AN INDUSTRY ORIENTED MINI PROJECT REPORT

On

LI-FI BASED TEXT COMMUNICATION

Submitted in partial fulfillment of the requirements
For the award of the degree of

BACHELOR OF TECHNOLOGY

In

Electronics & Communication Engineering

By

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Under the guidance of

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DECLARATION

I hereby declare that project entitled "**Lifi based text communication**" is bonafide work duly completed by us. It does not contain any part of the project or thesis submitted by any other candidate to this or any other institute of the university.

All such materials that have been obtained from other sources have been duly acknowledged.

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CERTIFICATE

This is to certify that the thesis work titled "Dustbin Monitoring and Alerting System" submitted by **Ms. P. Mohana Sruthi (Regd No. 17891A0442), Ms. Managari Shivani (Regd No. 17891A0435)** in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in Electronics & Communication Engineering** to the Vignan Institute of Technology and Science, Deshmukhi is a record of bonafide work carried out by him/her under my guidance and supervision.

The results embodied in this project report have not been submitted in any university for the award of any degree and the results are achieved satisfactorily.

DR. N. Dinesh Kumar
Head Of The Department

(External Examiner)

PREFACE

The project “Lifi based text communication”, In this we will be demonstrating Li-Fi communication using two Arduino. Here the text data is transmitted using LED and 4x4 keypad and it is decoded on the receiver side using LDR.

Chapter 1: Presents introduction, block diagram, components used, cost of the project, advantages, disadvantages, applications of the project.

Chapter 2: Presents the topic Literature survey. It explains about what is Lifi, need for Lifi, history.

Chapter 3: Presents the Methodology. It deals with the block diagram of the project, hardware description.

Chapter 4: Presents the software description, implementation, design considerations, procedural steps for compilation, simulation and dumping.

Chapter 5: Presents Results

Chapter 6: Presents conclusion and future scope of the project.

ACKNOWLEDGEMENT

This project would not have been possible without considerable guidance and support. So, we would like to acknowledge those who have enabled us to complete this seminar.

Firstly, we would like to express our gratitude to our CEO **Mr. Shravan Boyapati**, management and Principal **Dr. Durga Sukumar** for extending their support.

Secondly, my sincere thanks to our head of the department, **Dr. N. Dinesh Kumar**, who helped me in selecting the topic, correcting various documents with attention and care. He has taken the pain to go through the project and make necessary correction as and when needed.

Finally, we would also like to thank our staff members that we called upon for assistance since the genesis of this project. Their opinions and suggestions have helped us in realizing this seminar and with their support and sharing ideas during the progress. I also extend my heartfelt thanks to my parents and well wishes.

ABSTRACT

Abstract: The main objective of this project is to use Li-Fi for faster communication of the data.

Working: Li-Fi uses visible light as a communication medium for the transmission of data. A LED can act as a light source and the photodiode acts as a transceiver that receives light signals and transmits them back. By Controlling the light pulse at the transmitter side, we can send unique data patterns. This phenomenon occurs at extremely high speed and can't be seen through the human eye. Then at the receiver side, the photodiode or Light-dependent resistor (LDR) converts the data into useful information. In the transmitter part of Li-Fi communication, the keypad is used as input here. That means we'll be selecting the text to be transmitted using the keypad. Then the information is processed by the control unit, which is Arduino in our case. Arduino converts the information into binary pulses which can be fed to an LED source for transmission. Then these data are fed to LED light which sends the visible light pulses to the receiver side.

Applications: Li-Fi applications are varied as a result of its key features, such as directional lighting, energy efficiency, intrinsic security, high data rate capability, signal blocking by walls and integrated networking capability.

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