



LIFI-LIGHT FIDELITY

Presented By:

Ass. Lect. Ali Mohammed Salih Mohammed Kadhim

College of Engineering / Electronic Engineering Department

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A person in a dark suit and striped tie is pointing their right index finger towards a glowing white logo. The logo consists of the text 'Li-Fi' in a large, bold, sans-serif font, with 'technology' in a smaller font below it. The text is enclosed in a stylized signal icon of three concentric curved lines on each side. A bright blue horizontal lens flare effect passes through the center of the logo.

Li-Fi
technology

WHAT IS LI-FI?

High-speed, Bidirectional, Networked and Mobile Wireless Communications Using Light.

High speed

Data rates of at least 10 Mbps per access point.

Bidirectional

Light spectrum (190 nm – 10,000 nm wavelength) used for uplink and downlink.

Networked

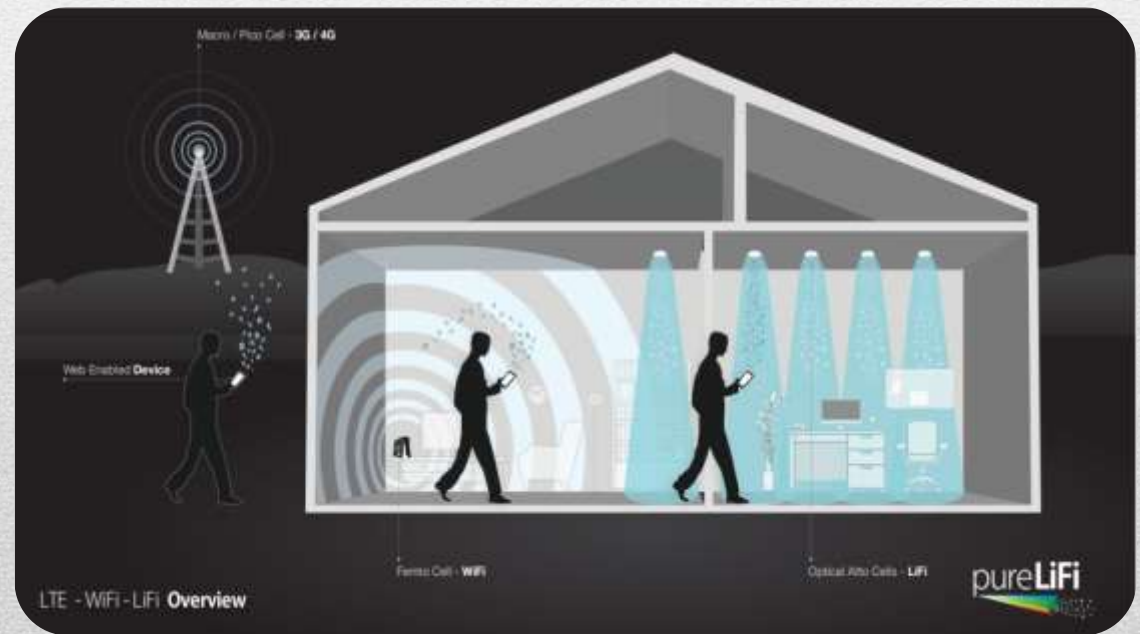
Facilitate network connectivity and management.

Mobile

Support roaming users and multiple users per access point (hand-over and multiple access).

Existing wireless technology - Why do we need an alternate technology?

- CAPACITY
- EFFICIENCY
- AVAILABILITY
- SECURITY



LTE - WiFi - LiFi Overview

Femto Cell - WiFi

Optical Pico Cells - LiFi

pureLiFi

LTE - WiFi - LiFi Overview

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Li-Fi Modem





Li-Fi Over Wi-Fi

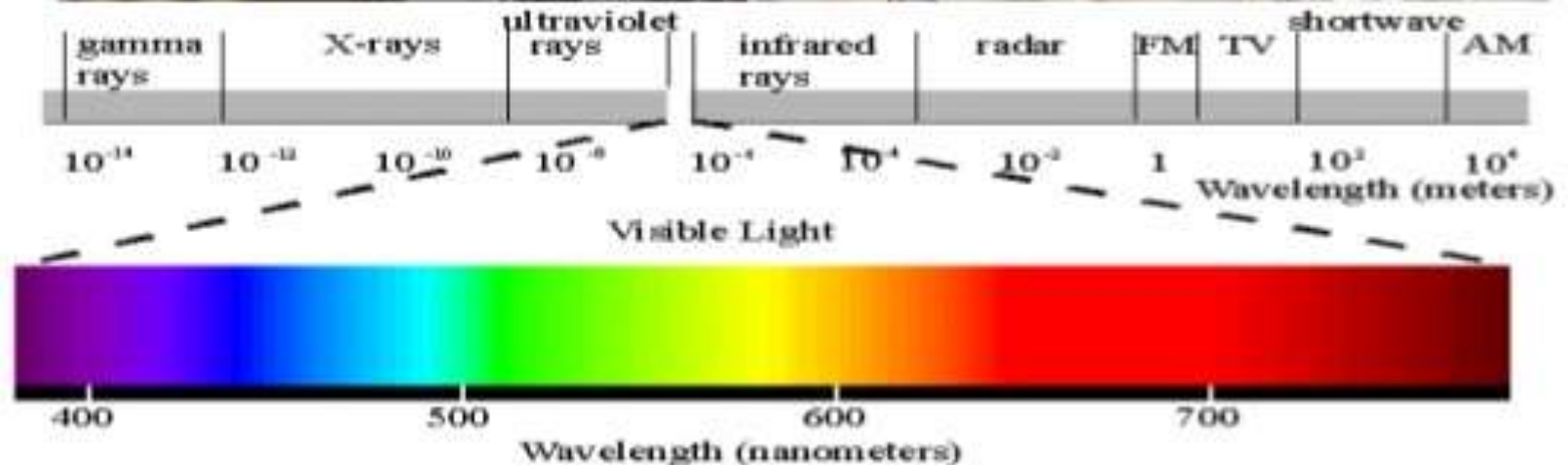
S.NO.	BASIS OF COMPARISON	WIFI	LIFI
1.	Security	Not secured (can be hacked)	Secured (cannot be hacked)
2.	Data transmission rate	Slower (uses radio waves)	Much faster (uses visible light)
3.	Range	Small	Large
4.	Traffic control	Less (signal become weaker as traffic increases)	More (due to high speed & easy availability)
5.	Where can be used	Within a range of WLAN infrastructure, usually inside a building	Anywhere, where light source is present
6.	Cost	Costly	Cheap
7.	Working concept	various topologies	direct binary data serving

LI-FI VS WIFI (CONTD...)

PART OF EM SPECTRUM THEY USE

- LI-FI USES THE VISBLE LIGHT PORTION OF THE EM

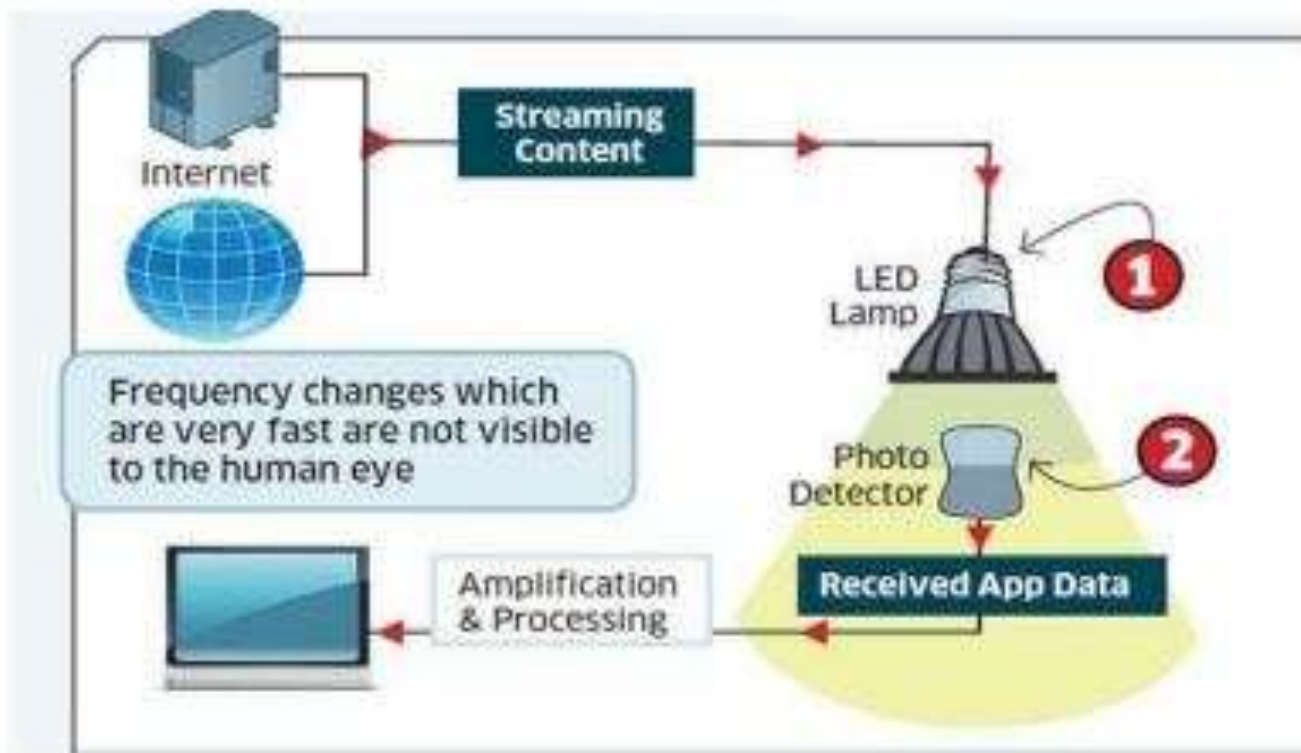
- WIFI USE THE RADIOWAVE PORTION OF THE EM



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[Visual Stimulus](#)

Li-Fi Work



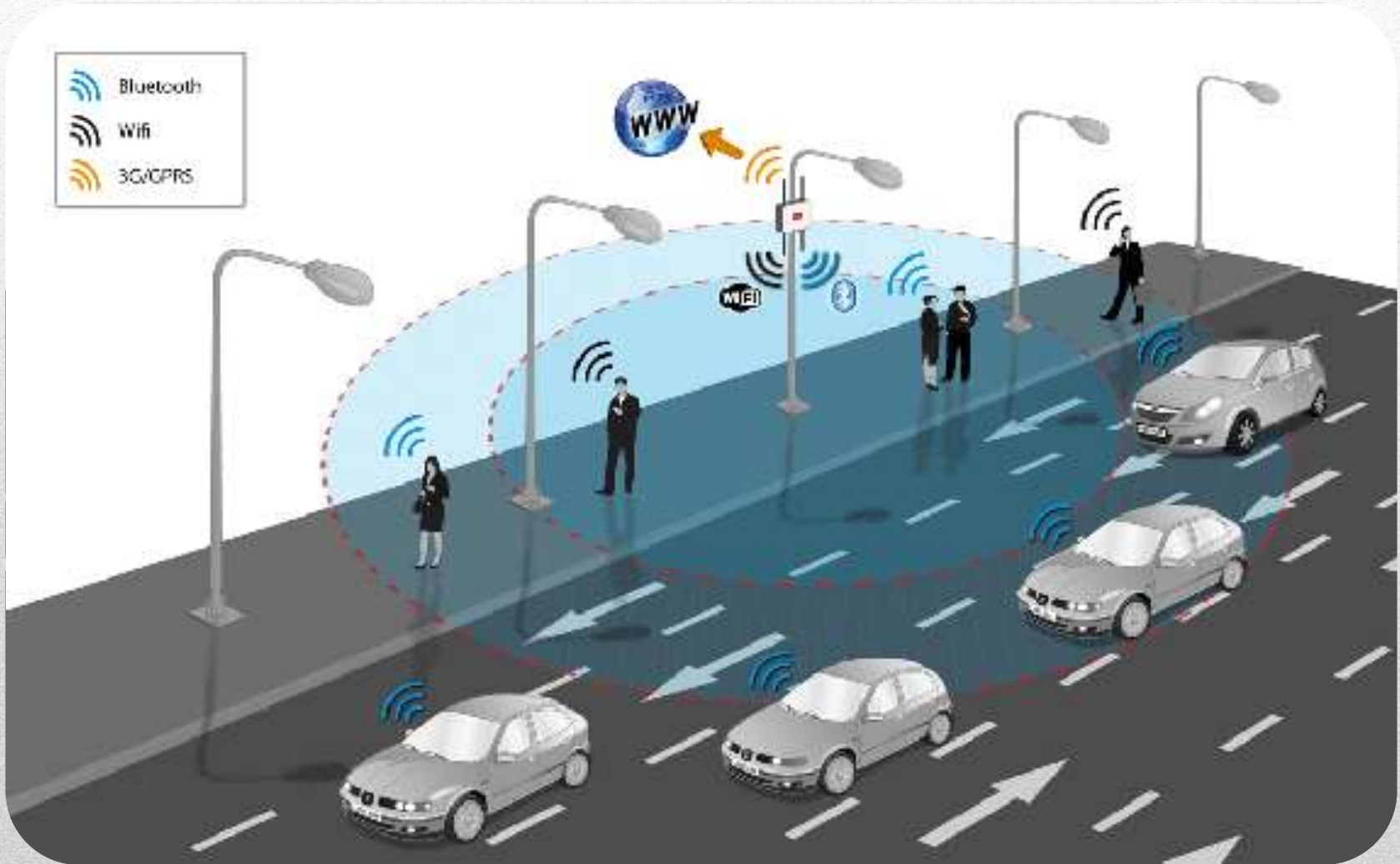
Li-Fi Work



Applications

- **Health sector:** Since WIFI is not safe to be used in hospitals and other various health care sectors because it penetrates human body. LIFI can be implemented and well suit in this sector.
 - **Internet anywhere:** street lamps, light of vehicles can be used to access internet anywhere in footpaths, roads, malls, anywhere where light source is available.
 - **Safety and management:** it can be used to update traffic information at almost every instant and it will be easy for traffic police to deal with traffic and catch the one who breaks the rule.
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Applications



Applications



Li-Fi With Apple

**Apple testing
Ultra-Fast
Li-Fi tech
for iPhones**



**100 times faster
than WiFi**

A close-up photograph of a bouquet of roses. The bouquet is composed of several shades of roses, including light yellow, pale pink, and vibrant magenta. The roses are densely packed and appear to have water droplets on their petals. Green leaves are interspersed among the flowers. The bouquet is wrapped in white ribbon and is set against a background of a white lattice or trellis structure. The text "THANK YOU" is overlaid in the center of the image in a bold, blue, sans-serif font with a slight 3D effect.

THANK YOU