**Chapter 15 Wireless LANS**

**Wireless LAN**

**Wireless communication is one of the fastest-growing technologies.**

**The demand for connecting devices without the use of cables is increasing everywhere.**

**Access control**

**The CSMA/CD algorithm does not work in wireless LANs for three reasons:**

**1-Wireless hosts do not have enough power to send and receive at the same time.**

**2-The hidden station problem prevents collision detection**

**3-The distance between stations can be great.**

**IEEE 802.11**

**IEEE has defined the specifications for a wireless LAN, called IEEE 802.11, which covers the physical and data-link layers. It is sometimes called wireless Ethernet also (WiFi)**

**Architecture**

**The standard defines two kinds of services:**

**Basic Service Set (BSS)**

 **Extended Service Set (ESS).**

 **MAC sublayers**

**IEEE 802.11 defines two MAC sublayers:**

 **Distributed coordination function (DCF)**

**Point coordination function (PCF)**

**Addressing Mechanism**

**The IEEE 802.11 addressing mechanism specifies four cases, defined by the value of the two flags in the FC field, To DS and From DS. Each flag can be either 0 or 1, resulting in four different situations.**

**The interpretation of the four addresses (address 1 to address 4) in the MAC frame depends on the value of these flags.**

**Bluetooth**

**Bluetooth is a wireless LAN technology designed to connect devices of different functions when they are at a short distance from each other**

**The devices called gadgets and network called a piconet**

**Architectur*e***

**Bluetooth has tow types of networks: piconet and scatternet**

**Bluetooth uses several layers that do not exactly match those of the Internet model famous*.*.**

**ESSAM**

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