Smart Street System Interfacing LoRa SX1276 with STM32 Microcontroller

Team Members:
B.PRASANTH (RA2211004050008)
E.G.PRADEEP (RA2211004050026)

Guided by,
DR.M.MATHAN KUMAR
Assistant Professor
DEPT OF ECE

INTRODUCTION

PROBLEM STATEMENT : Low Communication between Traditional street light systems

SOLUTION : Using Smart Street light system Interfacing LoRa SX1276 with STM32 Microcontroller

→ LoRa deployment in dense IoT networks facing several challenges like interference, scalability, security, and reliability.
As these techniques used a range of methodologies to get rid of interference challenge.

→Over 75% of IoT devices operate in resource-constrained environments, where interference can significantly impact performance.

MOTIVATION

→ Dense IoT Networks and Interference The growing population of resource-constrained IoT devices has made it challenging to meet communication requirements in dynamic and dense wireless networks.

→ LoRa networks, while promising for LPWAN, face critical challenges such as interference, scalability, security, and reliability in dense deployments.

→ SDG GOAL :Industry, Innovation and Infrastructure

- Zeroth Review :Explaining about our project and the sdg goal used.

- First Review :Explaining Simulation

- Second Review: Showing simulation Output(Software).

- Third Review: Showing hardware Components of our project.

- Final Review: Explanation of simulation outputs and the results from the assembled hardware.

REFERENCES

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3. Smart Street Lighting System, Chetna Badgaiyan , Palak Sehga,2024.

THANK YOU