Report for Lab 15-1: Wireless

Name: 김다빈	Student ID: 2015004375	Date: 17.05.21

	Part I(아래 사진 참조)
1	Management frame captured: Beacon frame (*1)
2	Control frame captured: Acknowledgement (*2)
3	Data frame captured: Data (*3)
4	Frame numbers of association frames: 79(Request) + 54(Response) = 133 bytes
5	Frame numbers of beacon frames: 110 bytes
6	Frame numbers of probe frames:104(Response) + 54(Request) = 158 bytes
7	Frame numbers of RTS frames: (wlan.fc.type==1)&&(wlan.fc.subtype==11) 필터를 사용하였으나, 데이터가 나오지 않았다.
8	Frame numbers of CTS frames: (wlan.fc.type==1)&&(wlan.fc.subtype==12) 필터를 사용하였으나, 데이터가 나오지 않았다.
9	Frame numbers of ACK frames: 10 bytes

	Part II

1	a. Hexadecimal value of FC : 80 00
	
	    Significance of difference bits:
	
	     Difference bits mean the details about Version, Type, Subtype and Flags.

	b. Duration of the frame: 0 microseconds

	c. Number of addresses in the frame: 4
	
	    Which entity does each address define?
	
	     Receiver address, Destination address, Transmitter address, Source address

	d. Hexadecimal value of FCS field: 00 50 f2 02
2	Are answers to question 1 verified by the information in the detail pane lane? Yes

	Part III

1	a. Hexadecimal value of FC: d4 00
	
	    Significance of difference bits:
	
	     Difference bits mean the details about Version, Type, Subtype and Flags.

	b. Duration of the frame: 0 microseconds

	c. Number of addresses in the frame: 1
	Which entity does each address define? Receiver address
	d. Hexadecimal value of FCS field: No FCS field
5	Are answers to question 1 verified by the information in the detail pane lane? Yes.

	Part IV	
1	a. Hexadecimal value of FC: 50 00	
	Significance of difference bits:	
	Difference bits mean the details about Version, Type, Subtype and Flags.	
	b. Duration of the frame: 258 microseconds	
	c. Number of addresses in the frame: 4	
	Which entity does each address define?	
	Receiver address, Destination address, Transmitter address, Source address	
	d. Hexadecimal value of FCS field: 00 50 f2 02	
5	Are answers to question 1 verified by the information in the detail pane lane? Yes.	

Part 1. 1(*1)

```
▶ Frame 360: 110 bytes on wire (880 bits), 110 bytes captured (880 bits)
▼ IEEE 802.11 Beacon frame, Flags: ........
    Type/Subtype: Beacon frame (0x0008)
  ▼ Frame Control Field: 0x8000
      .... ..00 = Version: 0
      .... 00.. = Type: Management frame (0)
      1000 .... = Subtype: 8
    ▶ Flags: 0x00
    .000 0000 0000 0000 = Duration: 0 microseconds
    Receiver address: Broadcast (ff:ff:ff:ff:ff:ff)
    Destination address: Broadcast (ff:ff:ff:ff:ff:ff)
    Transmitter address: Siemens_41:bd:6e (00:01:e3:41:bd:6e)
    Source address: Siemens_41:bd:6e (00:01:e3:41:bd:6e)
    BSS Id: Siemens_41:bd:6e (00:01:e3:41:bd:6e)
    .... .... .... 0000 = Fragment number: 0
    0000 0110 0111 .... = Sequence number: 103
  ▶ IEEE 802.11 wireless LAN management frame
```

Part 1. 2(*2)

```
▶ Frame 229: 10 bytes on wire (80 bits), 10 bytes captured (80 bits)
▼ IEEE 802.11 Acknowledgement, Flags: ........
    Type/Subtype: Acknowledgement (0x001d)
  ▼ Frame Control Field: 0xd400
      .... ..00 = Version: 0
      .... 01.. = Type: Control frame (1)
      1101 .... = Subtype: 13
    ▶ Flags: 0x00
    .000 0000 0000 0000 = Duration: 0 microseconds
    Receiver address: IntelCor_34:18:52 (00:15:00:34:18:52)
```

Part 1. 3(*3)

```
▶ Frame 257: 80 bytes on wire (640 bits), 80 bytes captured (640 bits)
▼ IEEE 802.11 Data, Flags: .p....F.
     Type/Subtype: Data (0x0020)
   ▼ Frame Control Field: 0x0842
       .... ..00 = Version: 0
       .... 10.. = Type: Data frame (2)
       0000 .... = Subtype: 0
     ▶ Flags: 0x42
     .000 0000 0000 0000 = Duration: 0 microseconds
     Receiver address: Broadcast (ff:ff:ff:ff:ff:ff)
     Destination address: Broadcast (ff:ff:ff:ff:ff:ff)
     Transmitter address: Siemens_41:bd:6e (00:01:e3:41:bd:6e)
     Source address: Siemens_42:9e:2b (00:01:e3:42:9e:2b)
     BSS Id: Siemens_41:bd:6e (00:01:e3:41:bd:6e)
     STA address: Broadcast (ff:ff:ff:ff:ff:ff)
     .... .... .... 0000 = Fragment number: 0
     0000 0000 0000 .... = Sequence number: 0
   ▶ TKIP parameters
▶ Data (48 bytes)
```