

Li-Fi Technology: Data Transmission through Visible Light

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Abstract : People are always in search of Wi-Fi hotspots because Internet is a major demand nowadays. But like all other technologies, there is still room for improvement in the Wi-Fi technology with regards to the speed and quality of connectivity. In order to address these aspects, Harald Haas, a professor at the University of Edinburgh, proposed what we know as the Li-Fi (Light Fidelity). Li-Fi is a new technology in the field of wireless communication to provide connectivity within a network environment. It is a two-way mode of wireless communication using light. Basically, the data is transmitted through Light Emitting Diodes which can vary the intensity of light very fast, even faster than the blink of an eye. From the research and experiments conducted so far, it can be said that Li-Fi can increase the speed and reliability of the transfer of data. This paper pays particular attention on the assessment of the performance of this technology. In other words, it is a 5G technology which uses LED as the medium of data transfer. For coverage within the buildings, Wi-Fi is good but Li-Fi can be considered favorable in situations where large amounts of data are to be transferred in areas with electromagnetic interferences. It brings a lot of data related qualities such as efficiency, security as well as large throughputs to the table of wireless communication. All in all, it can be said that Li-Fi is going to be a future phenomenon where the presence of light will mean access to the Internet as well as speedy data transfer.

Keywords : communication, LED, Li-Fi, Wi-Fi

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