

Examples:**1. Blue tooth wireless PAN:**

- ✓ These are referred as Pico nets. Pico nets are Ad hoc networks.
- ✓ Pico nets work over a range of 200metres and transmit data of about 2100 Kbit/ sec.
- ✓ The Bluetooth technology is based on IEEE 802.15 standard.
- ✓ The wearable and portable computer devices communicate with each other.
- ✓ In this process of hand shake, an electric field is generated around people, and they emit Pico amps.
- ✓ These emissions complete the circuit and hence an exchange of information takes place.

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❖ PERSONAL AREA NETWORK – PAN:**Examples:****2. ZigBee:**

- ✓ It is a short-range, low-power computer networking protocol that complies with the IEEE 802.15.4 standard.
- ✓ In the U.S., ZigBee devices operate in the 902-928 MHz and 2.4 GHz unlicensed bands.
- ✓ ZigBee employs DS-SS modulation with a gross data rate of 40 kb/s in the 900 MHz band and 250 kb/s in the 2.4 GHz band.
- ✓ There are three types of ZigBee devices:
 - ☞ *ZigBee Coordinator (ZC):* Forming the root of the network tree and bridging to other networks ,
 - ☞ *ZigBee Router (ZR):* It can run an application function as well as act as an intermediate router by passing data from other devices.
 - ☞ *ZigBee End Device (ZED):* It contains just enough functionality to talk to its parent node. It can sleep most of the time, extending its battery life.

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❖ PERSONAL AREA NETWORK – PAN:**Examples:****3. Ultra-Wide Band(UWB):**

- ✓ It is a radio technology useful for short-range, high-bandwidth communications that does not create harmful interference to users sharing the same band.
- ✓ A pulse-based UWB method is the basis of the IEEE 802.15.4a draft standard

4. Wi-Fi or WiMAX

- ✓ Wi-Fi or WiFi is a technology for wireless local area networking with devices based on the IEEE 802.11 standards.