



Smart City Waste Management

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Abstract:

Waste management includes all the activities and actions required to manage waste from its starting to its final disposal. This also includes other things, collection, transport, treatment and disposal of waste together with proper monitoring and regulation. It encompasses the legal and regulatory framework that related to waste management guidance on recycling etc. The term waste management usually relates to all kinds of waste, whether generated during the extraction of raw materials, the processing of raw materials into final products, the consumption of final products, or other human activities, including municipal, agricultural, and social like health care etc. Waste management is introduced to reduce the effects of waste on health, the environment or aesthetics. We are providing a digital approach to waste management which provides smart and effective impact on Waste Management.

Keywords: Smart garbage bin, GSM (Global system for mobile communication), Sensors

I. INTRODUCTION

These ideas support the development of Smart City concepts, which are intended to improve living by using new and innovative technologies. The IOT “Internet of Things” provides new opportunities for making cities smarter. By introducing the Smart Waste Management System, we are taking key step towards becoming a Smart City. The targeted waste Collection on time saves time, money, and fuel and also reduces exhaust Gas emissions and noise levels for local residents. Garbage truck tours can be reduced by 30 %. There might be more cities benefiting from this system in future—twenty other countries are currently testing Smart Waste Management System.

II. LITERATURE REVIEW

Sauro Longhi in 2012 proposed a wireless sensor network has been used to control the filling of the bin collecting data from embedded sensors [1]. Yann Glouche, Paul Couderc in 2013 stated Waste collection using the RFID technology this approach does not require any sensor[2].Hind Abdalsalam in 2014 worked on GPS tracking system has been successfully designed and implemented[3]. Mohd Helmy Abd Wahab in 2014 proposed waste management by providing electronic system which utilizing radio frequency identification at bin level[4].Gaikwad Prajakta in 2015 stated about overflowing of garbage from container in residential area[5].R.Narayanmoorthi in 2015 effately worked in NIR spectroscopy for separating biodegradable waste[6].

III. SUMMARY

A set of sensors is installed in the garbage bin to detect level of a bin. As soon as the garbage bin is 90% full it will send a notification to the authorized person and also to the garbage collecting vehicle. By using GSM technology it will assign a unique ID to every Bin and it will send its location through GSM only to the vehicle.

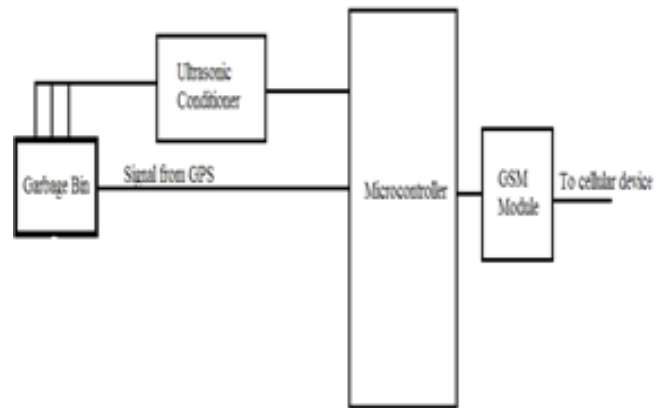


Figure.1. Unique ID GSM

As soon as the vehicle is notified about the condition of the garbage bin it will collect the garbage. After the collection it will send message about the empty bin.

IV. CONCLUSION

An attempt has been made to provide a comprehensive and sincere review of the generation, characteristics, collection and transportation. The proposed system would be able to monitor the solid waste collection process and manage the overall collection process. This technique would provide solid waste collection in time and also overcome all the disadvantages which are as use of minimum route, low fuel use, clean and green environment and available vehicle. The proposed system is good enough to ensure the practical and perfect for solid waste collection process monitoring and management for green Environment.

V. ACKNOWLEDGEMENT

As our country has started a new project of Smart city. We have taken the initiative to add some features and innovations into that project up to our knowledge and abilities.

It provides digital and smart way to reduce and control the waste and provide our contribution in Smart cities Development Project.

VI REFERENCES

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