

## **Assingment no -4**

### **Information about Bluethooth and Wifi... ?**



**What is bluethooth?** Bluetooth technology is a short-range wireless communications technology to replace the cables connecting electronic devices, allowing a person to have a phone conversation via a headset, use a wireless mouse and synchronize information from a mobile phone to a PC.



**What is wifi?** Wireless Fidelity .Wi-Fi is a wireless networking technology that allows devices such as computers (laptops and desktops), mobile devices (smart phones and wearables), and other equipment (printers and video cameras) to interface with the Internet.

# **Difference Between wifi and Bluetooth....**



- **1st difference:**Bluetooth allows for short-range data transfer between devices. As an example, it is commonly employed in headsets for mobile phones, enabling hands-free phone use. Wi-Fi, on the other hand, allows devices to connect to the Internet.
- **2nd difference:**WiFi is short for Wireless And provides Internet connectivity to any device having the facility. It requires an internet service provider a network. Bluetooth is a wireless connecting platform giving the ability to transfer media files like photos, music, documents,etc. It does not require an Internet connection. This facility is commonly available in Mobile and computers.
- **3rd difference:**Bluetooth consumes low power and wifi consumes high power.

## **How does the WIFI work.**



## **How does the bluetooth work.**

### How Does It Work?

- Bluetooth is a standard for tiny, radio frequency chips that can be plugged into our devices
- These chips were designed to take all of the information that your wires normally send, and transmit it at a special frequency to a receiver Bluetooth chip.
- The information is then transmitted to your device

The diagram shows a 'Bluetooth' chip at the top, with a line connecting it to a central 'Notebook'. Surrounding the notebook are various devices connected via Bluetooth: 'Headset', 'DVD-player', 'Projector', 'Printer', 'Personal Digital Assistant', 'Mobile Disk Drive', 'Refrigerator', 'Digital Camera', 'Infowear', 'Mobile telephone', and 'Scanner'. The devices are arranged in a circular pattern around the central notebook, illustrating the range and variety of devices that can connect via Bluetooth.

## **Advantages of wifi .**

### **Convenience**

The wireless nature of such networks allow users to access network resources from nearly any convenient location within their primary networking environment(a home or office). With the increasing saturation of laptop-style computers, this is particularly relevant.

## **Cost**

Wireless networking hardware is at worst a modest increase from wired counterparts. This potentially increased cost is almost always more than outweighed by the savings in cost and labor associated to running physical cables.

## **Disadvantages of Wifi**

### **Security**

To combat this consideration, wireless networks may choose to utilize some of the various encryption technologies available. Some of the more commonly utilized encryption methods, however, are known to have weaknesses that a dedicated adversary can compromise.

### **Range**

The typical range of a common 802.11g network with standard equipment is on the order of tens of meters. While sufficient for a typical home, it will be insufficient in a larger structure. To obtain additional range, repeaters or additional access points will have to be purchased. Costs for these items can add up quickly.

## **Advantages of Bluetooth.**

### **Wireless**

One of the major advantages of bluetooth is that it does not require any form of wires for it to transmit data. Through this you can conveniently send and receive files without needing to worry about the cables. Many other applications too take use of wireless bluetooth technology. Such applications include personal security system, locating devices and health monitoring.

### **Availability**

Today bluetooth is an exclusive feature available in most devices such as smart phones and tablets. These numerous kinds of devices with bluetooth indicate its universal availability.

## **Disadvantages of Bluetooth.**

### **Speed**

All the wireless technologies have relatively slow transmission of data. This is especially true in the case of bluetooth. In general Bluetooth 3.0 and Bluetooth 4.0 has the transmission rate of 25Mbps. Since bluetooth is energy efficient the mechanism of transferring data is slower here.

### **Range**

Maximum range offered by a bluetooth connection is of 100m. Generally bluetooth has a small range of communication (typically lower than a Wifi connection). Depending on the version and the nature of the devices, the range of a bluetooth connection varies. Devices that needs to be connected has to be in this range.

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