Relatório TP4

Grupo 102

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4. Acesso Rádio

Tendo em conta que o nosso grupo é o 102,usaremos a trama de ordem 1102.

.1 A rede sem fios está a operar na frequência 2412MHz, que corresponde ao canal 1.

```
802.11 radio information
    PHY type: 802.11g (ERP) (6)
    Proprietary mode: None (0)
    Data rate: 24,0 Mb/s
    Channel: 1
    Frequency: 2412MHz
    Signal strength (dBm): -89 dBm
    Noise level (dBm): -93 dBm
    Signal/noise ratio (dB): 4 dB
    TSF timestamp: 885706
  > [Duration: 28µs]
> IEEE 802.11 Request-to-send, Flags: ........C
```

.2 A versão da norma IEEE 802.11 que está a ser usada é a 802.11g.

```
802.11 radio information
    PHY type: 802.11g (ERP) (6)
```

.3 O débito a que foi enviada a trama foi de 24Mb/s, o que não corresponde ao débito máximo da versão 802.11g de 54Mb/s.

.4 A força do sinal é de -89 dBm o que segundo a tabela do enunciado, mostra que as chances de haver uma conexão são muito baixas(o valor está mais próximo de -90dB do que -80dB).

```
Signal strength (dBm): -89 dBm
```

5. Scanning Passivo e Scanning Ativo

.5 A trama 1102 é do tipo 0 (que corresponde a uma Management frame) e subtipo 8.
Estes valores podem ser observados na secção “frame control” no cabeçalho.

```
> Frame 1102: 329 bytes on wire (2632 bits), 329 bytes captured (2632 bits) on interface en0, id 0
> Radiotap Header v0, Length 60
> 802.11 radio information
v IEEE 802.11 Beacon frame, Flags: ........C
    Type/Subtype: Beacon frame (0x0008)
  v 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: PTInovac_9e:9b:b0 (00:06:91:9e:9b:b0)
    Source address: PTInovac_9e:9b:b0 (00:06:91:9e:9b:b0)
    BSS Id: PTInovac_9e:9b:b0 (00:06:91:9e:9b:b0)
    .... .... .... 0000 = Fragment number: 0
    1010 0011 1010 .... = Sequence number: 2618
    Frame check sequence: 0x6cc37891 [unverified]
    [FCS Status: Unverified]
> IEEE 802.11 Wireless Management
```

.6 Receiver adress: ff:ff:ff:ff:ff:ff

Destination adress: ff:ff:ff:ff:ff:ff

Transmitter adress: 00:06:91:9e:9b:b0

Source address: 0:06:91:9e:9b:b0

Quanto a sua origem podemos concluir que é o ponto de acesso (AP),e quanto ao destino como o mesmo é um endereço Broadcast, a trama é enviada para todos os dispositivos no alcance do ponto de acesso.

```
Receiver address: Broadcast (ff:ff:ff:ff:ff:ff)
Destination address: Broadcast (ff:ff:ff:ff:ff:ff)
Transmitter address: PTInovac_9e:9b:b0 (00:06:91:9e:9b:b0)
Source address: PTInovac_9e:9b:b0 (00:06:91:9e:9b:b0)
```

.7 No início o método de deteção de erros não estava a ser utilizado como se pode ver pela imagem seguinte.

wlan.check_checksum	Default	Boolean	FALSE
wlan.check_fcs	Default	Boolean	FALSE

```
Frame check sequence: 0x6cc37891 [unverified]
[FCS Status: Unverified]
```

No entanto após mudarmos os campos que podem ser observados abaixo, forçamos o uso do método de deteção de erros CRC.

wlan.check_checksum	**Changed**	**Boolean**	**TRUE**
wlan.check_fcs	**Changed**	**Boolean**	**TRUE**

```
Frame check sequence: 0x6cc37891 [correct]
[FCS Status: Good]
```

A deteção de erros em redes sem fios é necessário para detetar qualquer tipo de problemas nas tramas tais como interferências no canal ou erros de transmissão.

.8 Esses débitos são os seguintes:

Débitos suportados:

- 1Mb/s
- 2Mb/s
- 5.5Mb/s
- 11Mb/s
- 18Mb/s
- 24Mb/s
- 36Mb/s
- 54Mb/s

Débitos suportados extendidos:

- 6Mb/s
- 9Mb/s
- 12Mb/s
- 48Mb/s

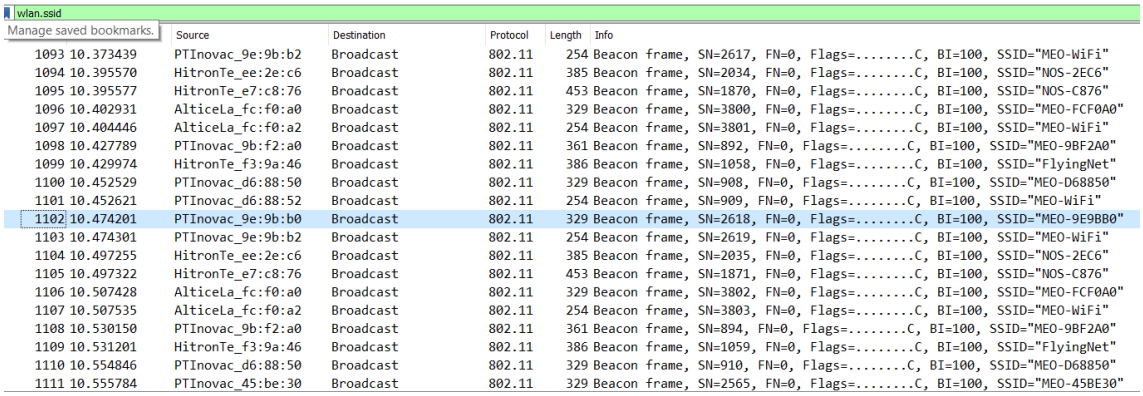
```
Tagged parameters (229 bytes)
  Tag: SSID parameter set: "MEO-9E9BB0"
  Tag: Supported Rates 1(B), 2(B), 5.5(B), 11(B), 18, 24, 36, 54, [Mbit/sec]
     Tag Number: Supported Rates (1)
     Tag length: 8
     Supported Rates: 1(B) (0x82)
     Supported Rates: 2(B) (0x84)
     Supported Rates: 5.5(B) (0x8b)
     Supported Rates: 11(B) (0x96)
     Supported Rates: 18 (0x24)
     Supported Rates: 24 (0x30)
     Supported Rates: 36 (0x48)
     Supported Rates: 54 (0x6c)
  Tag: DS Parameter set: Current Channel: 1
  Tag: Traffic Indication Map (TIM): DTIM 0 of 1 bitmap
  Tag: ERP Information
  Tag: Extended Supported Rates 6, 9, 12, 48, [Mbit/sec]
     Tag Number: Extended Supported Rates (50)
     Tag length: 4
     Extended Supported Rates: 6 (0x0c)
     Extended Supported Rates: 9 (0x12)
     Extended Supported Rates: 12 (0x18)
     Extended Supported Rates: 48 (0x60)
```

.9 O intervalo de tempo previsto é 0,102400 Segundos, no entanto este valor é apenas uma aproximação, pois o AP pode estar ocupado quando deveria enviar a trama beacon, o que resulta num atraso do envio da trama.

```
Fixed parameters (12 bytes)
   Timestamp: 1891932059325
   Beacon Interval: 0,102400 [Seconds]
```

.10 Os SSIDs dos APs que estão a operar na vizinhança da STA da captura são FlyingNet, NOS-xxxx e MEO-xxxx, como podemos ver na imagem abaixo.

Para obtermos estes SSIDs utilizamos o filtro “wlan.ssid”.



wlan.ssid

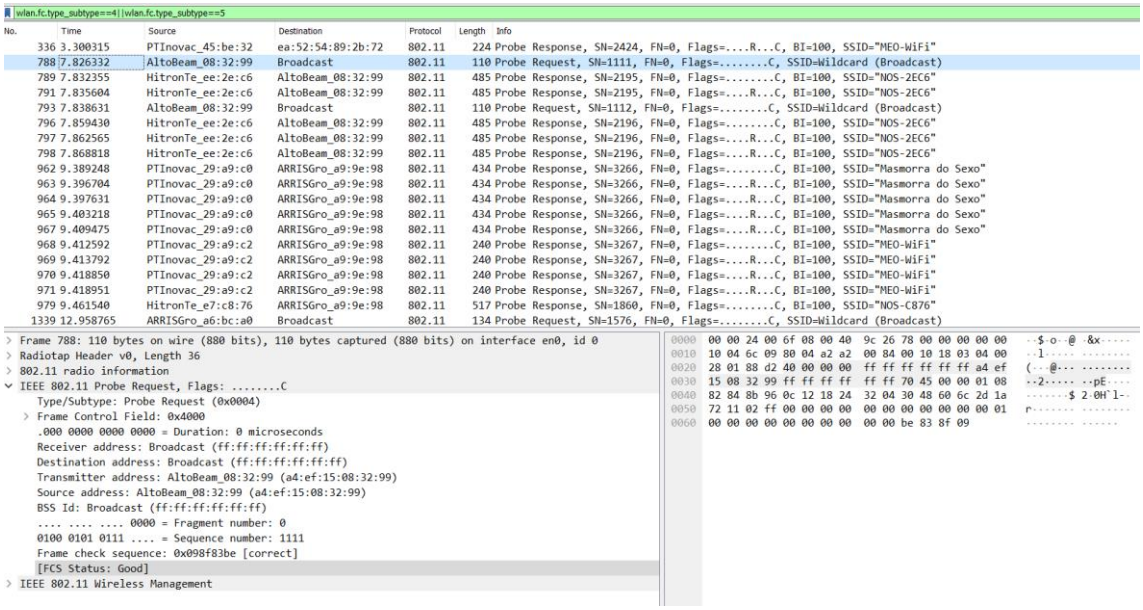
Manage saved bookmarks.

	Source	Destination	Protocol	Length	Info
1093 10.373439	PTInovac_9e:9b:b2	Broadcast	802.11	254	Beacon frame, SN=2617, FN=0, Flags=........C, BI=100, SSID="MEO-WiFi"
1094 10.395570	HitronTe_ee:2e:c6	Broadcast	802.11	385	Beacon frame, SN=2034, FN=0, Flags=........C, BI=100, SSID="NOS-2EC6"
1095 10.395577	HitronTe_e7:c8:76	Broadcast	802.11	453	Beacon frame, SN=1870, FN=0, Flags=........C, BI=100, SSID="NOS-C876"
1096 10.402931	AlticeLa_fc:f0:a0	Broadcast	802.11	329	Beacon frame, SN=3800, FN=0, Flags=........C, BI=100, SSID="MEO-FCF0A0"
1097 10.404446	AlticeLa_fc:f0:a2	Broadcast	802.11	254	Beacon frame, SN=3801, FN=0, Flags=........C, BI=100, SSID="MEO-WiFi"
1098 10.427789	PTInovac_9b:f2:a0	Broadcast	802.11	361	Beacon frame, SN=892, FN=0, Flags=........C, BI=100, SSID="MEO-9BF2A0"
1099 10.429974	HitronTe_f3:9a:46	Broadcast	802.11	386	Beacon frame, SN=1058, FN=0, Flags=........C, BI=100, SSID="FlyingNet"
1100 10.452529	PTInovac_d6:88:50	Broadcast	802.11	329	Beacon frame, SN=908, FN=0, Flags=........C, BI=100, SSID="MEO-D68850"
1101 10.452621	PTInovac_d6:88:52	Broadcast	802.11	254	Beacon frame, SN=909, FN=0, Flags=........C, BI=100, SSID="MEO-WiFi"
1102 10.474201	PTInovac_9e:9b:b0	Broadcast	802.11	329	Beacon frame, SN=2618, FN=0, Flags=........C, BI=100, SSID="MEO-9E9BB0"
1103 10.474301	PTInovac_9e:9b:b2	Broadcast	802.11	254	Beacon frame, SN=2619, FN=0, Flags=........C, BI=100, SSID="MEO-WiFi"
1104 10.497255	HitronTe_ee:2e:c6	Broadcast	802.11	385	Beacon frame, SN=2035, FN=0, Flags=........C, BI=100, SSID="NOS-2EC6"
1105 10.497322	HitronTe_e7:c8:76	Broadcast	802.11	453	Beacon frame, SN=1871, FN=0, Flags=........C, BI=100, SSID="NOS-C876"
1106 10.507428	AlticeLa_fc:f0:a0	Broadcast	802.11	329	Beacon frame, SN=3802, FN=0, Flags=........C, BI=100, SSID="MEO-FCF0A0"
1107 10.507535	AlticeLa_fc:f0:a2	Broadcast	802.11	254	Beacon frame, SN=3803, FN=0, Flags=........C, BI=100, SSID="MEO-WiFi"
1108 10.530150	PTInovac_9b:f2:a0	Broadcast	802.11	361	Beacon frame, SN=894, FN=0, Flags=........C, BI=100, SSID="MEO-9BF2A0"
1109 10.531201	HitronTe_f3:9a:46	Broadcast	802.11	386	Beacon frame, SN=1059, FN=0, Flags=........C, BI=100, SSID="FlyingNet"
1110 10.554846	PTInovac_d6:88:50	Broadcast	802.11	329	Beacon frame, SN=910, FN=0, Flags=........C, BI=100, SSID="MEO-D68850"
1111 10.555784	PTInovac_45:be:30	Broadcast	802.11	329	Beacon frame, SN=2565, FN=0, Flags=........C, BI=100, SSID="MEO-45BE30"

.11 O filtro estabelecido de maneira a visualizar as tramas probing request e probing response simultaneamente foi “wlan.fc.type_subtype == 4 || wlan.fc.type_subtype == 5”

.12

Probing Request:



wlan.fc.type_subtype==4||wlan.fc.type_subtype==5

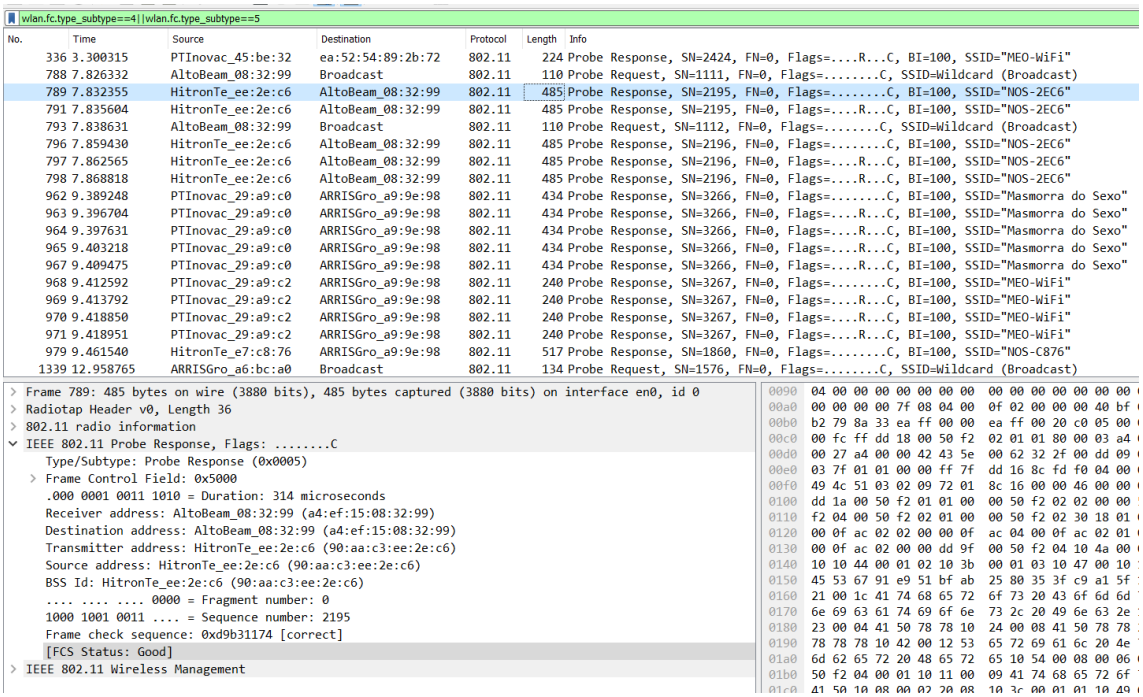
No.	Time	Source	Destination	Protocol	Length	Info
336	3.300315	PTInovac_45:be:32	ea:52:54:89:2b:72	802.11	224	Probe Response, SN=2424, FN=0, Flags=....R...C, BI=100, SSID="MEO-WiFi"
788	7.826332	AltoBeam_08:32:99	Broadcast	802.11	110	Probe Request, SN=1111, FN=0, Flags=........C, SSID=Wildcard (Broadcast)
789	7.832355	HitronTe_ee:2e:c6	AltoBeam_08:32:99	802.11	485	Probe Response, SN=2195, FN=0, Flags=........C, BI=100, SSID="NOS-2EC6"
791	7.835604	HitronTe_ee:2e:c6	AltoBeam_08:32:99	802.11	485	Probe Response, SN=2195, FN=0, Flags=....R...C, BI=100, SSID="NOS-2EC6"
793	7.838631	AltoBeam_08:32:99	Broadcast	802.11	110	Probe Request, SN=1112, FN=0, Flags=........C, SSID=Wildcard (Broadcast)
796	7.859430	HitronTe_ee:2e:c6	AltoBeam_08:32:99	802.11	485	Probe Response, SN=2196, FN=0, Flags=........C, BI=100, SSID="NOS-2EC6"
797	7.862565	HitronTe_ee:2e:c6	AltoBeam_08:32:99	802.11	485	Probe Response, SN=2196, FN=0, Flags=....R...C, BI=100, SSID="NOS-2EC6"
798	7.868818	HitronTe_ee:2e:c6	AltoBeam_08:32:99	802.11	485	Probe Response, SN=2196, FN=0, Flags=....R...C, BI=100, SSID="NOS-2EC6"
962	9.389248	PTInovac_29:a9:c0	ARRISGro_a9:9e:98	802.11	434	Probe Response, SN=3266, FN=0, Flags=........C, BI=100, SSID="Masmorra do Sexo"
963	9.396704	PTInovac_29:a9:c0	ARRISGro_a9:9e:98	802.11	434	Probe Response, SN=3266, FN=0, Flags=....R...C, BI=100, SSID="Masmorra do Sexo"
964	9.397631	PTInovac_29:a9:c0	ARRISGro_a9:9e:98	802.11	434	Probe Response, SN=3266, FN=0, Flags=....R...C, BI=100, SSID="Masmorra do Sexo"
965	9.403218	PTInovac_29:a9:c0	ARRISGro_a9:9e:98	802.11	434	Probe Response, SN=3266, FN=0, Flags=....R...C, BI=100, SSID="Masmorra do Sexo"
967	9.409475	PTInovac_29:a9:c0	ARRISGro_a9:9e:98	802.11	434	Probe Response, SN=3266, FN=0, Flags=....R...C, BI=100, SSID="Masmorra do Sexo"
968	9.412592	PTInovac_29:a9:c2	ARRISGro_a9:9e:98	802.11	240	Probe Response, SN=3267, FN=0, Flags=........C, BI=100, SSID="MEO-WiFi"
969	9.413792	PTInovac_29:a9:c2	ARRISGro_a9:9e:98	802.11	240	Probe Response, SN=3267, FN=0, Flags=....R...C, BI=100, SSID="MEO-WiFi"
970	9.418850	PTInovac_29:a9:c2	ARRISGro_a9:9e:98	802.11	240	Probe Response, SN=3267, FN=0, Flags=....R...C, BI=100, SSID="MEO-WiFi"
971	9.418951	PTInovac_29:a9:c2	ARRISGro_a9:9e:98	802.11	240	Probe Response, SN=3267, FN=0, Flags=....R...C, BI=100, SSID="MEO-WiFi"
979	9.461540	HitronTe_e7:c8:76	ARRISGro_a9:9e:98	802.11	517	Probe Response, SN=1860, FN=0, Flags=........C, BI=100, SSID="NOS-C876"
1339	12.958765	ARRISGro_a6:bc:a0	Broadcast	802.11	134	Probe Request, SN=1576, FN=0, Flags=........C, SSID=Wildcard (Broadcast)

```
> Frame 788: 110 bytes on wire (880 bits), 110 bytes captured (880 bits) on interface en0, id 0
> Radiotap Header v0, Length 36
> 802.11 radio information
v IEEE 802.11 Probe Request, Flags: ........C
    Type/Subtype: Probe Request (0x0004)
  > Frame Control Field: 0x4000
    .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: AltoBeam_08:32:99 (a4:ef:15:08:32:99)
    Source address: AltoBeam_08:32:99 (a4:ef:15:08:32:99)
    BSS Id: Broadcast (ff:ff:ff:ff:ff:ff)
    .... .... .... 0000 = Fragment number: 0
    0100 0101 0111 .... = Sequence number: 1111
    Frame check sequence: 0x098f83be [correct]
    [FCS Status: Good]
> IEEE 802.11 Wireless Management
```

```
0000  00 00 24 00 6f 08 00 40  9c 26 78 00 00 00 00 00   ··$·o··@ ·&x·····
0010  10 04 6c 09 80 04 a2 a2  00 84 00 10 18 03 04 00   ··l····· ········
0020  28 01 88 d2 40 00 00 00  ff ff ff ff ff ff a4 ef   (···@··· ········
0030  15 08 32 99 ff ff ff ff  ff ff 70 45 00 00 01 08   ··2····· ··pE····
0040  82 84 8b 96 0c 12 18 24  32 04 30 48 60 6c 2d 1a   ·······$ 2·0H`l-·
0050  72 11 02 ff 00 00 00 00  00 00 00 00 00 00 01 00   r······· ········
0060  00 00 00 00 00 00 00 00  00 00 be 83 8f 09         ········ ······
```

O probing request é enviado como Broadcast para descobrir as redes na sua proximidade.

Probing Response:



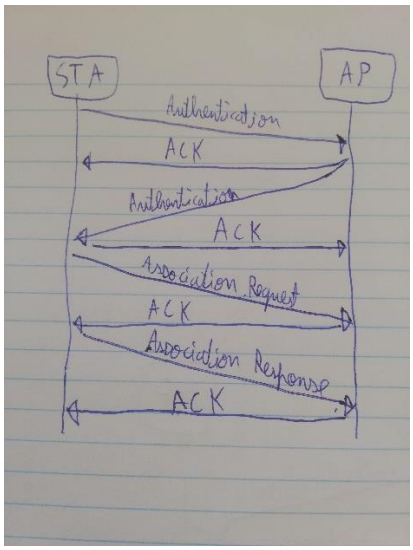
Já o probing response é enviado pelo Access Point para a estação com as informações relativas ao mesmo.

6. Processo de Associação

.13 A sequência de tramas identificada foi:

8472	73.450730	AzureWav_0f:0e:9b	HitronTe_f3:9a:46	802.11	70	Authentication, SN=262, FN=0, Flags=........C
8473	73.450745		AzureWav_0f:0e:9b (…	802.11	48	Acknowledgement, Flags=........C
8474	73.450775	HitronTe_f3:9a:46	AzureWav_0f:0e:9b	802.11	70	Authentication, SN=1965, FN=0, Flags=........C
8475	73.450780		HitronTe_f3:9a:46 (…	802.11	48	Acknowledgement, Flags=........C
8476	73.459546	AzureWav_0f:0e:9b	HitronTe_f3:9a:46	802.11	164	Association Request, SN=263, FN=0, Flags=........C, SSID="FlyingNet"
8477	73.459553		AzureWav_0f:0e:9b (…	802.11	48	Acknowledgement, Flags=........C
8478	73.459638	HitronTe_f3:9a:46	AzureWav_0f:0e:9b	802.11	210	Association Response, SN=1966, FN=0, Flags=........C
8479	73.459643		HitronTe f3:9a:46 (…	802.11	48	Acknowledgement, Flags=........C

.14



7. Transferência de Dados

.15 Pelo campo “DS Status” podemos observar as flags “to DS” e “From DS” as quais tem o valor 1 e 0, com isto podemos concluir que esta trama vem do STA para o DS logo é local a WLAN.

```
IEEE 802.11 QoS Data, Flags: .p.....TC
    Type/Subtype: QoS Data (0x0028)
  Frame Control Field: 0x8841
      .... ..00 = Version: 0
      .... 10.. = Type: Data frame (2)
      1000 .... = Subtype: 8
    Flags: 0x41
        .... ..01 = DS status: Frame from STA to DS via an AP (To DS: 1 From DS: 0) (0x1)
        .... .0.. = More Fragments: This is the last fragment
        .... 0... = Retry: Frame is not being retransmitted
        ...0 .... = PWR MGT: STA will stay up
        ..0. .... = More Data: No data buffered
        .1.. .... = Protected flag: Data is protected
        0... .... = +HTC/Order flag: Not strictly ordered
    .000 0000 0011 0000 = Duration: 48 microseconds
    Receiver address: HitronTe_f3:9a:46 (74:9b:e8:f3:9a:46)
    Transmitter address: AzureWav_0f:0e:9b (80:c5:f2:0f:0e:9b)
    Destination address: IPv6mcast_16 (33:33:00:00:00:16)
    Source address: AzureWav_0f:0e:9b (80:c5:f2:0f:0e:9b)
    BSS Id: HitronTe_f3:9a:46 (74:9b:e8:f3:9a:46)
```

.16

Endereço STA: 74:9b:e8:f3:9a:46

Endereço AP: bc:14:01:af:b1:98

Endereço router de acesso: 33:33:00:00:00:16

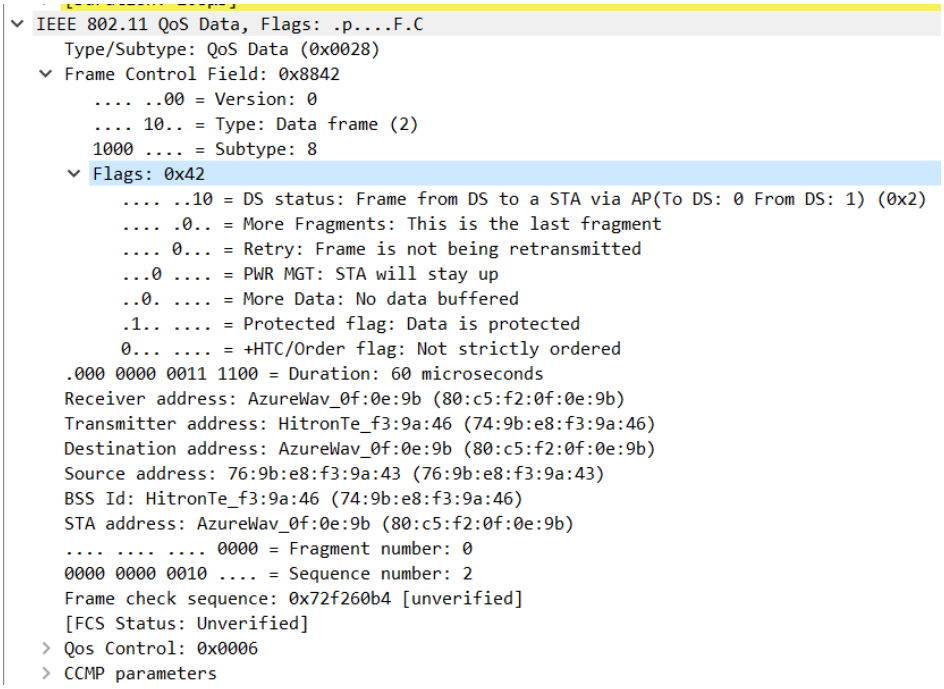
```
Receiver address: HitronTe_f3:9a:46 (74:9b:e8:f3:9a:46)
Transmitter address: AzureWav_0f:0e:9b (80:c5:f2:0f:0e:9b)
Destination address: IPv6mcast_16 (33:33:00:00:00:16)
Source address: AzureWav_0f:0e:9b (80:c5:f2:0f:0e:9b)
BSS Id: HitronTe_f3:9a:46 (74:9b:e8:f3:9a:46)
STA address: AzureWav_0f:0e:9b (80:c5:f2:0f:0e:9b)
```

.17 Face a sua direccionalidade podemos analisar a fag “To DS” e “From DS” que tomam o valor 0 e 1, podemos então concluir que esta trama vai do DS para o STA.

Receiver Address: 80:c5:f2:0f:0e:9b

Destination Address: 80:c5:f2:0f:0e:9b

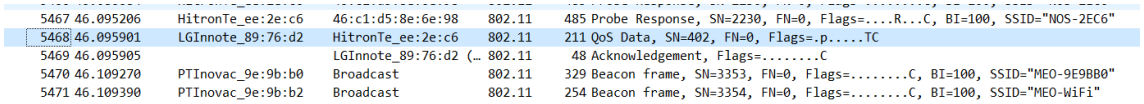
Source Address: 76:9b:e8:f3:9a:46



.18 O subtipo de tramas utilizadas ao longo da transferência são as tramas de controlo ACK (acknowledge), que permitem confirmar a chegada de uma trama, ao chegar uma trama ACK, serve como aviso que a transmissão foi efetuada com sucesso.

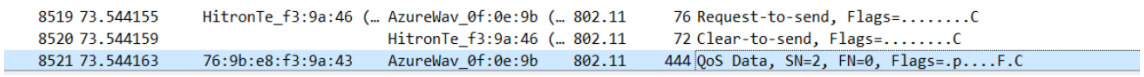
No.	Time	Source	Destination	Protocol	Length	Info
8503	73.511585	AzureWav_0f:0e:9b	IPv6mcast_16	802.11	188	QoS Data, SN=0, FN=0, Flags=.p.....TC
8504	73.511588	HitronTe_f3:9a:46 (…	AzureWav_0f:0e:9b (…	802.11	68	802.11 Block Ack, Flags=........C
8505	73.530748	PTInovac_d6:88:50	Broadcast	802.11	329	Beacon frame, SN=2251, FN=0, Flags=........C, BI=100, SSID="MEO-D68850"
8506	73.530757	AzureWav_0f:0e:9b	Broadcast	802.11	440	QoS Data, SN=1, FN=0, Flags=.p.....TC
8507	73.530760	HitronTe_f3:9a:46 (…	AzureWav_0f:0e:9b (…	802.11	68	802.11 Block Ack, Flags=........C
8508	73.531678	PTInovac_d6:88:52	Broadcast	802.11	254	Beacon frame, SN=2252, FN=0, Flags=........C, BI=100, SSID="MEO-WiFi"
8509	73.534969	PTInovac_45:be:32	Broadcast	802.11	254	Beacon frame, SN=3831, FN=0, Flags=........C, BI=100, SSID="MEO-WiFi"
8510	73.542828	HitronTe_f3:9a:46	AzureWav_0f:0e:9b	802.11	73	Action, SN=1, FN=0, Flags=........C, Dialog Token=1
8511	73.542835		HitronTe_f3:9a:46 (…	802.11	48	Acknowledgement, Flags=........C
8512	73.542839	AzureWav_0f:0e:9b	HitronTe_f3:9a:46	802.11	73	Action, SN=612, FN=0, Flags=........C, Dialog Token=1
8513	73.542845		AzureWav_0f:0e:9b (…	802.11	48	Acknowledgement, Flags=........C
8514	73.544132	HitronTe_f3:9a:46	AzureWav_0f:0e:9b	802.11	73	Action, SN=2, FN=0, Flags=........C, Dialog Token=1
8515	73.544136		HitronTe_f3:9a:46 (…	802.11	48	Acknowledgement, Flags=........C
8516	73.544143	AzureWav_0f:0e:9b	HitronTe_f3:9a:46	802.11	73	Action, SN=613, FN=0, Flags=........C, Dialog Token=1
8517	73.544147	AzureWav_0f:0e:9b	HitronTe_f3:9a:46	802.11	73	Action, SN=613, FN=0, Flags=....R...C, Dialog Token=1
8518	73.544151		AzureWav_0f:0e:9b (…	802.11	48	Acknowledgement, Flags=........C
8519	73.544155	HitronTe_f3:9a:46 (…	AzureWav_0f:0e:9b (…	802.11	76	Request-to-send, Flags=........C
8520	73.544159		HitronTe_f3:9a:46 (…	802.11	72	Clear-to-send, Flags=........C
8521	73.544163	76:9b:e8:f3:9a:43	AzureWav_0f:0e:9b	802.11	444	QoS Data, SN=2, FN=0, Flags=.p....F.C

.19 Exemplo que não se utiliza a opção RTC/CTS:



5467	46.095206	HitronTe_ee:2e:c6	46:c1:d5:8e:6e:98	802.11	485	Probe Response, SN=2230, FN=0, Flags=....R...C, BI=100, SSID="NOS-2EC6"
5468	46.095901	LGInnote_89:76:d2	HitronTe_ee:2e:c6	802.11	211	QoS Data, SN=402, FN=0, Flags=.p.....TC
5469	46.095905		LGInnote_89:76:d2 (…	802.11	48	Acknowledgement, Flags=........C
5470	46.109270	PTInovac_9e:9b:b0	Broadcast	802.11	329	Beacon frame, SN=3353, FN=0, Flags=........C, BI=100, SSID="MEO-9E9BB0"
5471	46.109390	PTInovac_9e:9b:b2	Broadcast	802.11	254	Beacon frame, SN=3354, FN=0, Flags=........C, BI=100, SSID="MEO-WiFi"

Exemplo em que se utiliza a opção RTC/CTS:



8519	73.544155	HitronTe_f3:9a:46 (…	AzureWav_0f:0e:9b (…	802.11	76	Request-to-send, Flags=........C
8520	73.544159		HitronTe_f3:9a:46 (…	802.11	72	Clear-to-send, Flags=........C
8521	73.544163	76:9b:e8:f3:9a:43	AzureWav_0f:0e:9b	802.11	444	QoS Data, SN=2, FN=0, Flags=.p....F.C

Conclusão

Com a realização deste trabalho prático consolidamos os temas abordados acerca das redes Wireless e conseguimos explorar os diferentes aspetos e conceitos do protocolo 802.11, para além disto aprendemos a utilizar melhor a plataforma do wireshark com os seus diversos filtros de pesquisa e etc.