802.11 :. Protocol

802.11 is a set of media acess controlled and physical layer specifications for implementing local area network computer communication in the 900 GHz and 60 GHz frequency bounds

The 802.11 family consists of a series of half duplex over the dir modulation techniques that use the same basic protocol. 802.11-1997 was the first wireless networking standard in the family, but 802.11b was widely used one followed by 802.11a, 802.11g. 802.11n and 802.11ac

Data frames pass on 802.11 medium and being converted to 802.3 or vice versa. Due to the difference in their frames lengths of these two media, the application packet size determines the spend of the data transfer.

Other factors that contributes to overall application data rate are the speed with which the application transmits the packets and energy with which the wireless signal is received. The latter is determined by distance & by configured output.

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802.15 Protocol:-

802.15 is a working group of IEEE standards commitee which specifes wireless spread personal area network standards. There are 10 major areas of development, not all of which are active. Types:-

i) 802.15.1 → WPAN / Bluetooth
ii) 802.15.3 → Highrate WPAN
iii) 802.15.2 → Coexistence of WPAN
iv) 802.15.4 → Lowrate WPAN
v) 802.15.5 → Mesh Networking
vi) 802.15.6 → Body Area Networks
vii) 802.15.7 → Visible light communication
viii) 802.15.8 → Peer Aware communication
ix) P 802.15.9 → Key Management Protocol
x) P 802.15.10 → Layer 2 routing

The IEEE P802.15 wireless Next generation a tending committee is charted to facilitate and simulate presentation and discussions a new

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wireless related technologies

802.15.4 Protocol :-

It is a technical standard which define the operation of low rate wireless personal area networks. It specifies the physical layer and media access control for LR-WPAN are

Protocol Architecture :-

i) Physical layer :- The physical layer ultimately provides the data transmission service, as well as the interface to the physical layer managment entity, which offers access to every layer management function.

ii) The MAC Layer :- The media access control enables the transmission of MAC frames through the use of physical channel. Besides the data service, it offer management interface and itself manages access to the physical channel and network becoming.

Data transfer to the coordinator require a become synchonization Phase, if applicable, followed by CSMA/CA transmission. Data transfer usually follow

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device requests. If becomes are in use, there are used to signal requests

802.16 Protocal :-

IEEE 802.16 is a services of wireless broadband standards the 802.16 standard essentially standard. it has two ascepects of air interface. physical layer and media acess control layer

802.16 uses scalable of DHA to carry data, supporting channel bandwidth of b/w 1.25 MHz and 20 MHz. with up to 2048 sub carrier, It supports adaptive modulation and coding. that in conditions of good signal, a highly efficient th Q&M coding schme is used whereas when signal is poorer, a more robust, BPSK coding mechanism is used.

The 802.16 MAC describes a number of convergence sublayers which describes how wireline technologies such as ethernet, asynchronous transfer mode and internet, protocol are encapsulated on air interface and how data is classified etc. It also delivered by using secure key exchange

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during authentication and encryption using advanced encryption standard during data transfer 802.16 is a connection oriented technology and also it has been widely used protocals to carry the data supporting channel bandwidths.

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