Design Practicum (IC201P) 2022

Group 17

LiFi

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Main Features

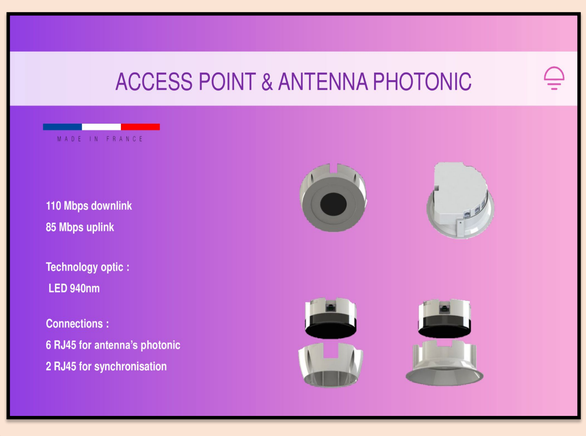
- Can use existing light sources for transmitting data
- Provides security in transmission of data
- Cheaper than traditional transmission techniques
- Green Technology

Challenges faced

- In our initial version of model, LCD wasn't working, which made us lose hope, but we managed to complete it
- In the transmitter and receiver circuit we needed DC to DC conversion which was a problem
- LDR sensor wasn't working as expected due to interference of surrounding light
- Moreover, working with other discipline students was a challenge and learning as well

Market Survey

- Access points and dongle from pureLifi
- This available product costs about ~2 lakh
- Our product is cost efficent, 10 X cheaper than available LiFi product



Social Impact

- Helps reduction in radio waves usage for transmission which are carcinogenic and harmful to health
- Does not pollute environment and hence, green technology
- Provides better security thus making society a better place to live.
- Due to LiFi there would not be a huge energy boom thus, energy consumption of the nation would decrease

Achieved Objectives

- Security in transmission of data
- Able to built lifi in very low cost compared to products available in the market.
- Able to transmit images and text through only light

References

[1]https://www.irjet.net/archives/V7/i9/IRJET-V7I9256.pdf

[2]https://rcs.cic.ipn.mx/2018_147_12/Transmission%20and%20Reception%20of%20Images%20via%20Visible%20Light.pdf

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