Answers for Session 2d - PHY Headers, Frame Formats and Key Functions

1.Is the PLCP header always transmitted at the lowest PHY rate?

The PCLP header is divided into two parts
Preamble
PLCP

Preamble helps to detect, estimate the channel, synchronize the transmitter and receiver
PCL Pheader helps us to know the modulation used to send the payload
Legacy fields are also needed

Yes, the PLCP header is always transmitted at the lowest PHY rate. This is because the PLCP header contains important information that all stations need to receive in order to demodulate the rest of the frame, such as the preamble, the length of the frame, and the modulation scheme that is being used. If the PLCP header was transmitted at a higher PHY rate, stations that are further away from the transmitter or that are experiencing interference may not be able to receive it correctly. The lowest PHY rate for 802.11b is 1 Mbps, and the lowest PHY rate for 802.11a/g/n is 6 Mbps. Therefore, the PLCP header will always be transmitted at either 1 Mbps or 6 Mbps, depending on the PHY layer that is being used.

2.Is Acrylic Wi-Fi Analyzer a paid tool?

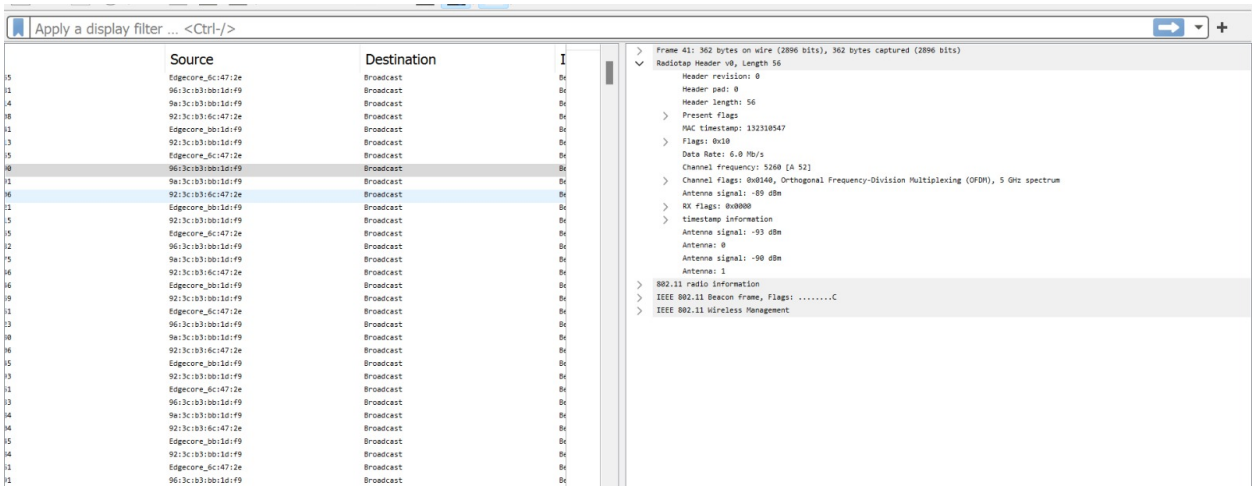
Acrylic Wi-Fi Analyzer has both free and paid versions. The free version includes all of the basic features that you need to scan and analyze wireless networks, such as:
SSID
Channel Signal strength
MAC address
Security encryption Vendor

The paid versions of Acrylic Wi-Fi Analyzer offer additional features, such as:
Real-time network monitoring Packet capture and analysis Spectrum analysis
Heatmap generation
Advanced troubleshooting tools

The paid versions of Acrylic Wi-Fi Analyzer are designed for network administrators and other professionals who need more detailed information about their wireless networks.

3.In wireshark , does the radio header belong to the transmitter or the capture device?

The radio tap header information belongs to the source/ transmitter who transmitted that packet


Apply a display filter ... <Ctrl-/>
Source
Destination
Edgecore_6c:47:2e
Broadcast
96:3c:b3:bb:1d:f9
9a:3c:b3:bb:1d:f9
92:3c:b3:6c:47:2e
Frame 41: 362 bytes on wire (2896 bits), 362 bytes captured (2896 bits)
Radiotap Header v0, Length 56
Header revision: 0
Header pad: 0
Header length: 56
Present flags
MAC timestamp: 132310547
Flags: 0x10
Data Rate: 6.0 Mb/s
Channel frequency: 5260 [A 52]
Channel flags: 0x0140, Orthogonal Frequency-Division Multiplexing (OFDM), 5 GHz spectrum
Antenna signal: -89 dBm
RX flags: 0x0000
timestamp information
Antenna signal: -93 dBm
Antenna: 0
Antenna signal: -90 dBm
Antenna: 1
802.11 radio information
IEEE 802.11 Beacon frame, Flags: C
IEEE 802.11 Wireless Management