

## **6G AND ITS NEXT BIG LEAP IN GLOBAL NETWORKING...**

just when we have started enjoying 5G speed ,the world technology is welcoming its successor -6G the network connecting humans, machines and even intelligence.Mainly it aims to merge AI, quantum computing and ultrasmart networks.

### **WHAT IS 6G ?**

It stands for SIXTH GENERATION of wireless communication technology. It uses the frequency range of terahertz(THz) which provides 1000 thousand times faster networking than 5G.

### **What IT CAN DO?**

- **smart health care** – 6 G's reliability make our real time remote surgeries ,AI diagnostics and biosensors to monitor patients regularly.
- **Holographic communication**-- lets say good bye to video calls since it will enable full body holographic meetings which provide projection of realistic 3-D images which overcomes the drawback of 5 G.
- **Autonomous Mobility**—6 G supports in developing self driving cars,drones and delivery robots.
- **1 trillion connected devices**— 6G makes a webspace from cars and drones to streetlights and wearables.

### **INDIA'S TECHNOLOGICAL JOURNEY TILL 6G**

When other countries are excelling in their technological development, India decided to engage in that competition ,likewise made itself, self-reliant in digital infrastructure which is both a strategic and social need.Initiating with the 4 G towers ,our India brought signal systems to our hometowns.Then came our new vision document named “Bharat 6G vision”(released on march 2023)sets out a roadmap for designing and developing 6G by around 2030.

At the recent international 6G symposium 2025 (held in India),India signed a “Delhi Declaration” which highlights openness,sustainability fot 6 G networks.

### **GOVERNMENT'S CONTRIBUTION**

Our government encouraged from a very small level startups and collaborated with leading groups from US,Europe,Japan,Korea and Brazil.It approved over 310 Crore rupees through the Telecom Technology Development Fund.Modi emphasised India's shift from being a user of Telecom Technologies to being a producer and exporter- under the mantra of “Atmanirbhar Bharath”.

### **ROLE IN GLOBAL NETWORKING**

Global data demand is touching stars,but 6G aims to cut energy consumption per bit by nearly 50% compared to 5G.It's massive Internet Of Everything(IoE) will make the world's infrastructure smarter like smart cities monitoring traffic and pollution.

### **THE ARRIVAL**

6G Internet is anticipated to go live around 2030-2035.Therefore 2030 and beyond will offer a unique set of challenges and opportunities of global relevance.

### **CONCLUSION**

6 G isn't just a faster version of 5G. Its a vast foundation for global networking far beyond our earth reaching space.