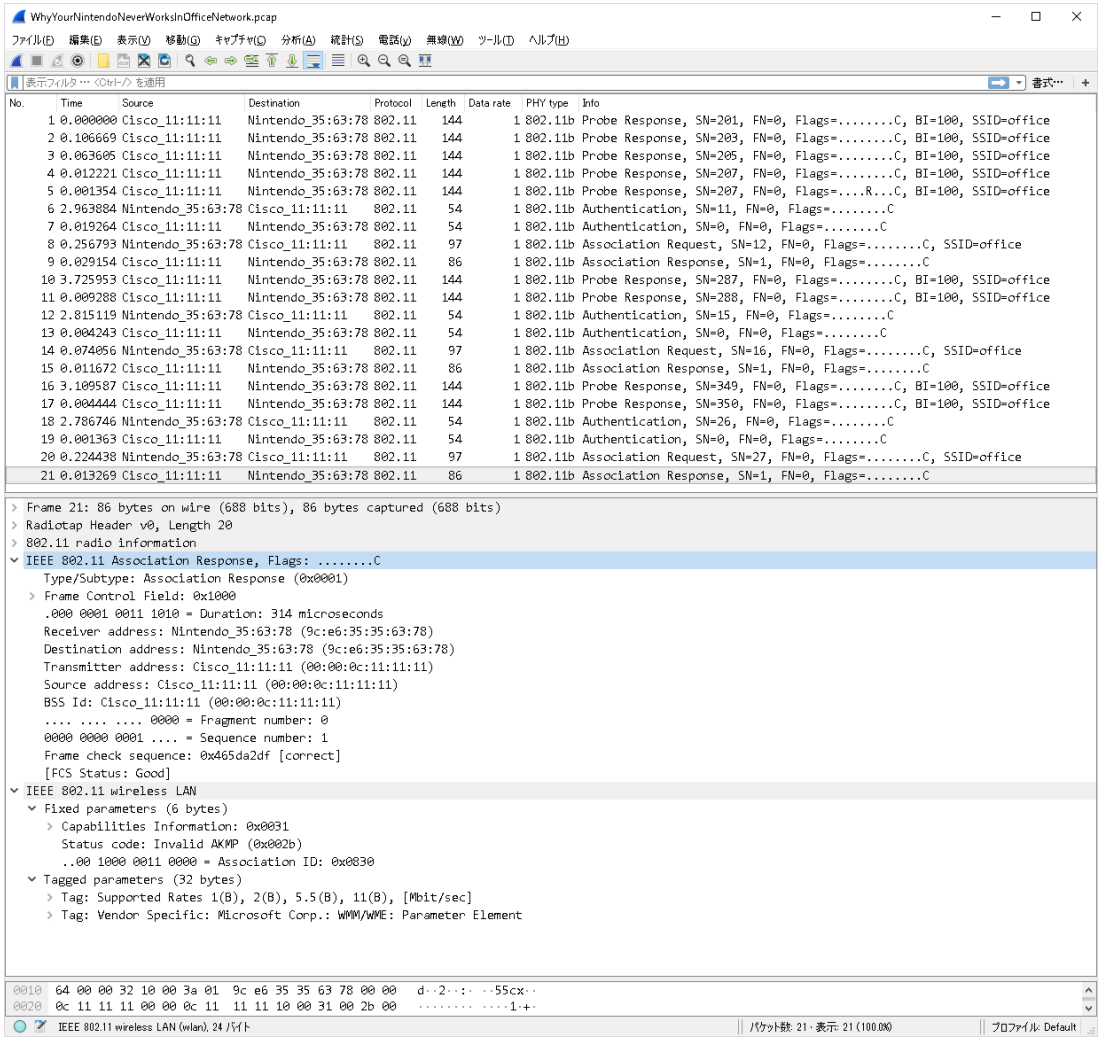
Packet Analyst Quiz Question by Megumi Takeshita
Why you cannot connect to your office through your Nintendo

You want to play video game with your colleagues. So you connect Nintendo to office WiFi, but you never do it. So you check again RF info, channels and setting, then capture packets and filter “wlan.addr_resolved contains Nintendo” in the trace file below, why you cannot connect enterprise wireless network? Choose the adequate reason in below,

1: Enterprise WiFi use the different MCS(Modulation Code Set)
2: Nintendo’s MAC address is prohibited by office network administrator.
3: You use wrong Authentication mode.
4: You use wrong WPA1 Passphrase in 4 way handshake
5: You use wrong WPA2 Passphrase in 4 way handshake



Answer 3: You use wrong Authentication mode.

Explanation
The good way to trobuleshoot wireless network problems, check which point packets are stacked and look deeply in the trace file.

1: Enterprise WiFi use the defferent MCS(Modulation Code Set)
You never see Association frames if STA and AP use the different MCS,

2: Nintendo's MAC address is prohibited by office network administrator.
MAC filtering settings are not used in this trace because there are no such status code.

3: You use wrong Authentication mode.
Correct, please check each Association Response int the trace file and look deeply in the last #21 packet, you may find the Status code field in Fixed parameters of IEEE 802.11 wireless LAN header. It shows "Imvalid AKMP" which means Authentication and Key Management Protocol (AKMP) is invalid. So the mismatch of authentication methods such as Pre-Shared-Key and IEEE802.1x is the problem.

4,5: You use wrong WPA Passphrase in 4 way handshake
If WPA passphrase is wrong, you may see many EAPOL 4way handshake packets (message 1 and 2) in the trace file.