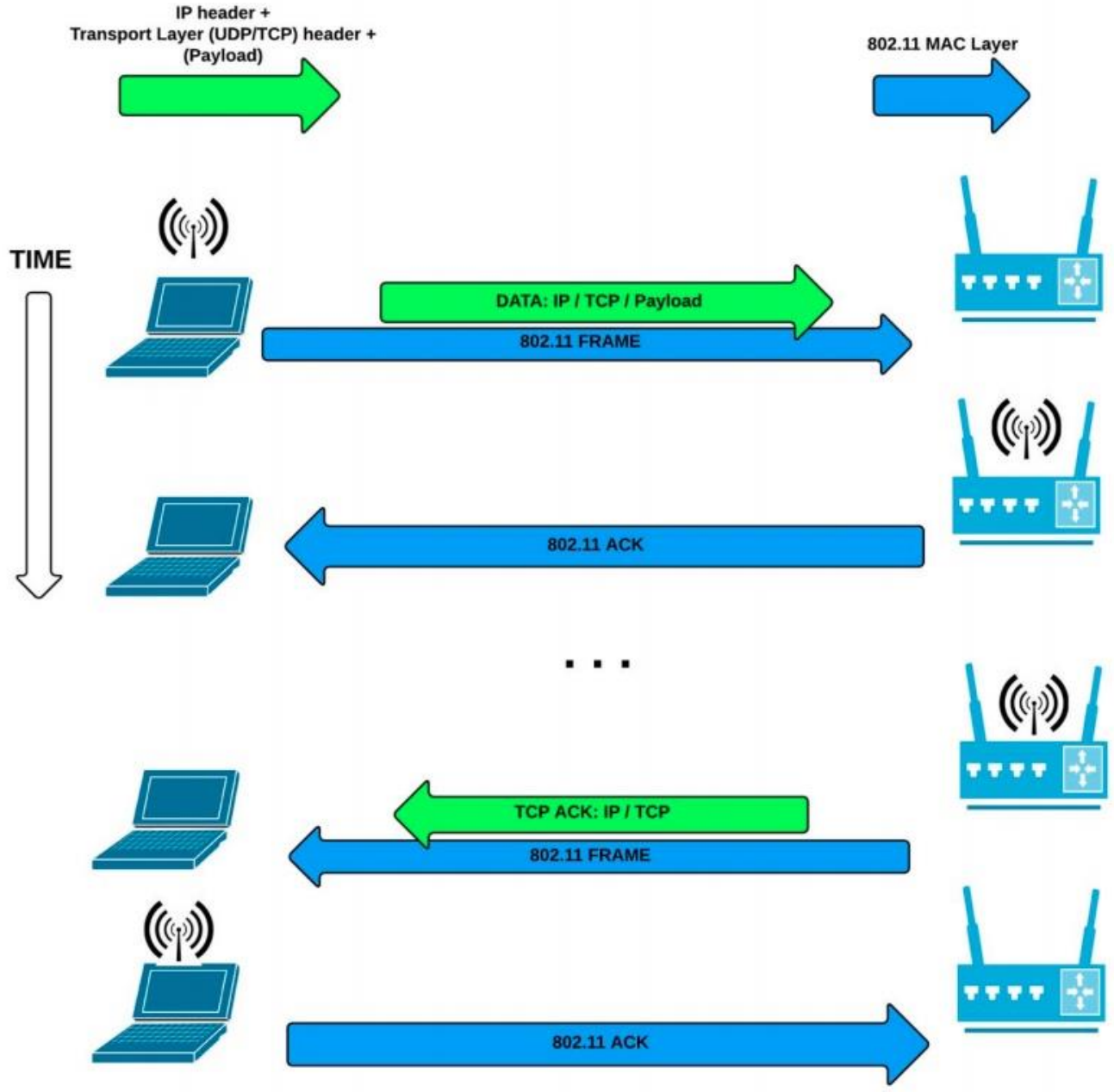
TCP ACK – Packet and Header

- TCP ACK – 40 bytes of TCP/IP header info. No ”real” data contained within the ACK. The TCP header will contain all that is required to acknowledge the previous TCP packet/segment.
- As before in the case of 802.11a/g, we add 42 bytes for the 802.11 MAC header (34 bytes and SNAP header encapsulation 8 bytes) to the TCP ACK packet, as this appears as ”just data” to 802.11
- In the case of 802.11n/ac/ax, we add 48 bytes for the 802.11 MAC header (40 bytes and SNAP header encapsulation 8 bytes) to the TCP ACK packet.

802.11 Frame Exchange – TCP



Example calculation (Data bits per OFDM symbol)

- User input: UDP, 43.3Mbps, 802.11ac_w2
- For 802.11ac_w2 standard → Nss = 8 spatial streams, 160MHz channels
- For a data rate of 43.3 Mbps → NBits = 4, CRate = ¾, NChan = 468 (160MHz)
- Number of bits per symbol = (NBits * CRate * NChan) * Nss = (4 * ¾ * 468) * 8 = 11232 bits/symbol