VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JNANA SANGAMA", BELAGAVI – 590 018

TECHNICAL SEMINAR ON

"Li-Fi Technology"

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IN

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INTRODUCTION

Li-Fi (Light Fidelity) is an innovative wireless communication technology that uses light waves instead of radio frequency (RF) waves for data transmission. It operates through visible light, ultraviolet, and infrared spectrums, making it a faster, more secure, and energy-efficient alternative to traditional Wi-Fi. Li-Fi technology enables high-speed internet connectivity, offering the potential for data rates up to 100 times faster than current Wi-Fi networks. By utilizing light from LED bulbs, Li-Fi can significantly enhance wireless communication, especially in areas where radio frequency communication is limited or prone to interference.

ABSTRACT

Li-Fi (Light Fidelity) is a wireless communication technology that uses visible light, ultraviolet, or infrared light to transmit data, offering a faster and more secure alternative to traditional Wi-Fi. It works by modulating light from LEDs at extremely high speeds, which can then be received by a photodetector. Li-Fi can provide high-speed internet access, greater bandwidth, and lower latency compared to Wi-Fi. It is especially useful in environments where radio frequency communication is limited or hazardous, such as hospitals or aircraft, and can offer greater energy efficiency and security.