Chair of Communication Networks
TUM Department of Electrical and Computer Engineering
Technical University of Munich

Forschungspraxis

Modeling and analysis of LiFi Access Point placement strategies for an office

LiFi (Light-fidelity) is becoming an increasingly important technology as the unlicensed ISM band gets overcrowded. LiFi, with its high data rates, emerges as a promising solution to provide connectivity using LED lights thereby reducing the interference with other wireless technologies. Due to the unique properties of a visible light communciation system, the position of theaccess points/LEDs has a significant effect on the network coverage and illumination level in an indoor area.

This work involves modelling an indoor office using Blender (a 3D modelling software) and analyzing the effects of different LED placement strategies.The goal is to answer the question: Which design is preferred for LiFi access point placement in an office environment?

Related Reading:

Blender

https://www.blender.org/

LiFi

H. Haas, L. Yin, Y. Wang and C. Chen, "What is LiFi?," in Journal of Lightwave Technology, vol. 34, no. 6, pp. 1533-1544, 15 March15, 2016, doi: 10.1109/JLT.2015.2510021.

Prerequisites

- Python
- Interest in new communication technologies
- Interest in 3D modelling

Advisors

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