins in villages are filled or not. Temperature sensor and Humidity sensor are used to verify the temperature and humidity condition of the village. Agriculture is one of the main sources for village people. For the agriculture land moisture land is very important. Therefore, to observe the moisture condition in agriculture lands here us using moisture sensor. To make smart village streets light are much essential. To control LED lamps according to the mode of day and night without manual support we using LDR (light dependent resistor).To avoid wastage of water we using water pump and is controlled by Relay and finally all these conditions of the land stored in Amazon cloud through GPRS.

temperature sensor, Humidity sensor, Soil moisture sensor, LDR, LED lamp, Water pump and GPRS.

Ultrasonic sensor: The Ultrasonic sensor is used to check whether the dustbin in villages is filled or not.

Temperature sensor and Humidity sensor: Temperature sensor and Humidity sensor are used to verify the temperature and humidity condition of the village.

Moisture sensor: To observe the moisture condition in agriculture lands here we using moisture sensor.

LDR and LED lamp: To control LED lamps according to the mode of day and night without manual support we using LDR.

Relay: To avoid wastage of water we using water pump and is controlled by Relay.

4. RESULTS
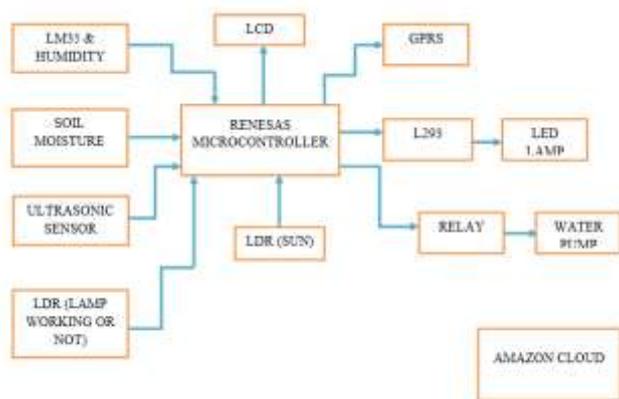
Renesas microcontroller: The environment monitoring, garbage collections and street light management are difficult and complex phenomena to overcome these problems this project has been proposed.

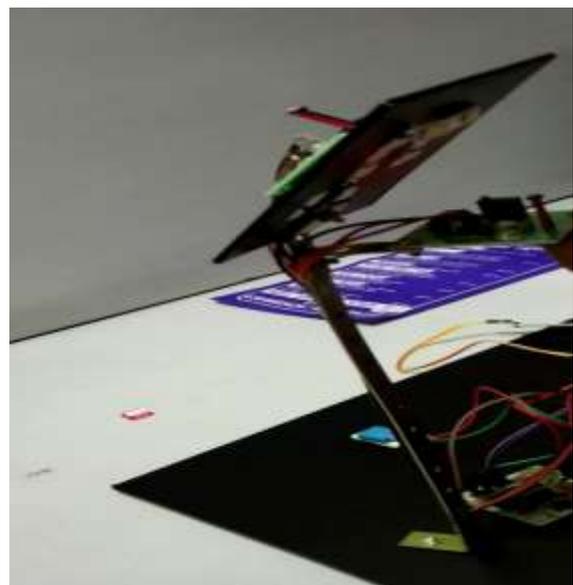**LCD:** The proposed design for smart village consists of Renesas Microcontroller Unit, LCD, Ultrasonic sensor,
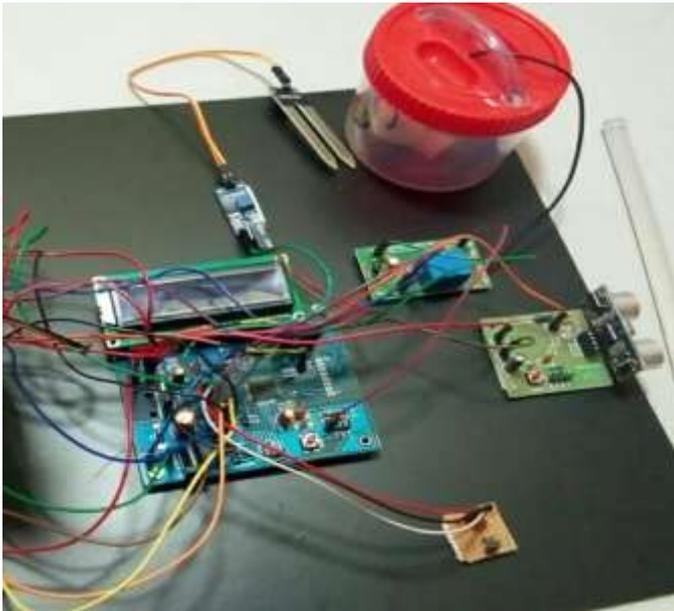

Fig: Streetlight Module
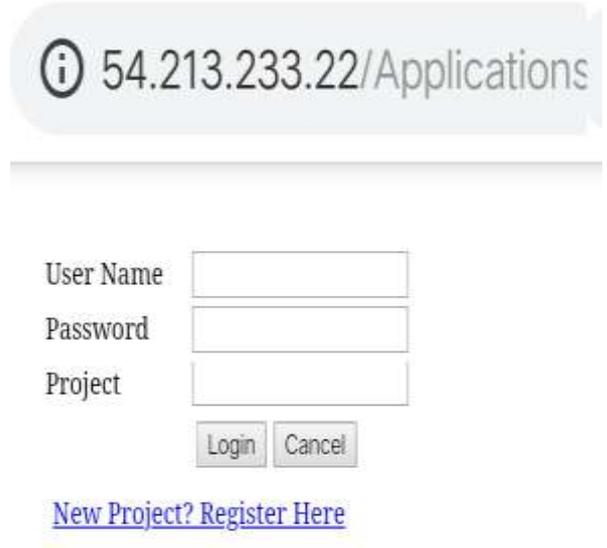
Fig: Water Management and Garbage Collection Module

Fig: Smart Village Information Login Page

5. CONCLUSION

Smart village planning can have a major impact on national development. These efforts can increase the decision-making power of society by allowing them to make intelligent and effective decisions at appropriate times. In this paper, we propose a system for smart village planning by using an IoT-generated data analysis. The proposed architecture consists of three tiers that have functionalities including collection, communication, processing, and interpretation. The complete system is developed using node mcu connect with the cloud storage. The simple IoT-based smart city datasets, such as vehicular networks, smart parking, smart home, weather, pollution, surveillance, and so on are analyzed for developing a smart city as well as for urban village planning decisions also. The proposed system benefit for villagers while providing them with the facilities to make intelligent and quick decisions.

6. REFERENCES

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