LI-FI TECHNOLOGY

WHAT IS LI – FI ?

- LI-FI is transmission of data through illumination, sending data through a LED light bulb that varies in intensity faster than human eye can follow

  -German physicist, DR. Harald Haas

PRESENT SCENARIO

1.4 Million

5 Billion

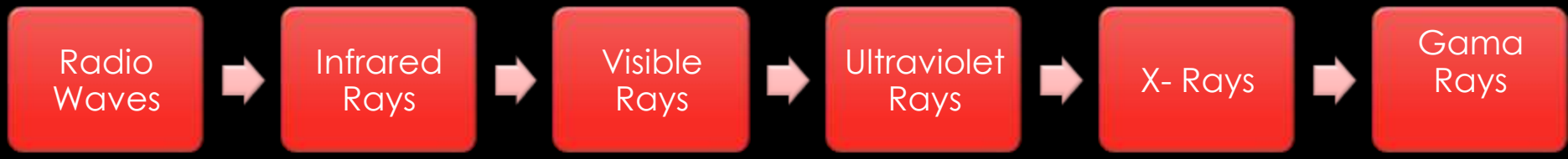
PRESENT SCENARIO

- Radio Spectrum is congested but the demand for wireless data double each year .Every thing, it seems want to use wireless data but the capacity is drying up.
- So what can carry this excess demand in the future.
- Drawbacks - Capacity, Availability, Security & Efficiency.

WHO CAN REPLACE RADIO WAVES FOR WIRELESS COMMUNICATION ?

LI-FI

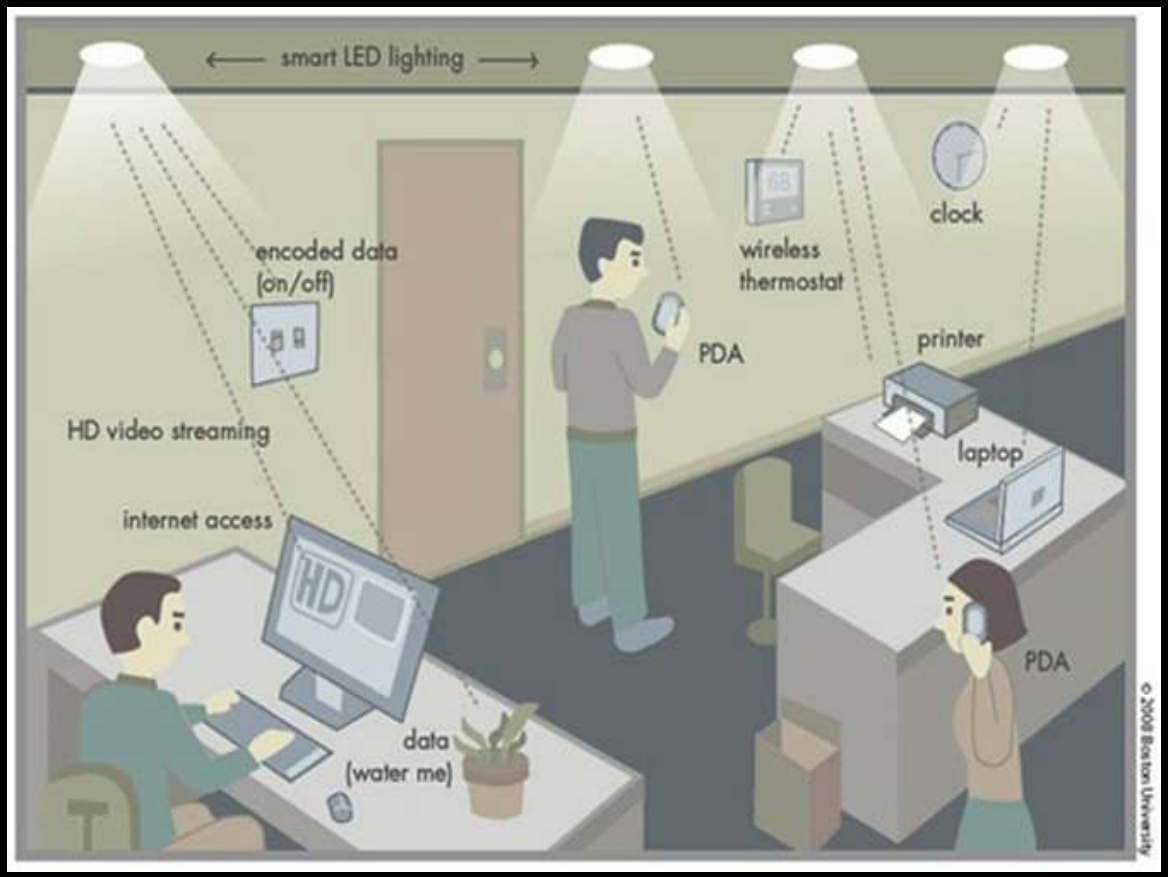
WHY ONLY VLC?



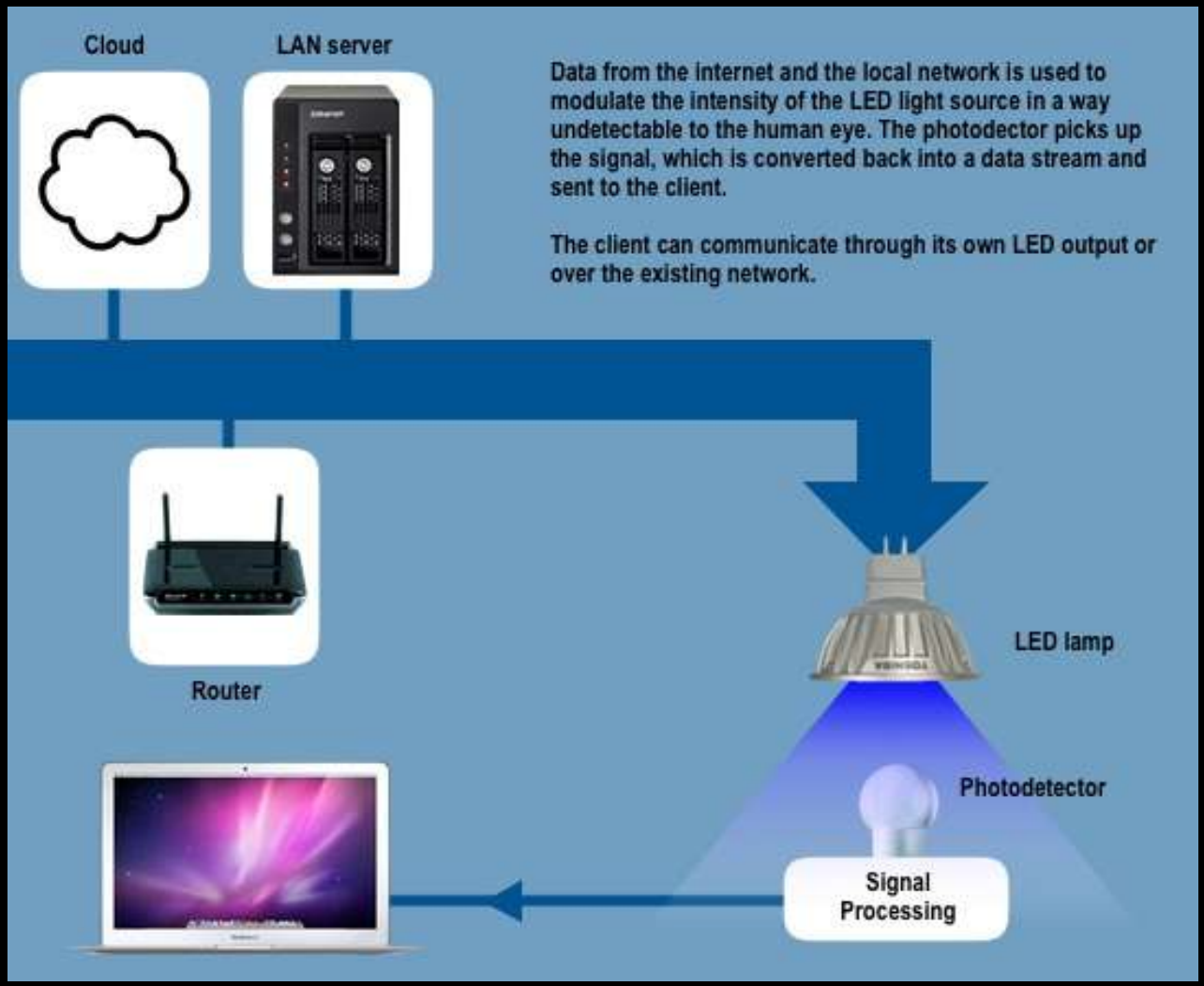
- Gama rays cant be used as they could be dangerous.
- X-rays have similar health issues.
- Ultraviolet light is good for place without people, but other wise dangerous for the human body.
- Infrared, due to eye safety regulation, can only be used with low power.

HOW LI-FI WORKS ?

- If the led is on, you transmit a digital 1, if its off you transmit a 0.



WORKING PROCESS



DIFFERENCE BETWEEN THE TECHNOLOGIES

TECHNOLOGY	SPEED	DATA DENSITY
	WIRED	
FIRE WIRE	800 Mbps	*****
USB3.0	5 Gbps	*****
THUNDERBOLT	2X 10 Gbps	*****
	WIRELESS (CURRENT)	
WI-FI-IEEE (802.11N)	150 Mbps	*
BLUETOOTH	3 Mbps	*
IrDA	4 Mbps	***
	WIRELESS (FUTURE)	
Wi-Gig	2 Gbps	**
Giga-IR	1 Gbps	***
Li-Fi	>10 Gbps	****

ADVANTAGES

- Capacity
- Availability
- Efficiency
- High Security

- Easy To Use
- Fast Data Transfer
- Harmlessness
- Low-cost

CONCUSSION

The possibilities are numerous and can be explored further. If this technology can be put into practical use, every bulb can be used something like a Wi-Fi hotspot to transmit wireless data and we will proceed toward the cleaner, greener, safer and brighter future.

THANK YOU