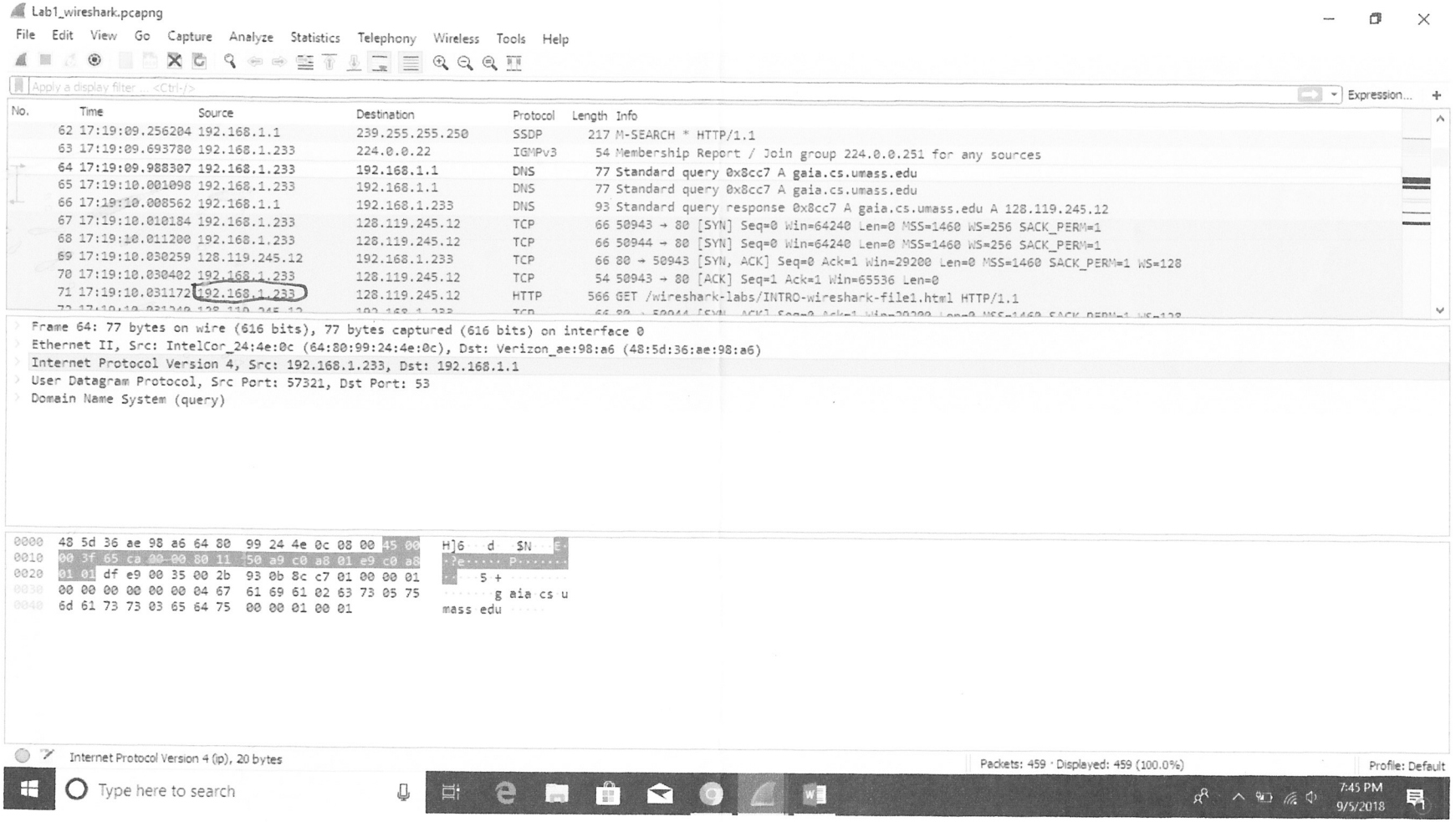
(4) Make sure you read the instructions next time.

Luz Deloria
IT-520 – Lab1
09/06/2018

1. What is the Internet address of your computer? — What is the address ?



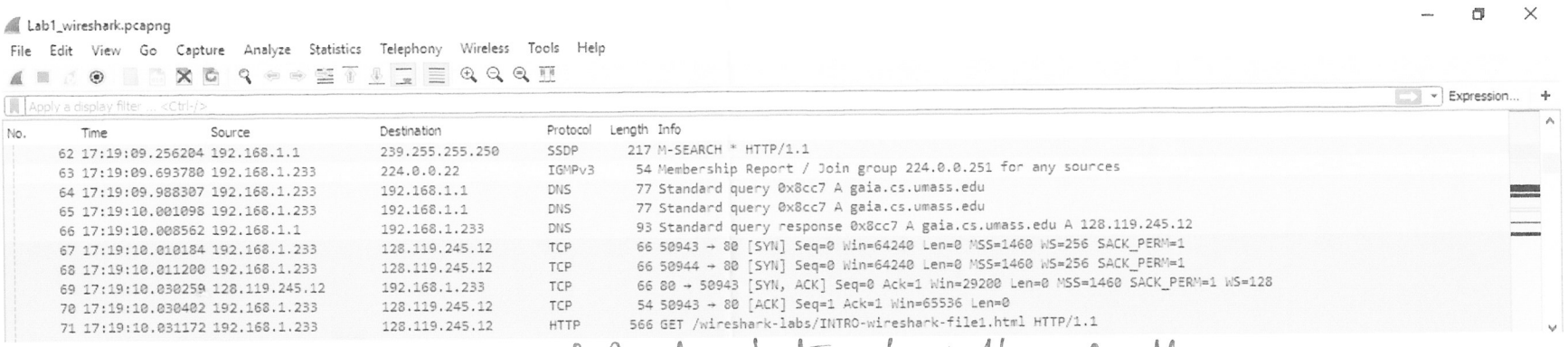
2. List 3 different protocols that appear in the protocol column in the unfiltered packet-listing window in step 7 above.

DNS ✓
DNS
DNS
TCP ✓
TCP
TCP
TCP
HTTP ✓

– Next time put a full screenshot and write down the protocols or highlight them.

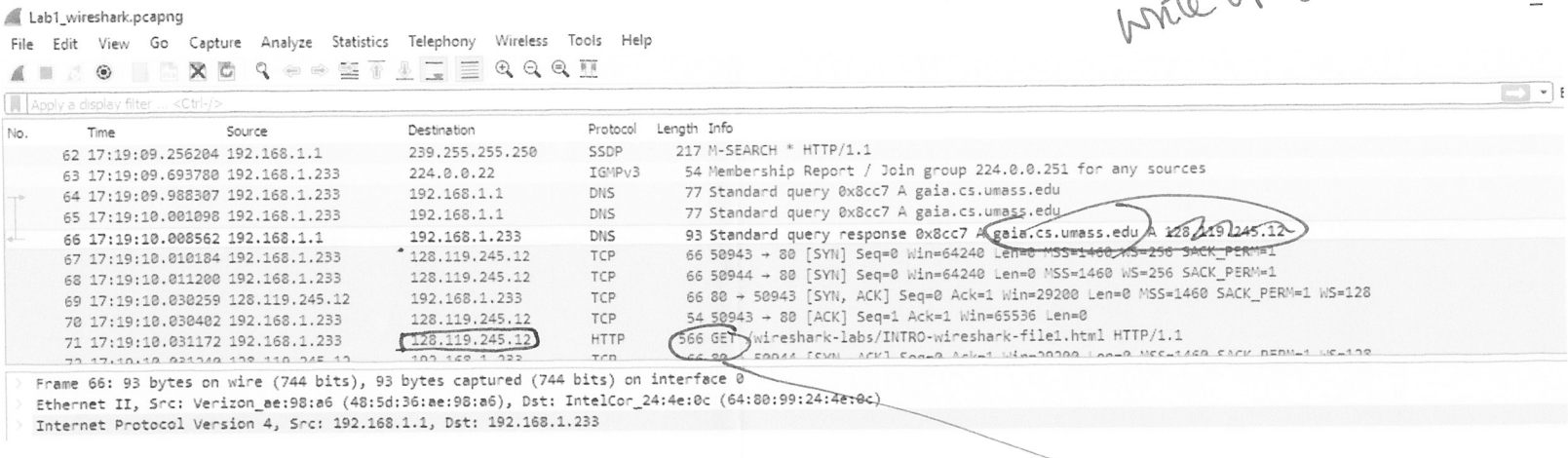
3. How long did it take from when the HTTP GET message was sent until the HTTP OK reply was received? (By default, the value of the Time column in the packetlisting window is the amount of time, in seconds, since Wireshark tracing began. To display the Time field in time-of-day format, select the Wireshark View pull down menu, then select Time-of-day.)

How long did it take?




Your screenshot doesn't show the result.

4. What is the Internet address of the gaia.cs.umass.edu (also known as wwwnet.cs.umass.edu)? — What is the IP address? Write or circle it.




5. Print the two HTTP messages (GET and OK) referred to in question 2 above. To do so, select Print from the Wireshark File command menu, and select the "Selected Packet Only" and "Print as displayed" radial buttons, and then click OK.

```
No.     Time           Source                Destination           Protocol Length Info
     65 12.423474      192.168.1.233         192.168.1.1           DNS      77     Standard query 0x8cc7 A gaia.cs.
Frame 65: 77 bytes on wire (616 bits), 77 bytes captured (616 bits) on interface 0
Ethernet II, Src: IntelCor_24:4e:0c (64:80:99:24:4e:0c), Dst: Verizon_ae:98:a6 (48:5d:36:ae:98:a6)
Internet Protocol Version 4, Src: 192.168.1.233, Dst: 192.168.1.1
User Datagram Protocol, Src Port: 57321, Dst Port: 53
Domain Name System (query)
```

It says Print Two GET and OK. ~~where is the~~ None of this is the GET or OK

C:\Users\Dominique Amor\Desktop\Lab1_wireshark.pcapng 459 total packets, 459 shown

```
No.     Time           Source                Destination           Protocol Length Info
     65 12.423474      192.168.1.233         192.168.1.1           DNS      77     Standard query 0x8cc7 A gaia.cs.umass.edu
Frame 65: 77 bytes on wire (616 bits), 77 bytes captured (616 bits) on interface 0
Ethernet II, Src: IntelCor_24:4e:0c (64:80:99:24:4e:0c), Dst: Verizon_ae:98:a6 (48:5d:36:ae:98:a6)
Internet Protocol Version 4, Src: 192.168.1.233, Dst: 192.168.1.1
User Datagram Protocol, Src Port: 57321, Dst Port: 53
Domain Name System (query)
```

3+1 (4)

I gave you grade for attempts make sure you follow the instruction and answer correctly next time..

Luz Deloria

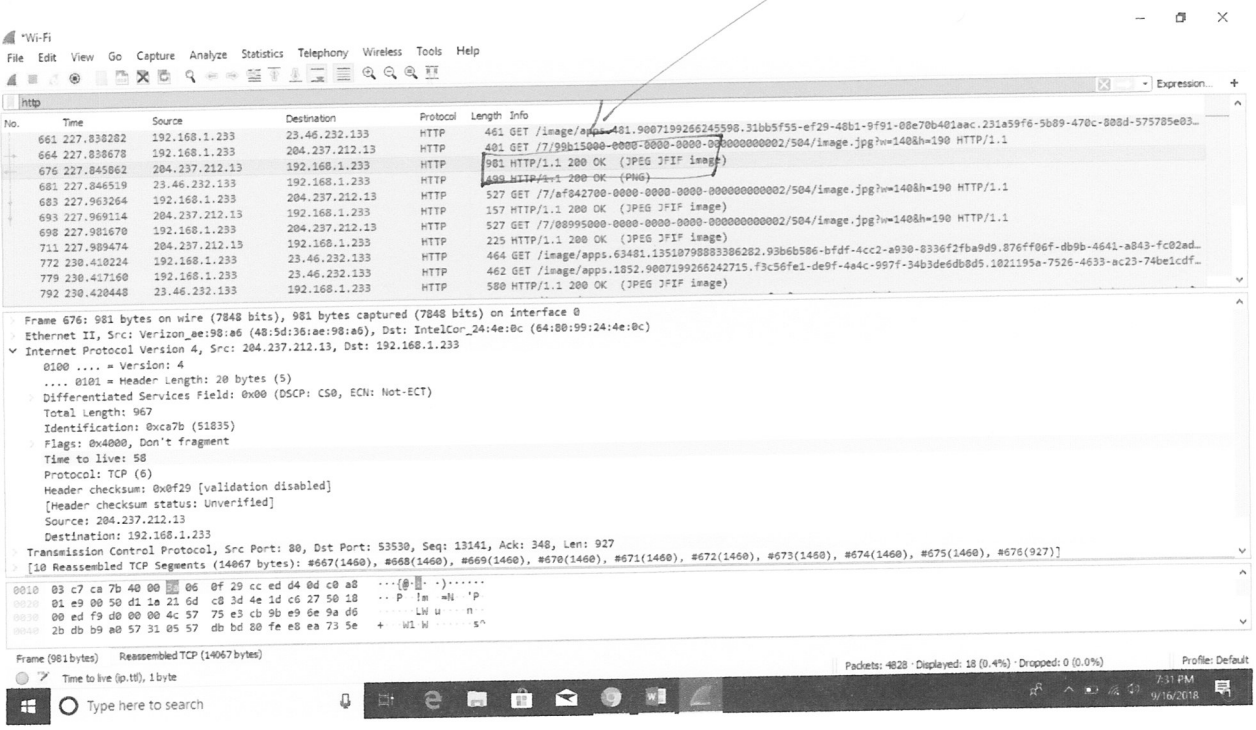
**Wireshark Lab2 – HTTP**

9/16/18

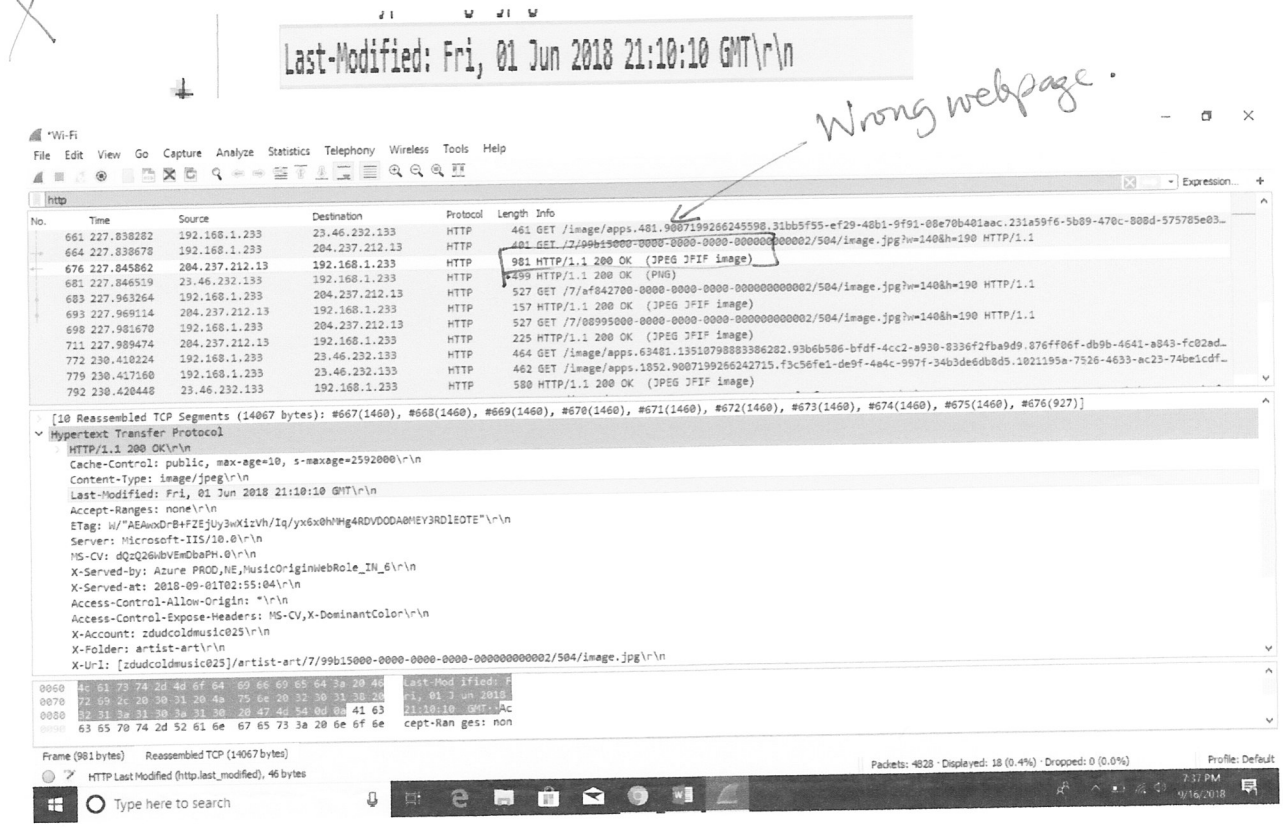
1. Is your browser running HTTP version 1.0 or 1.1?

Wrong webpage.

**HTTP 1.1**



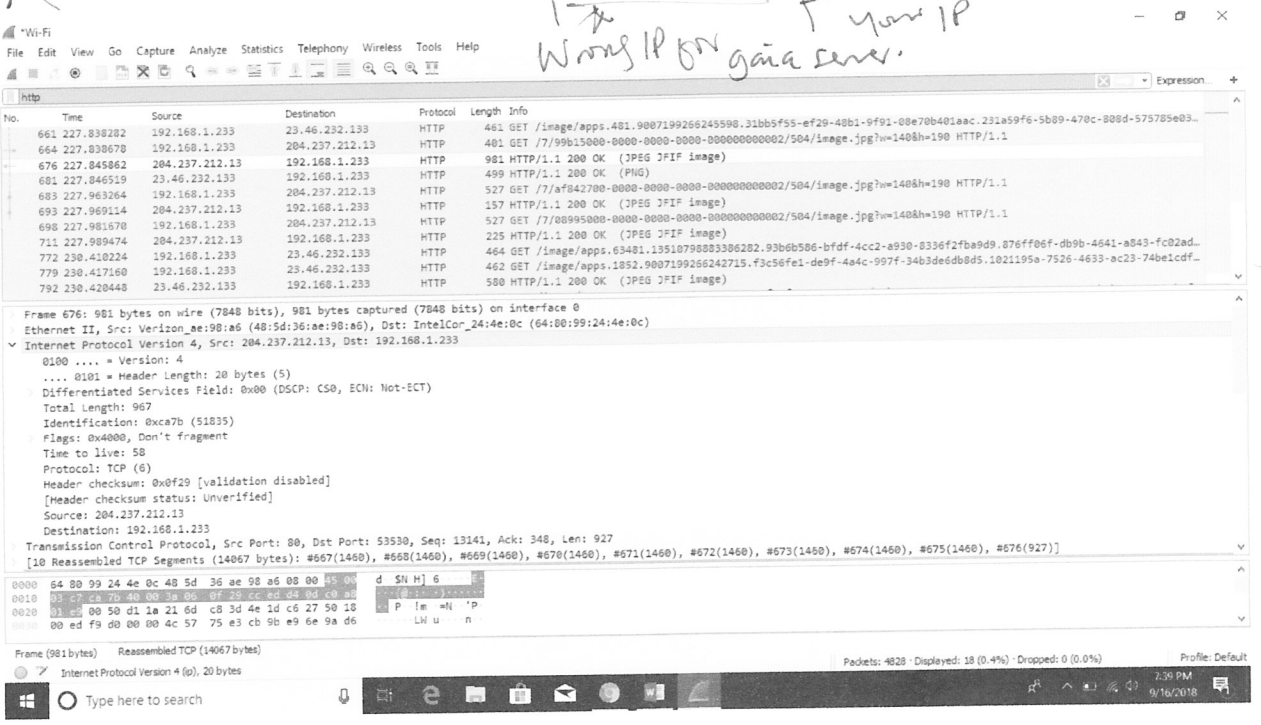
2. When was the HTML file that you are retrieving last modified at the server?



3. What is the IP address of your computer? Of the gaia.cs.umass.edu server?

```
Ethernet II, Src: Verizon_ae:98:a6 (48:5d:36:ae:98:a6), Dst: IntelCor_24:4e:0c (64:80:99:24:4e:0c)
Internet Protocol Version 4, Src: 204.237.212.13, Dst: 192.168.1.233
```

Wrong IP for gaia server. Your IP

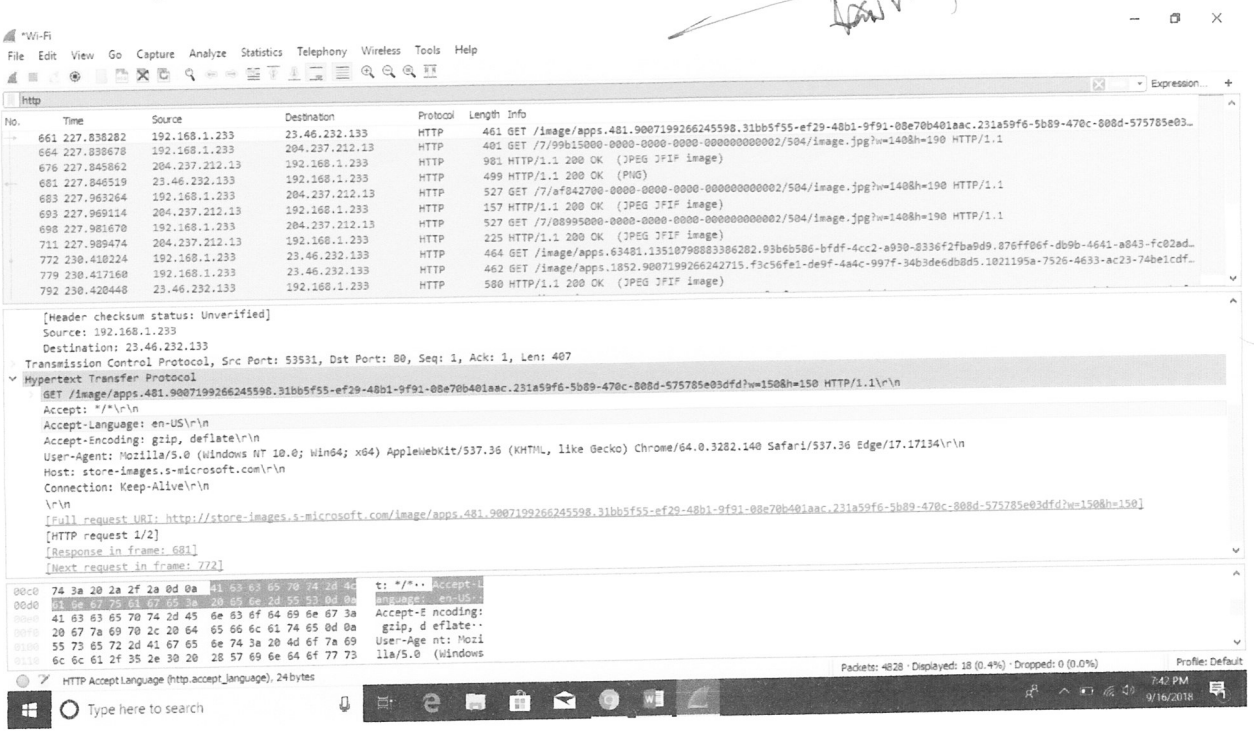



You didn't visit the webpage

4. What languages (if any) does your browser indicate that it can accept to the server?

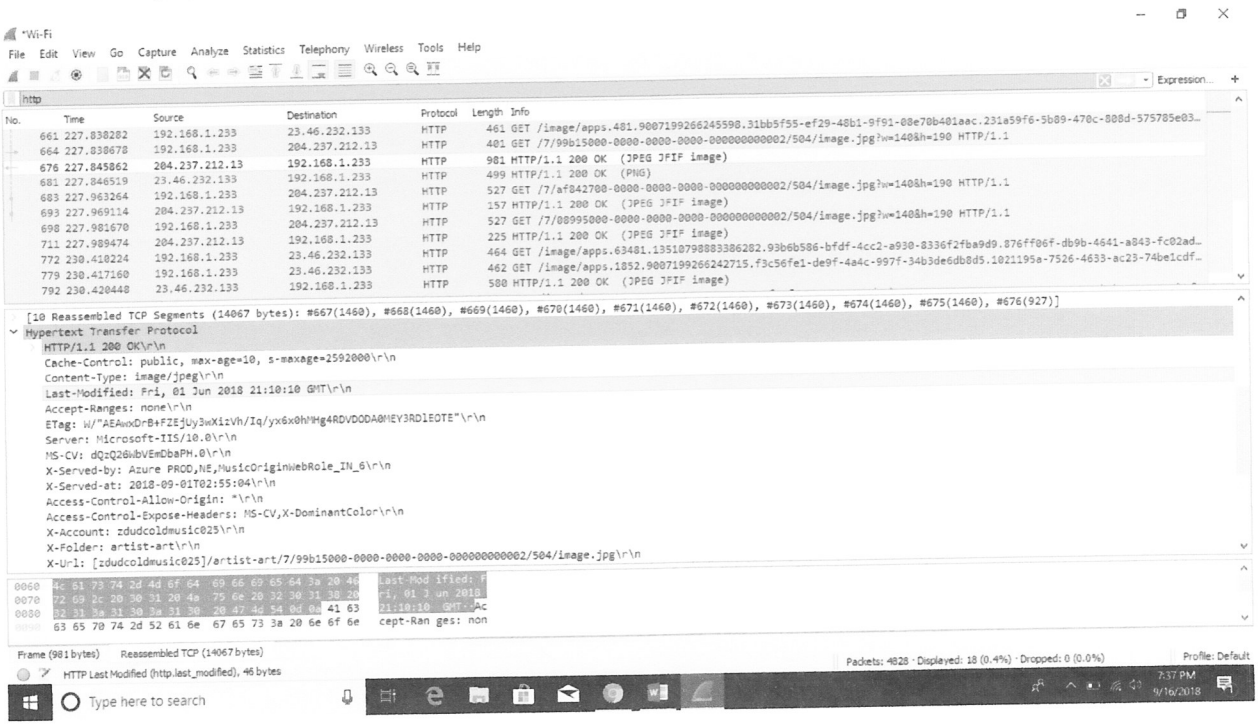
```
Accept-Language: en-US\r\n
```

Wrong webpage.



5. When was the HTML file that you are retrieving last modified at the server?

```
Last-Modified: Fri, 01 Jun 2018 21:10:10 GMT\r\n
```



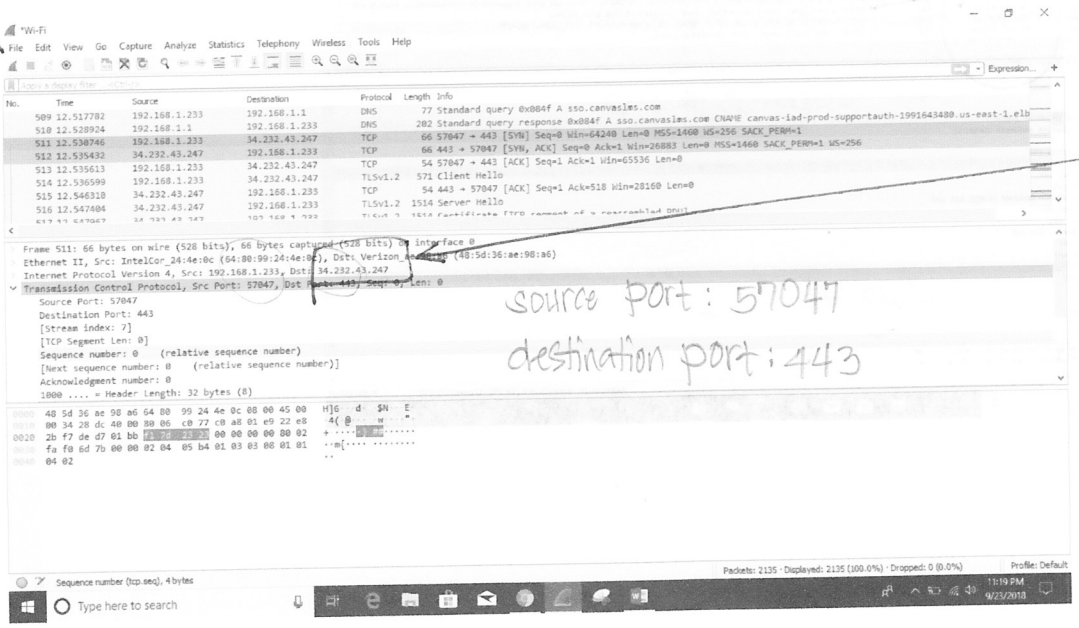
Luz Deloria
Wireshark lab 3- TCP
09/24/18

(1)

- IP address : 192.168.1.233

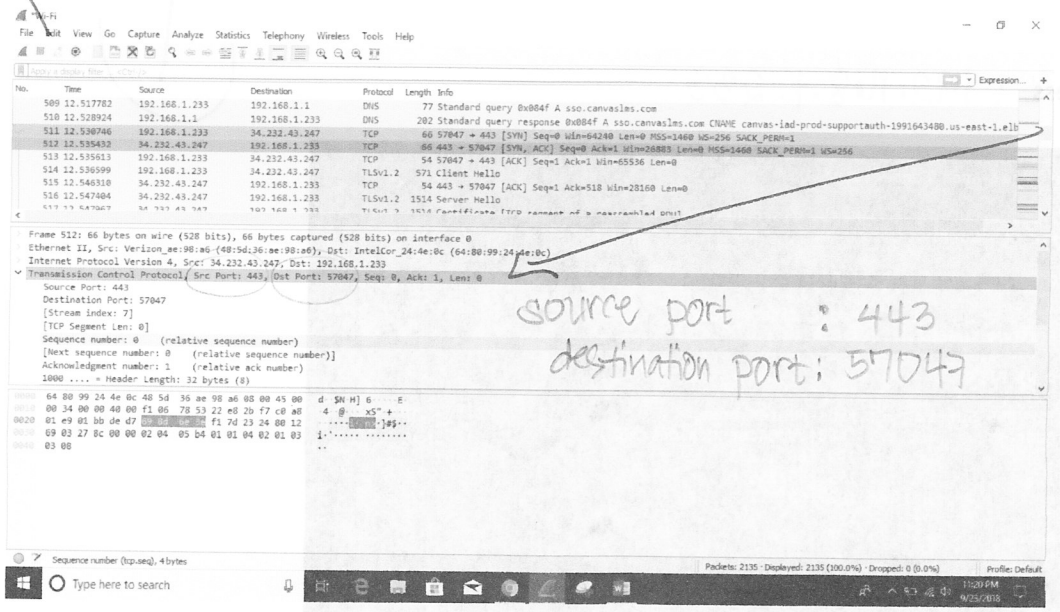
```
Command Prompt

Wireless LAN adapter Local Area Connection* 1:

   Media State . . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :

Wireless LAN adapter Local Area Connection* 2:

   Media State . . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :

Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . : fios-router.home
   Link-local IPv6 Address . . . . . : fe80::dd04:6ecd:a1de:ff6%3
   IPv4 Address. . . . . . . . . . . : 192.168.1.233
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.1.1

C:\Users\Dominique Amor>
```

1. What is the TCP port number used by your computer to communicate with gaia.cs.umass.edu?

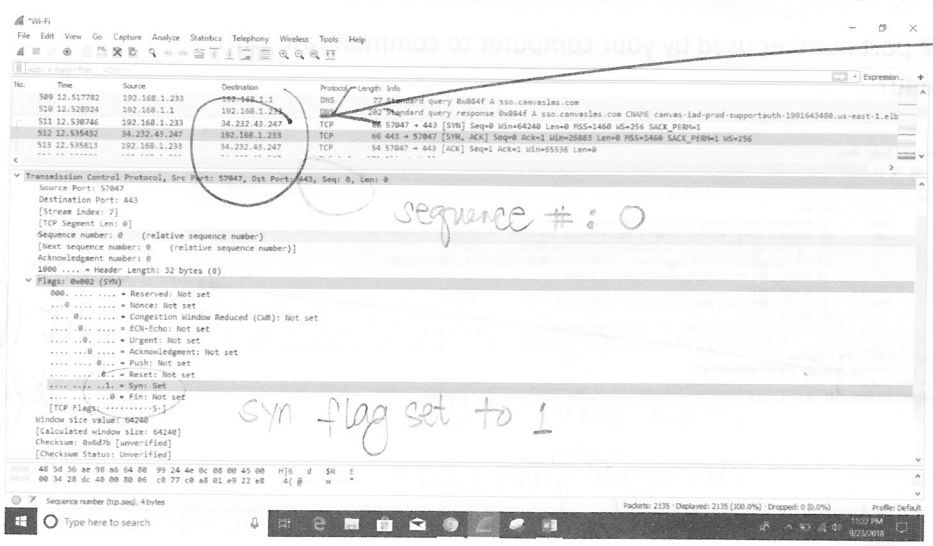



This is not the right IP for the webpage.

2. What is the TCP port number used by gaia.cs.umass.edu to communicate with your computer?

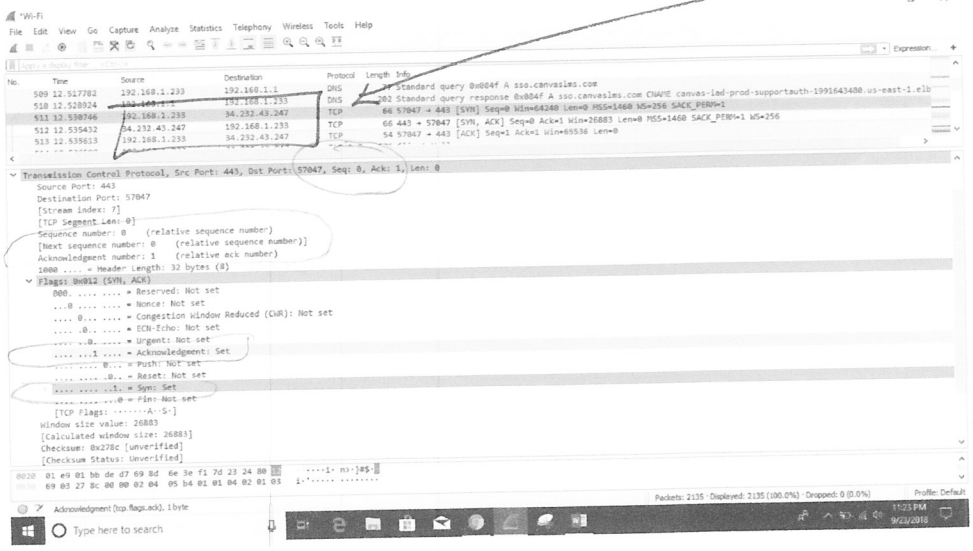



3. What is the sequence number of the TCP SYN segment that is used to initiate the TCP connection between your computer and gaia.cs.umass.edu? What is it in the segment that identifies the segment as a SYN segment?



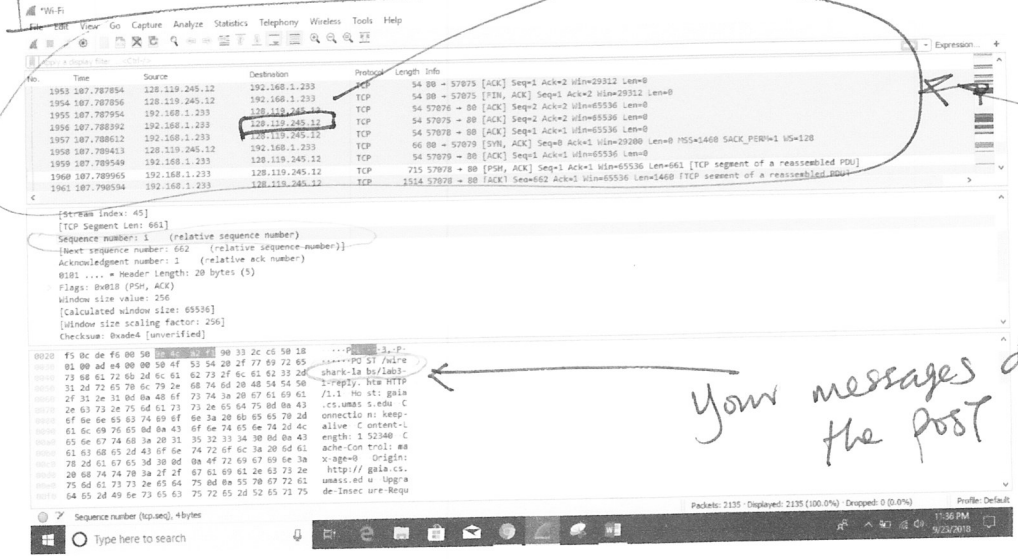
4. What is the sequence number of the SYNACK segment sent by gaia.cs.umass.edu to the client computer in reply to the SYN? - You must dig deep and find the ACK from gaia.cs.umass.edu.

Wrong webpage.

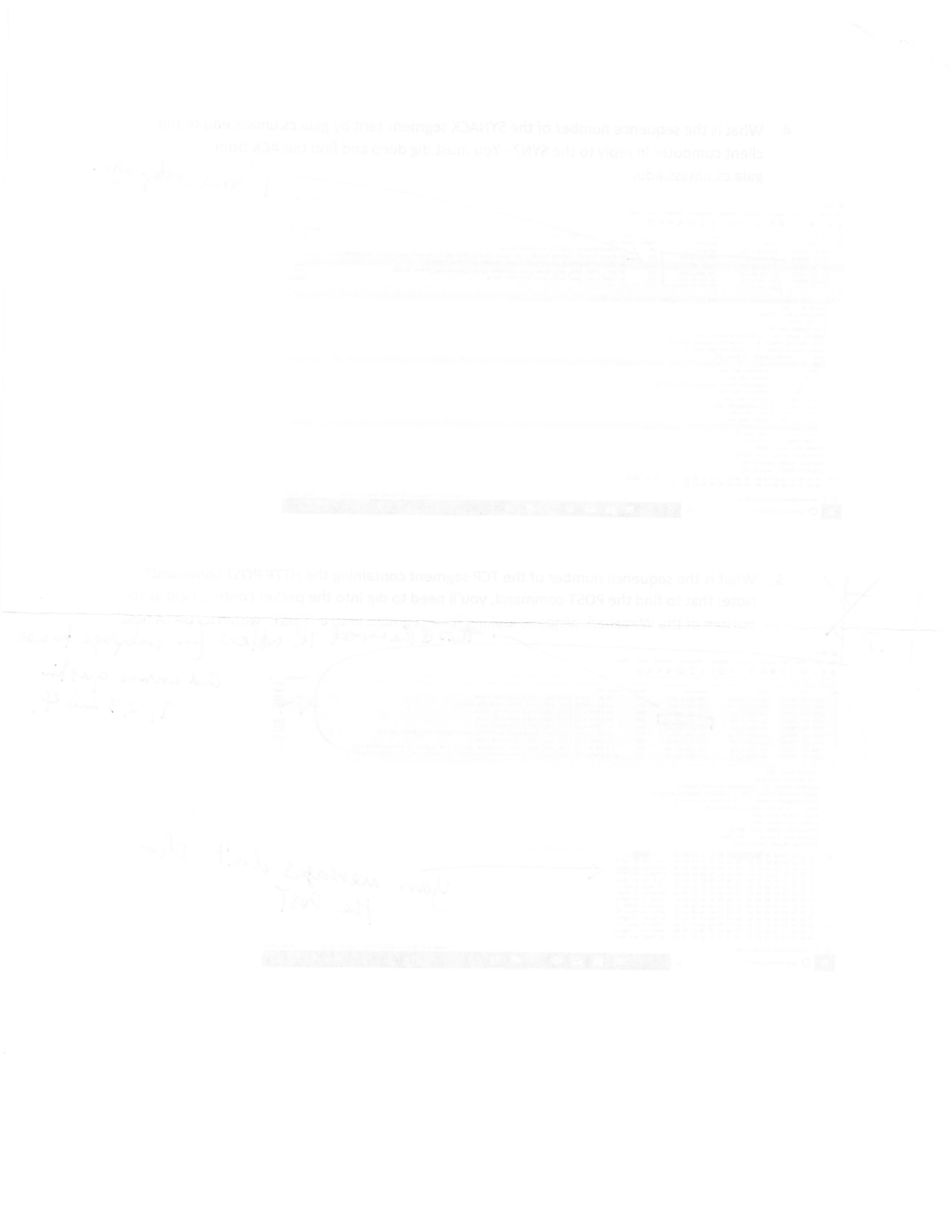



5. What is the sequence number of the TCP segment containing the HTTP POST command? Note: that to find the POST command, you'll need to dig into the packet content field at the bottom of the Wireshark window, looking for a segment with a "POST" within its DATA field.

This is the correct IP address for webpage to use and answer question 1, 2, 3 and 4.




Your messages don't show the POST



C:\Users\Dominique Amor\Desktop\Wireshark Lab 3- TCP.docx.pcapng 2135 total packets, 1 shown

| No. | Time | Source | Destination | Protocol | Length | Info |
|---|---|---|---|---|---|---|
| 1792 | 63.838901 | 192.168.1.233 | 128.119.245.12 | HTTP | 435 | GET /favicon.ico HTTP/1.1 |

Frame 1792: 435 bytes on wire (3480 bits), 435 bytes captured (3480 bits) on interface 0
Ethernet II, Src: IntelCor_24:4e:0c (64:80:99:24:4e:0c), Dst: Verizon_ae:98:a6 (48:5d:36:ae:98:a6)
Internet Protocol Version 4, Src: 192.168.1.233, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 57072, Dst Port: 80, Seq: 1, Ack: 1, Len: 381
Hypertext Transfer Protocol

# Wireshark Lab 3 - TCP

IT 520-A – Enterprise Infrastructure & Networks
Due Date: 09/24/18 (Handed in at the beginning of class)

Instructions:

- Start up your web browser. Go the http://gaia.cs.umass.edu/wireshark-labs/alice.txt and retrieve an ASCII copy of *Alice in Wonderland*. Save this file somewhere on your computer.
- Next go to http://gaia.cs.umass.edu/wireshark-labs/TCP-wireshark-file1.html.
- Use the *Browse* button in this form to enter the name of the file (full path name) on your computer containing *Alice in Wonderland* (or do so manually). Don't yet press the "*Upload alice.txt file*" button.
- Now start up Wireshark and begin packet capture *(Capture->Start)* and then press *OK* on the Wireshark Packet Capture Options screen (we'll not need to select any options here).
- Returning to your browser, press the "*Upload alice.txt file*" button to upload the file to the gaia.cs.umass.edu server. Once the file has been uploaded, a short congratulations message will be displayed in your browser window.
- Stop Wireshark packet capture and filter tcp packets.
- Pay attention to the SYN ACK packets.
- Include a terminal screenshot showing computer IP address on the front page before Question 1, and a full PRINT of the HTTP OK message as the last page. Labs will NOT be graded if either of these two is missing. (You can refer to Lab 1 for instructions on how to PRINT

Questions:
(*For each of these questions, take a screenshot of Wireshark, and attach it to your answer*) - Questions without Full Screenshot will not be graded. Your screenshot should indicate the time and date on your computer.

1. What is the TCP port number used by your computer to communicate with gaia.cs.umass.edu?
2. What is the TCP port number used by gaia.cs.umass.edu to communicate with your computer?
3. What is the sequence number of the TCP SYN segment that is used to initiate the TCP connection between your computer and gaia.cs.umass.edu? What is it in the segment that identifies the segment as a SYN segment?
4. What is the sequence number of the SYNACK segment sent by gaia.cs.umass.edu to the client computer in reply to the SYN? - You must dig deep and find the ACK from gaia.cs.umass.edu.
5. What is the sequence number of the TCP segment containing the HTTP POST command? Note: that to find the POST command, you'll need to dig into the packet content field at the bottom of the Wireshark window, looking for a segment with a "POST" within its DATA field.

# Wireshark Lab 3 - TCP

IT 520-A – Enterprise Infrastructure & Networks
Due Date: 09/24/18 (Handed in at the beginning of class)

Instructions:

- Start up your web browser. Go the http://gaia.cs.umass.edu/wireshark-labs/alice.txt and retrieve an ASCII copy of Alice in Wonderland. Save this file somewhere on your computer.
- Next go to http://gaia.cs.umass.edu/wireshark-labs/TCP-wireshark-file1.html.
- Use the Browse button in this form to enter the name of the file (full path name) on your computer containing Alice in Wonderland (or do so manually). Don't yet press the "Upload alice.txt file" button.
- Now start up Wireshark and begin packet capture (Capture->Start) and then press OK on the Wireshark Packet Capture Options screen (we'll not need to select any options here).
- Returning to your browser, press the "Upload alice.txt file" button to upload the file to the gaia.cs.umass.edu server. Once the file has been uploaded, a short congratulations message will be displayed in your browser window.
- Stop Wireshark packet capture, and Elect one packet.
- Pay attention to the SYN ACK packets.
- Include a terminal screenshot showing computer IP address on the front page, before Question 1, and a full PRINT of the HTTP OK message as the last page. Labs will NOT be graded if either of these two is missing. (You can refer to Lab 1 for instructions on how to PRINT

Questions

(For each of these questions, take a screenshot of Wireshark, and attach it to your answers - Questions without Full Screenshot will not be graded. Your screenshot should indicate the time and date on your computer.

1. What is the TCP port number used by your computer to communicate with gaia.cs.umass.edu?
2. What is the TCP port number used by gaia.cs.umass.edu to communicate with your computer?
3. What is the sequence number of the TCP SYN segment that is used to initiate the TCP connection between your computer and gaia.cs.umass.edu? What is it in the segment that identifies the segment as a SYN segment?
4. What is the sequence number of the SYNACK segment sent by gaia.cs.umass.edu to the client computer in reply to the SYN? – You must dig deep and find the ACK from gaia.cs.umass.edu.
5. What is the sequence number of the TCP segment containing the HTTP POST command? Note: that to find the POST command, you'll need to dig into the packet content field at the bottom of the Wireshark window, looking for a segment with a "POST" within its DATA field.

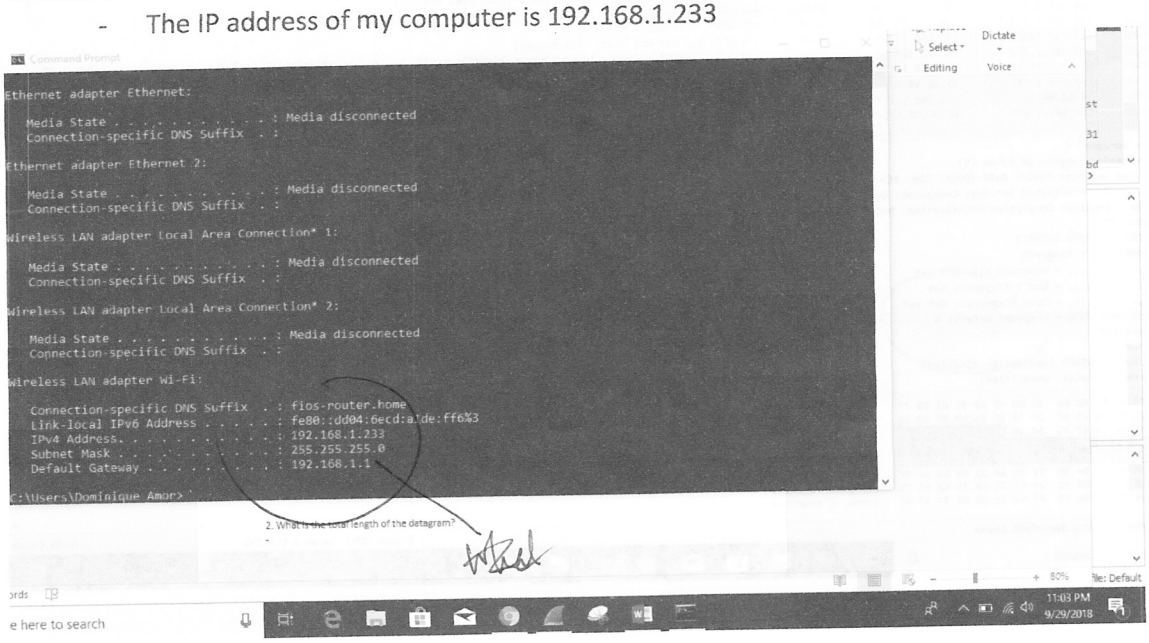
5

Luz Deloria

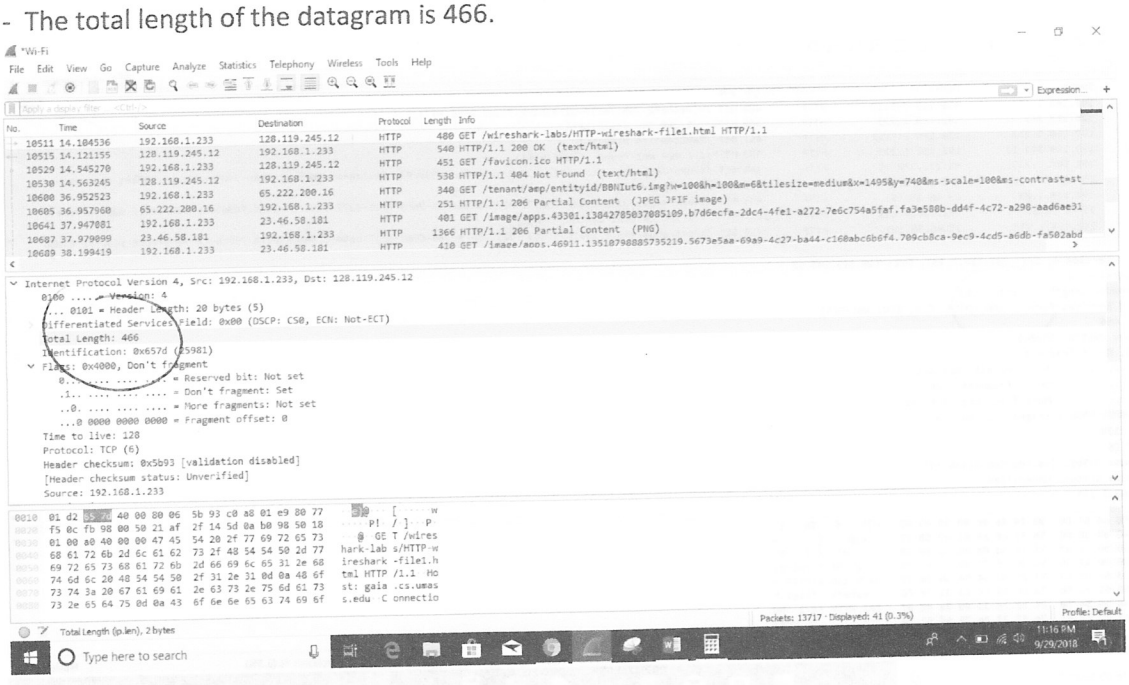
**Wireshark – Lab 4_IP**

09/29/18

1. What is the IP address of your computer?
   - The IP address of my computer is 192.168.1.233

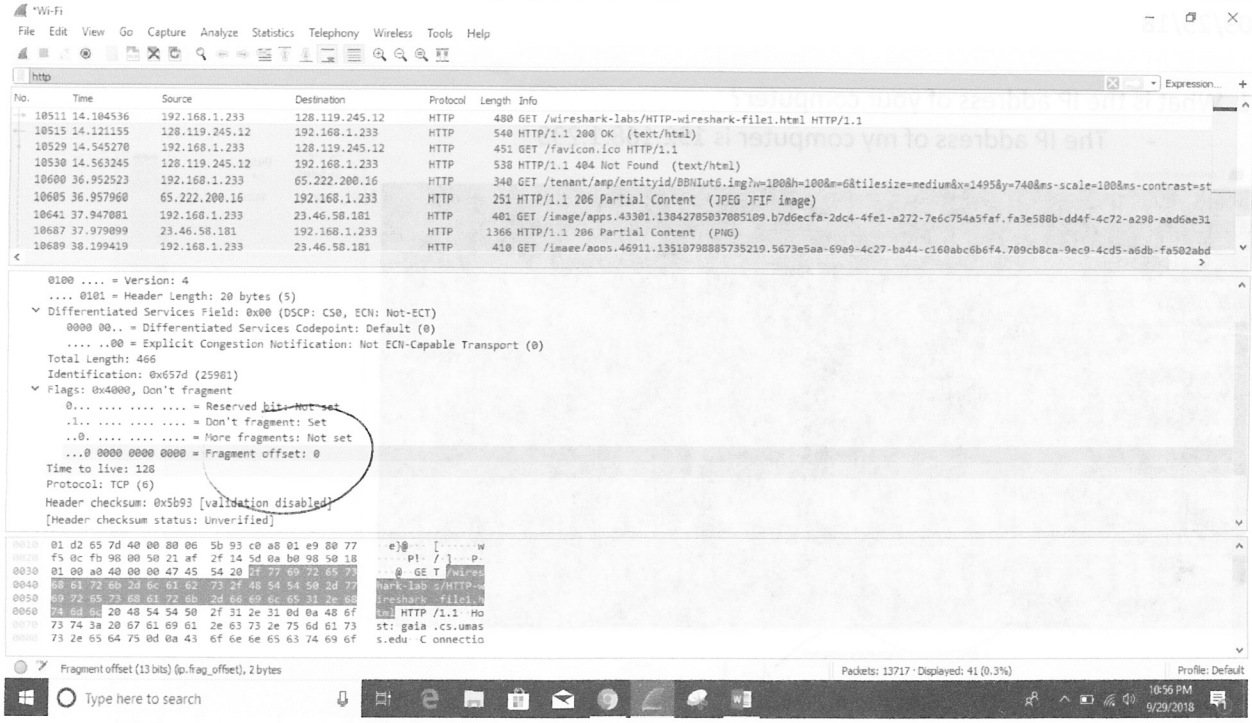



2. What is the total length of the datagram?
   - The total length of the datagram is 466.



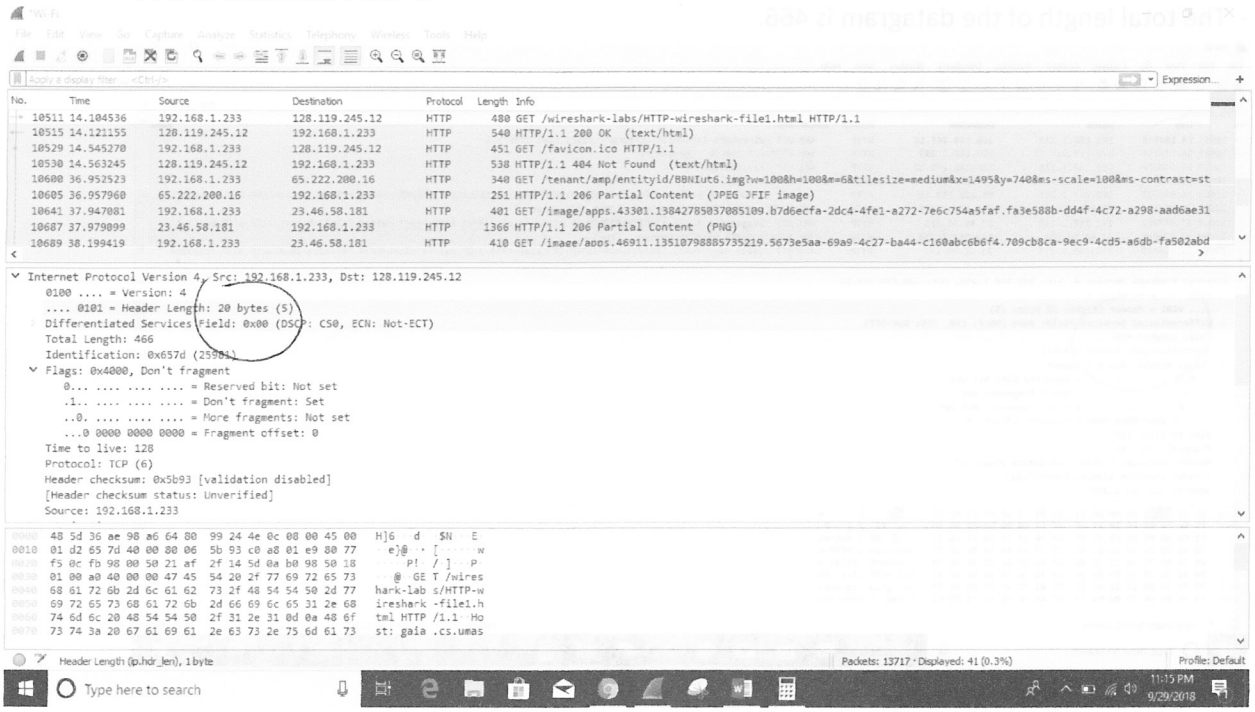
3. Has this IP datagram been fragmented?

- The fragments bit is = 0, so the data is <u>not fragmented.</u>



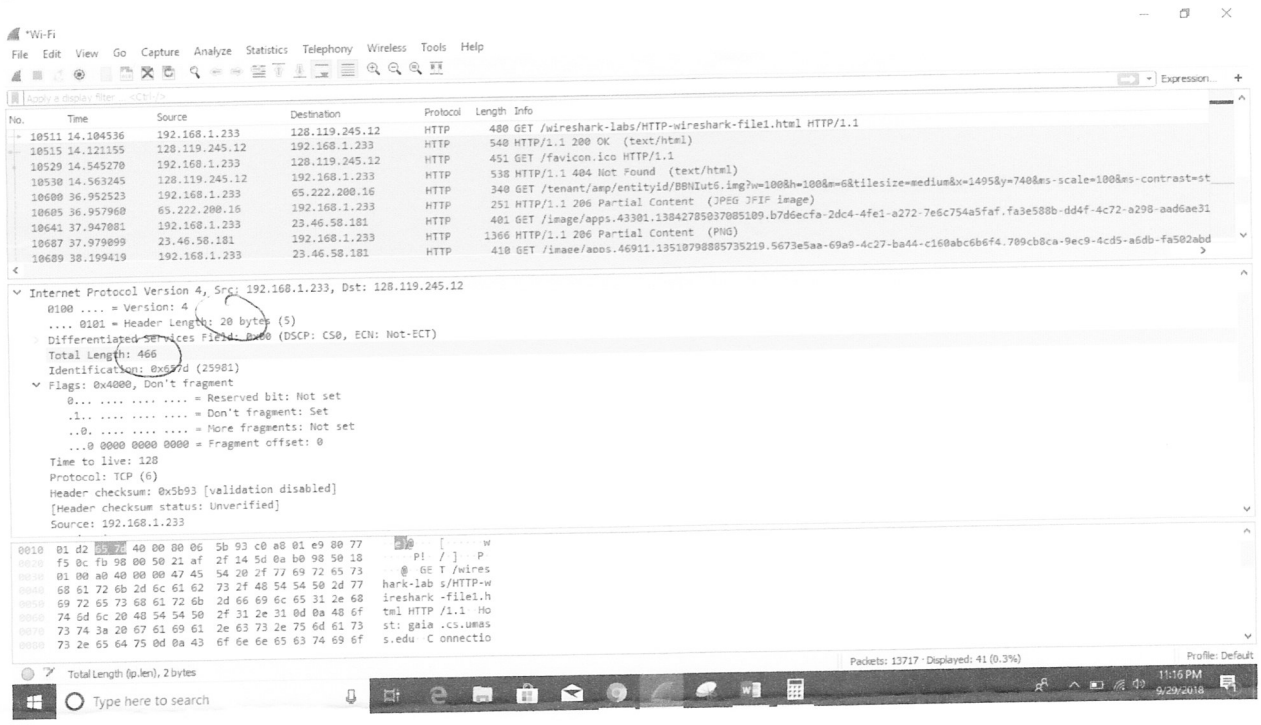

4. How many bytes are in the IP header?

-There are <u>20 bytes in the IP header</u>.



5. How many bytes are in the payload of the IP datagram? Explain how you determined the number of payload bytes.

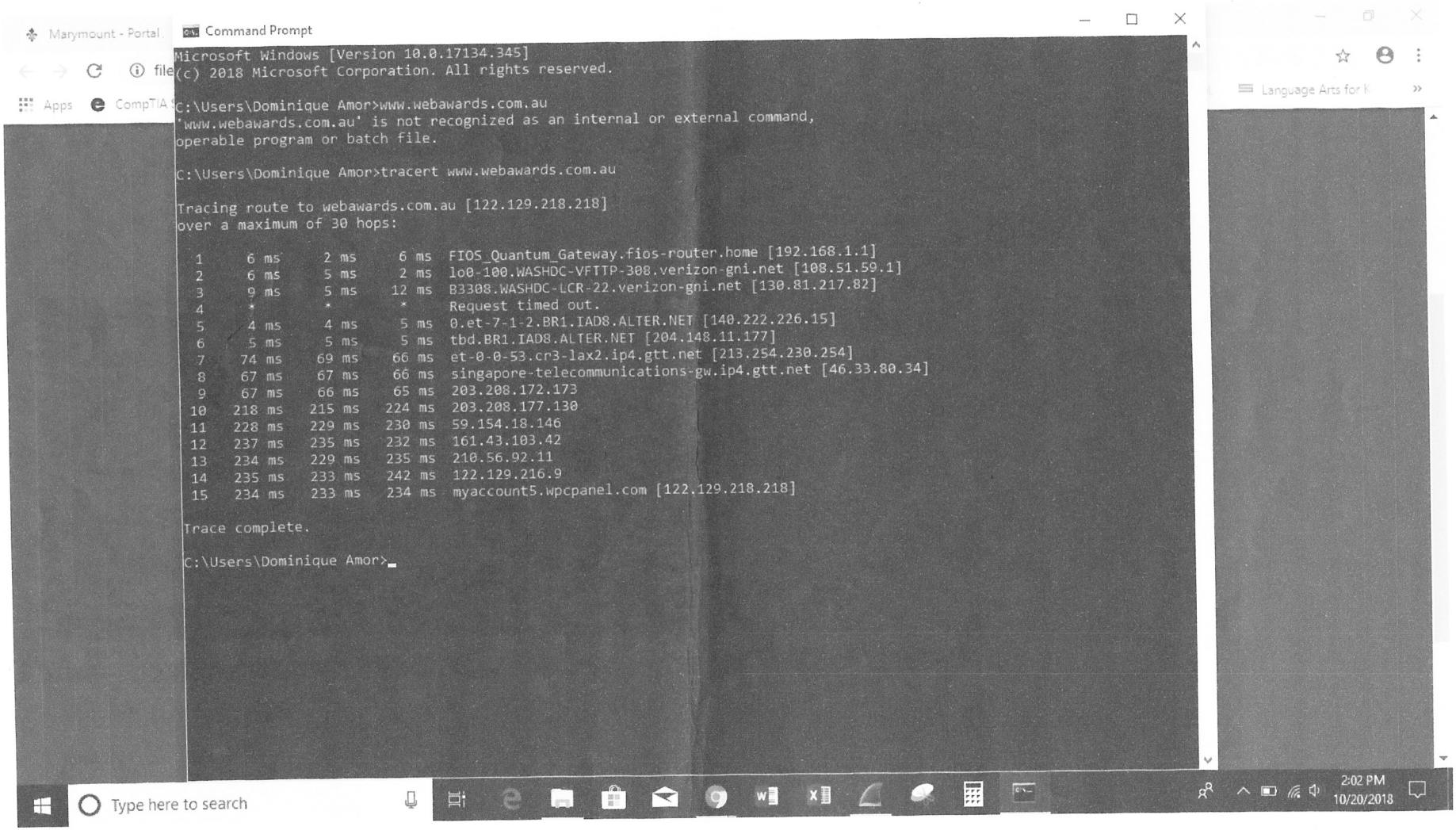
-There are 20 bytes in the IP header, and 466 bytes total length, this gives 446 bytes in the payload of the IP datagram.



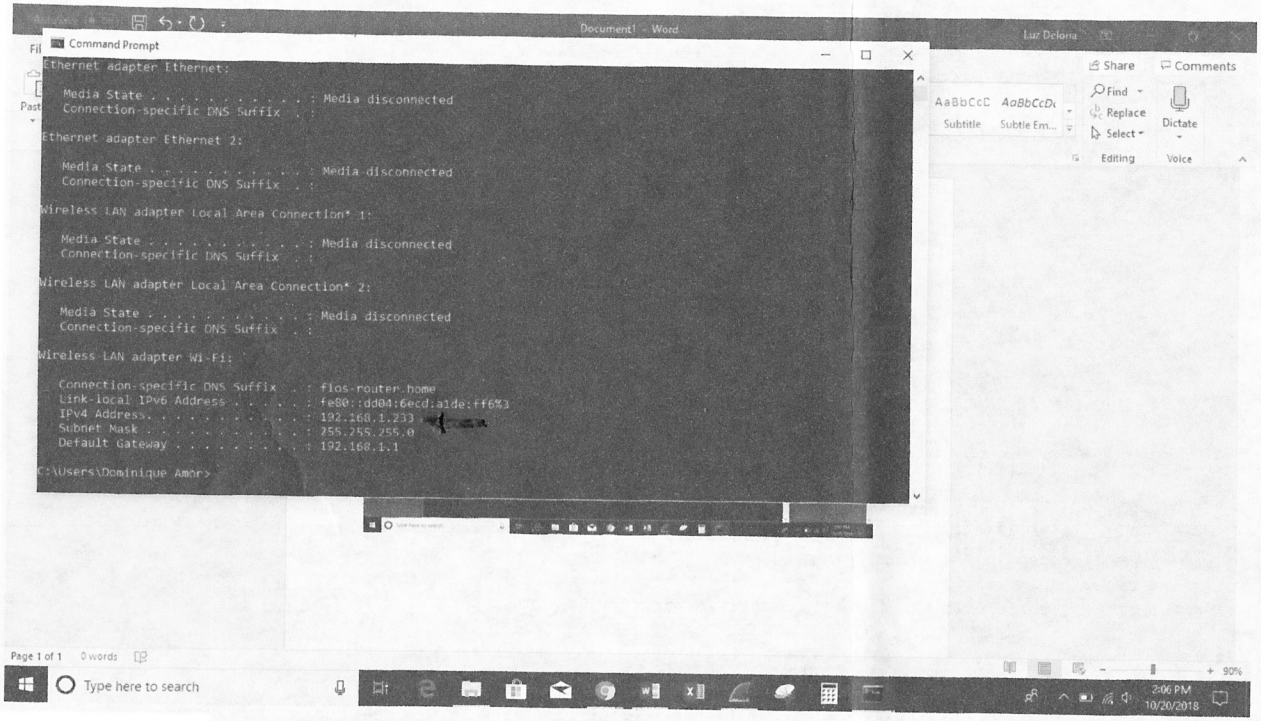
4

**Luz Deloria**
**Lab 5- Traceroute**

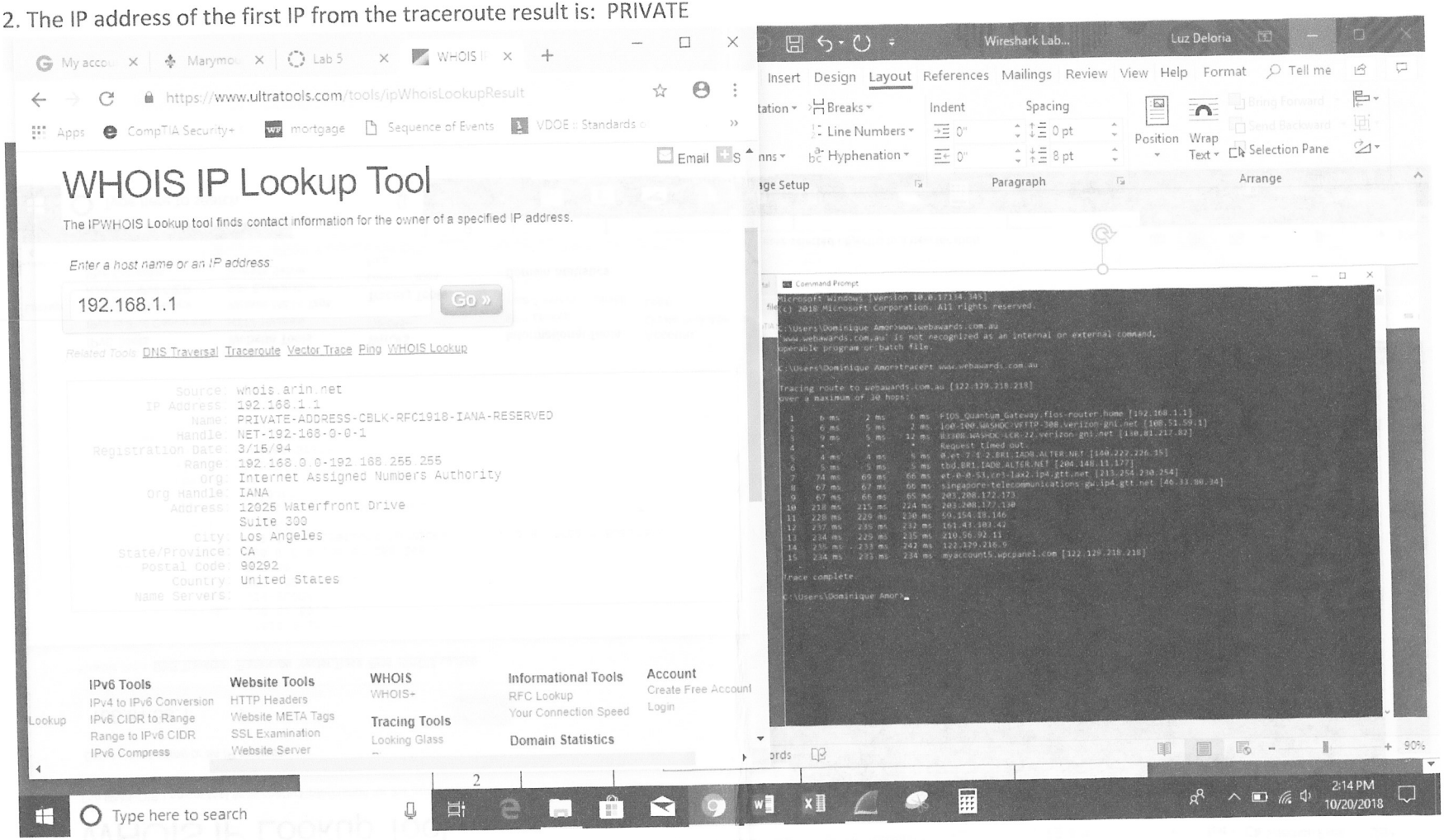
**IT-520-A**



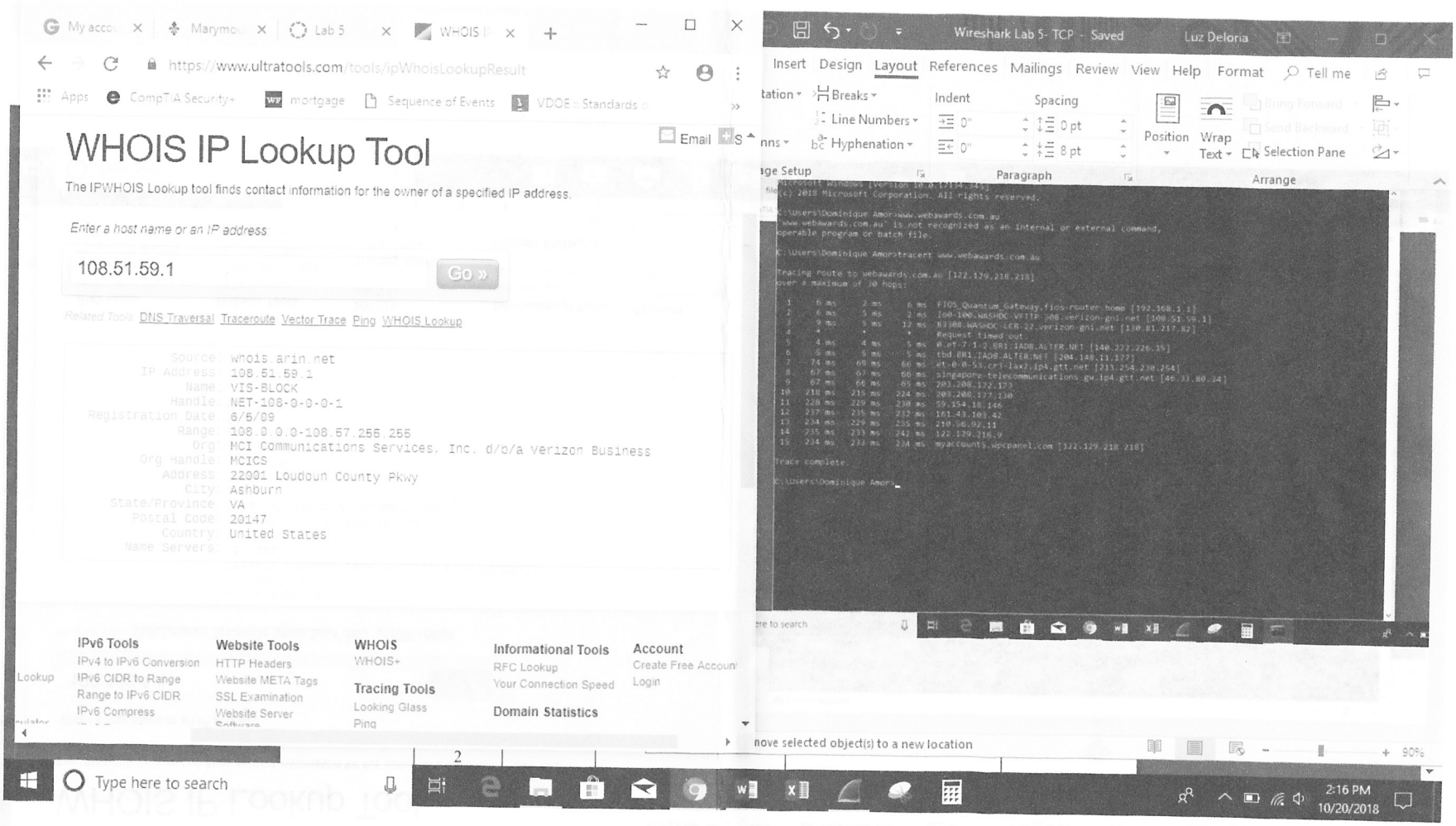
1.IP address: 192.168.1.233



2. The IP address of the first IP from the traceroute result is: PRIVATE



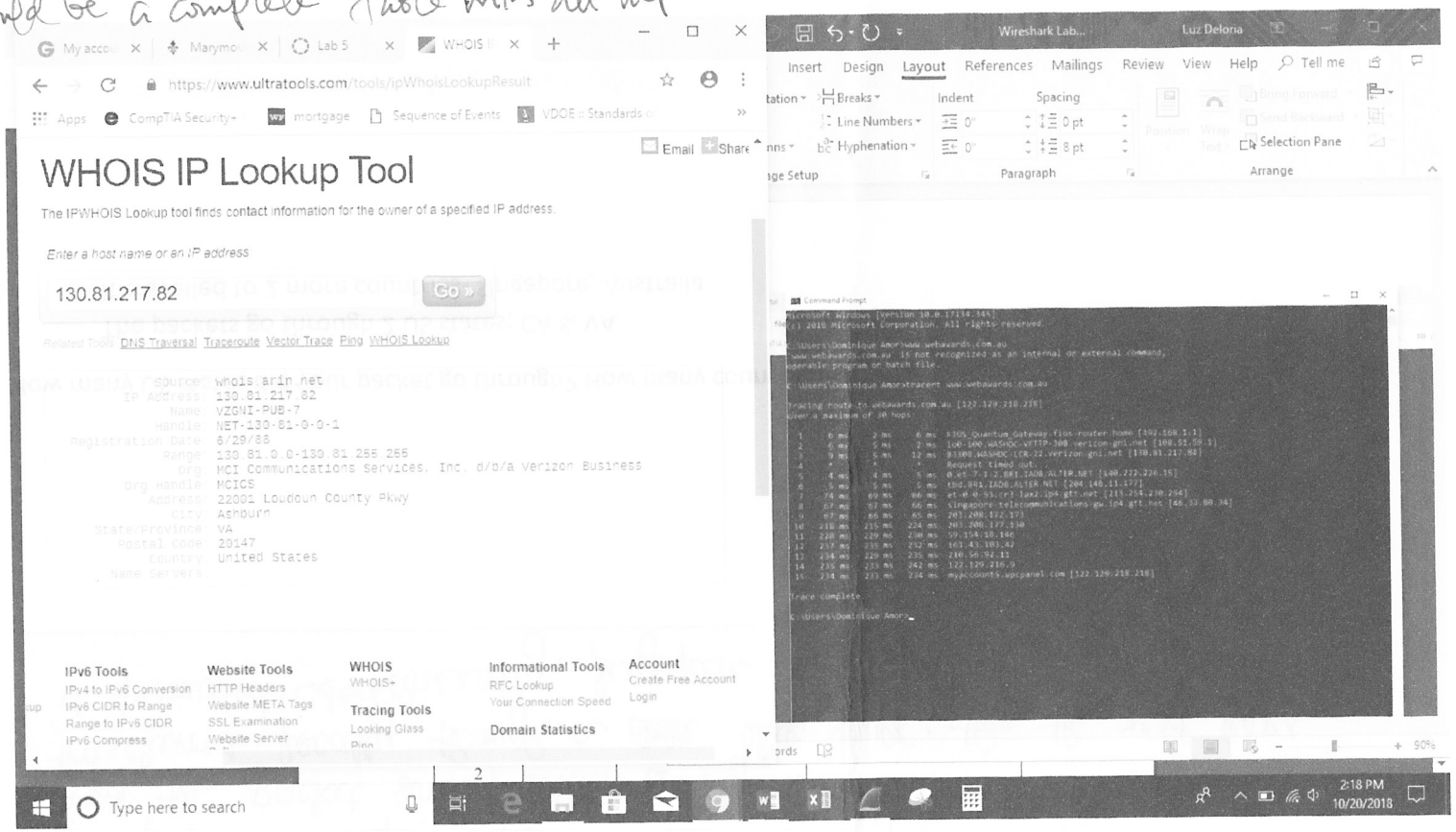
3. IP address of the second IP from the traceroute result is: PUBLIC



4.

| Hop Count IP address | IP address | Organization (IP Owner) | Location (US state)/Country |
|---|---|---|---|
| 1 | 192.168.1.1 | Internet Assigned Numbers Authority | CA/USA |
| 2 | 108.51.59.1 | MCI Communications Services, Inc. d/b/a Verizon Business | Ashburn/VA |
| 3 | 130.81.217.82 | MCI Communications Services, Inc. d/b/a Verizon Business | Ashburn/VA |

It should be a complete table with all hops.



5. In your own words, explain everything you just did, and what route did your packet took from source to destination.

- Out of the 30 hops, trace was complete in just 15 hops. From the packet source, which is my home router, the packet was transferred locally through a data link layer; then the next hops, it travelled internationally, Singapore & Australia, respectively.

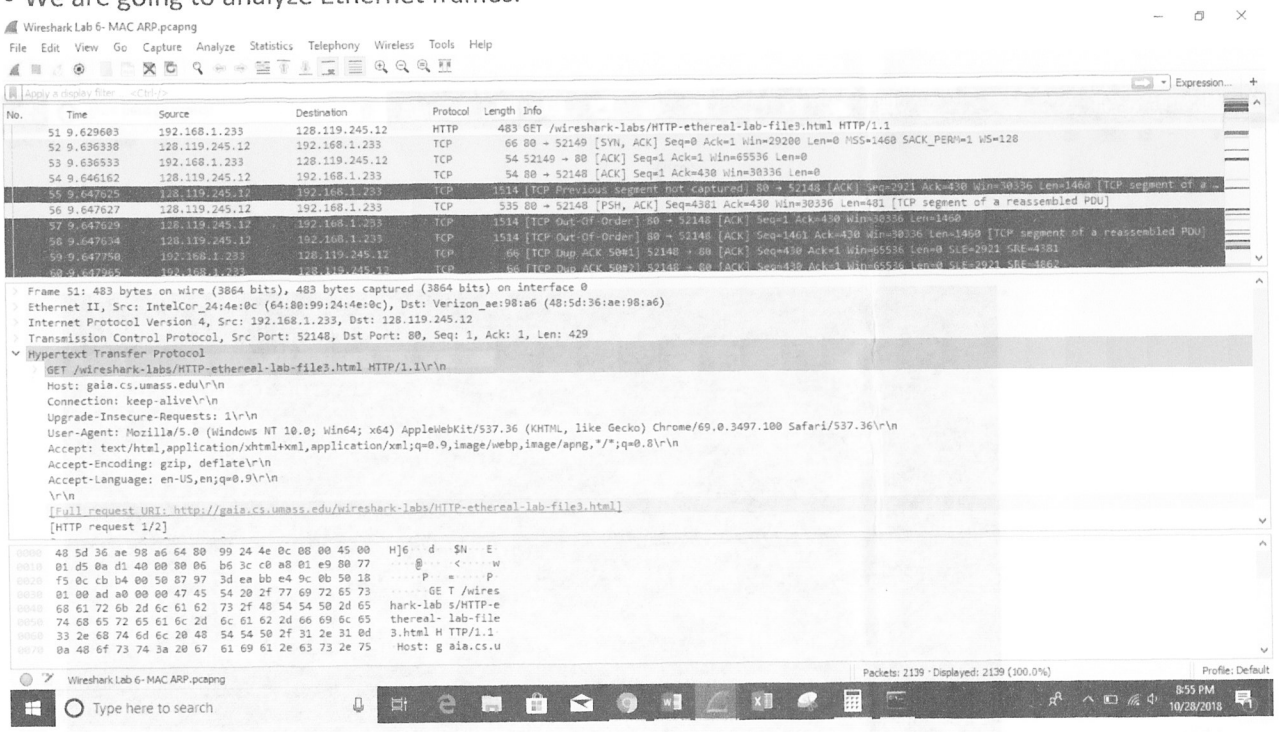
How many US states did your packet go through? How many countries if any?

- The packets go through 2 US states; CA & VA.
- It travelled to 2 more countries- Singapore, Australia

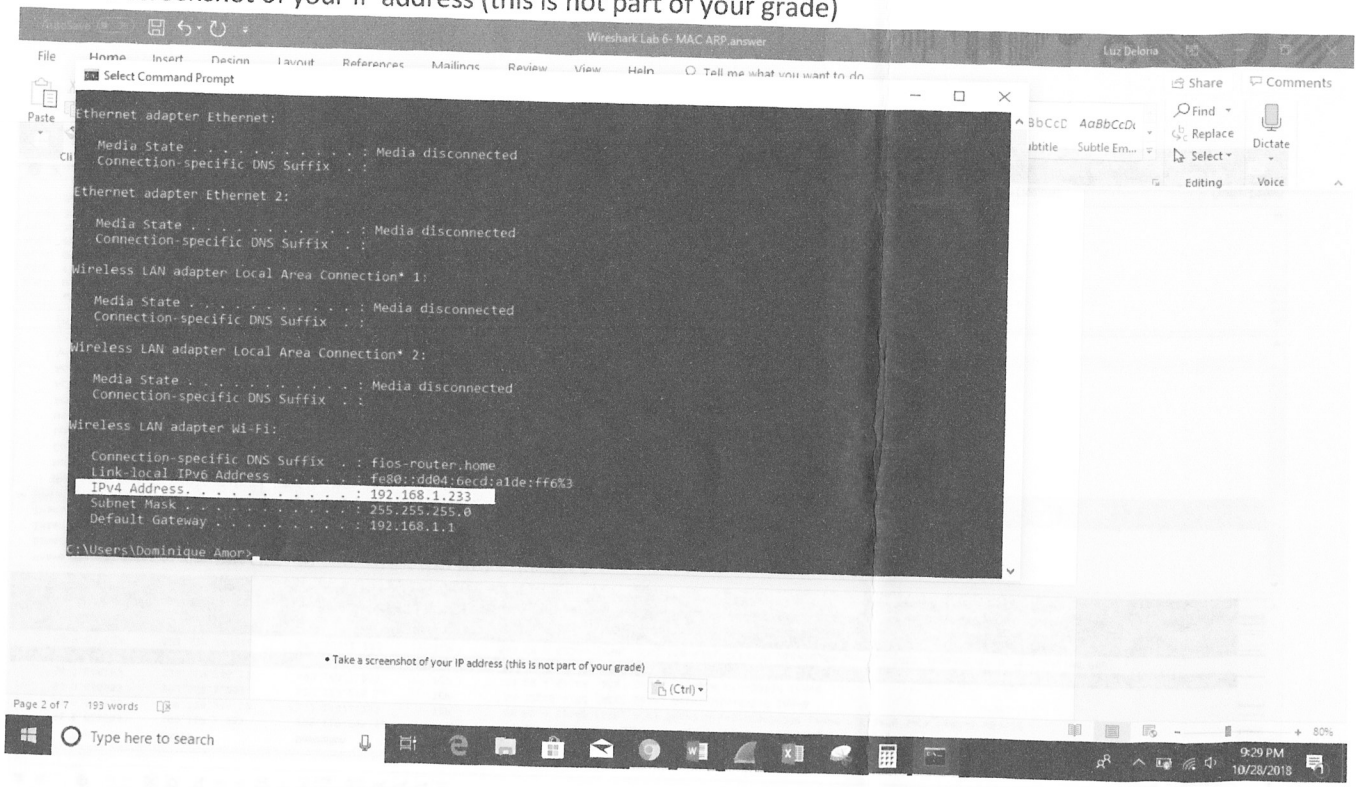
Luz Deloria
Lab 6
10/29/18

Instructions: •
Clear your browser history, and visit:
http://gaia.cs.umass.edu/wireshark-labs/HTTPethereal-lab-file3.html
(your browser should display the US Bill of Rights)

- Using Wireshark, capture the packets. Remember to start, then visit webpage, and then stop.
- We are going to analyze Ethernet frames.

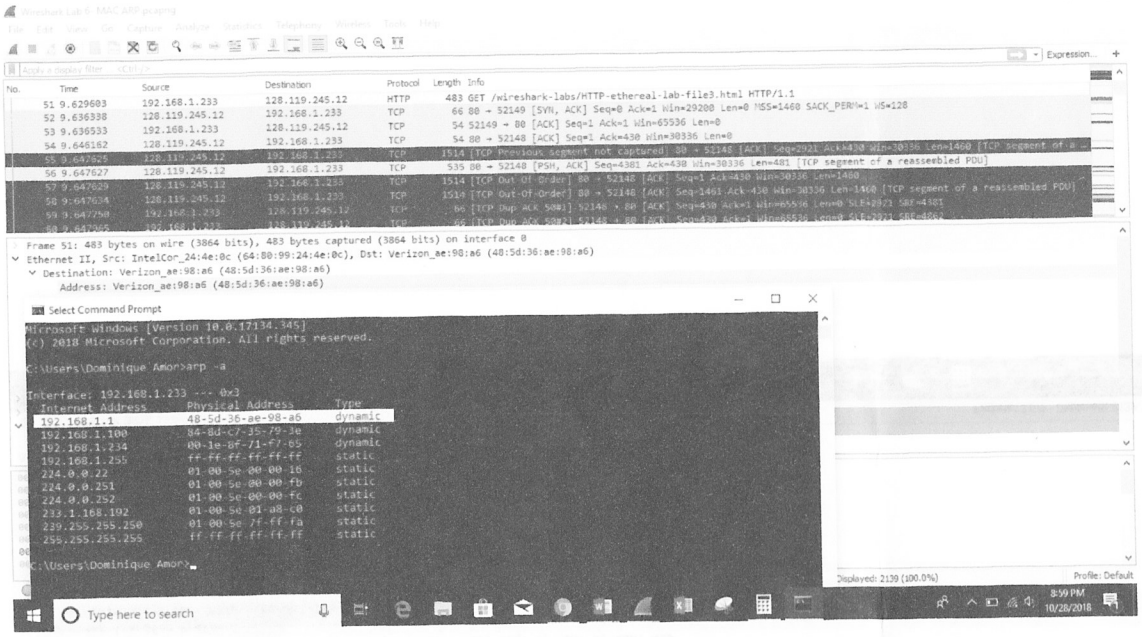


- Take a screenshot of your IP address (this is not part of your grade)



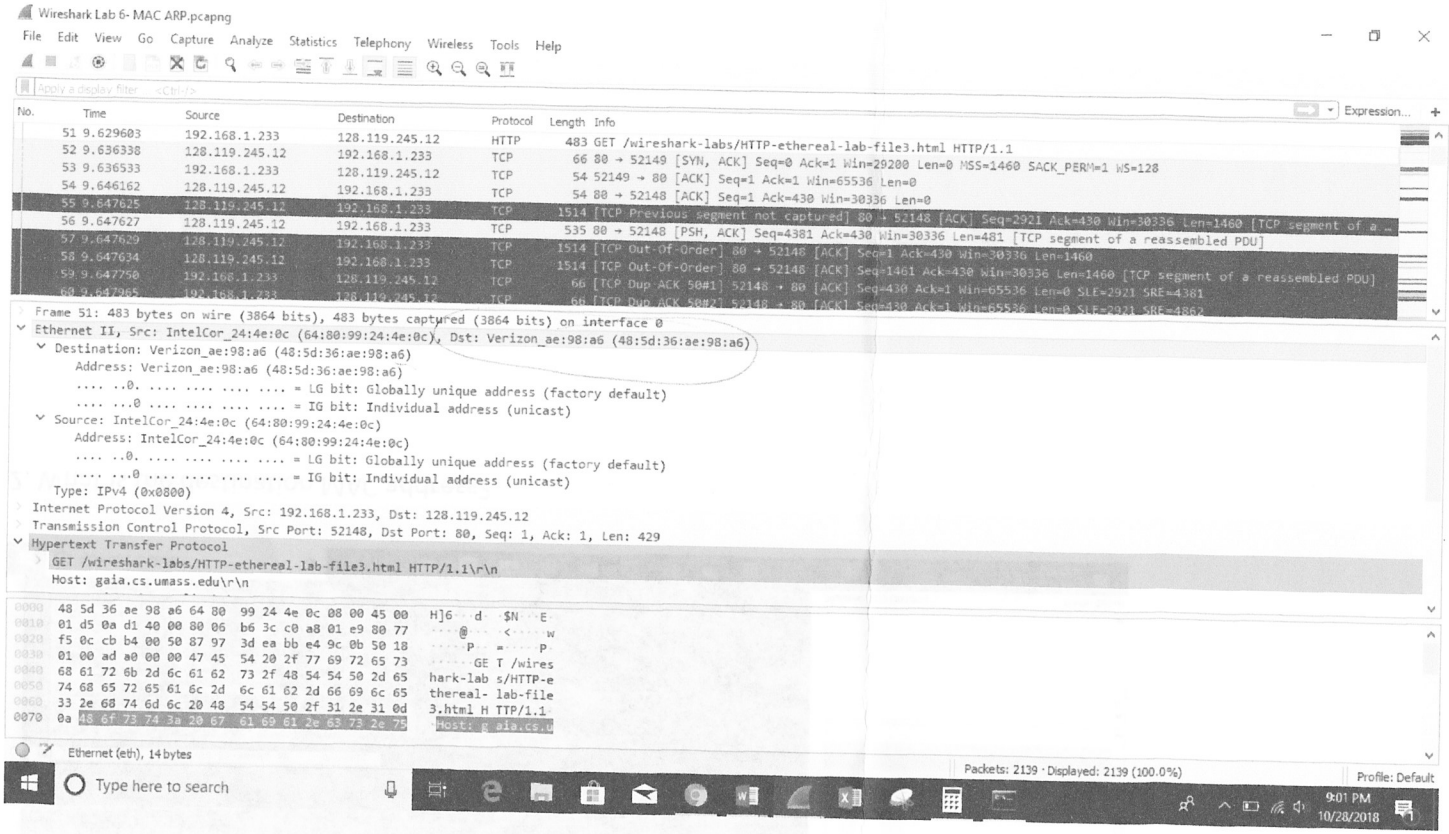
Questions:

1. What is the MAC address from your computer?

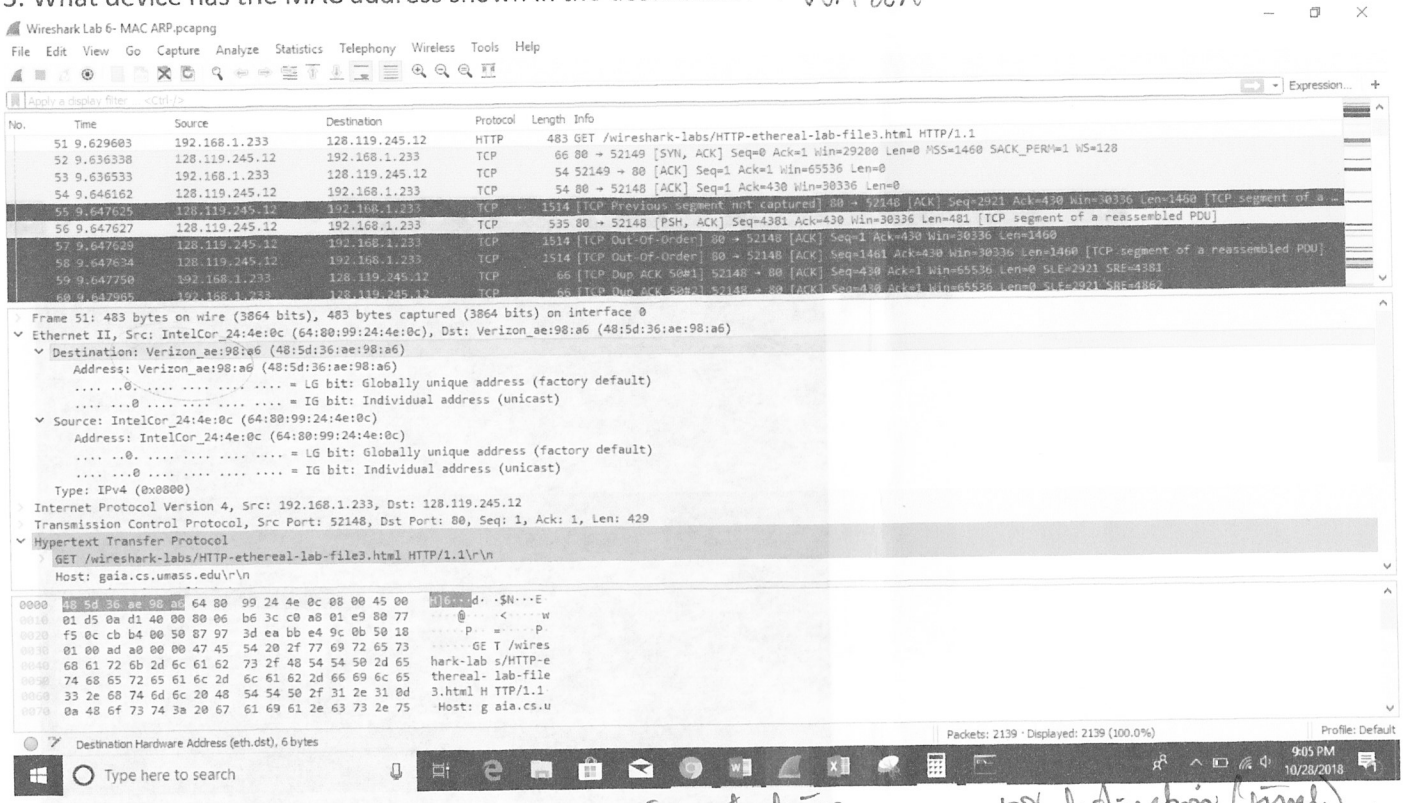



2. What is the destination MAC address?

(2)


Wireshark Lab 6- MAC ARP.pcapng
File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help
No. Time Source Destination Protocol Length Info
51 9.629603 192.168.1.233 128.119.245.12 HTTP 483 GET /wireshark-labs/HTTP-ethereal-lab-file3.html HTTP/1.1
52 9.636338 128.119.245.12 192.168.1.233 TCP 66 80 → 52149 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM=1 WS=128
53 9.636533 192.168.1.233 128.119.245.12 TCP 54 52149 → 80 [ACK] Seq=1 Ack=1 Win=65536 Len=0
54 9.646162 128.119.245.12 192.168.1.233 TCP 54 80 → 52148 [ACK] Seq=1 Ack=430 Win=30336 Len=0
55 9.647625 128.119.245.12 192.168.1.233 TCP 1514 [TCP Previous segment not captured] 80 → 52148 [ACK] Seq=2921 Ack=430 Win=30336 Len=1460 [TCP segment of a …
56 9.647627 128.119.245.12 192.168.1.233 TCP 535 80 → 52148 [PSH, ACK] Seq=4381 Ack=430 Win=30336 Len=481 [TCP segment of a reassembled PDU]
57 9.647629 128.119.245.12 192.168.1.233 TCP 1514 [TCP Out-Of-Order] 80 → 52148 [ACK] Seq=1 Ack=430 Win=30336 Len=1460
58 9.647634 128.119.245.12 192.168.1.233 TCP 1514 [TCP Out-Of-Order] 80 → 52148 [ACK] Seq=1461 Ack=430 Win=30336 Len=1460 [TCP segment of a reassembled PDU]
59 9.647750 192.168.1.233 128.119.245.12 TCP 66 [TCP Dup ACK 50#1] 52148 → 80 [ACK] Seq=430 Ack=1 Win=65536 Len=0 SLE=2921 SRE=4381
60 9.647765 192.168.1.233 128.119.245.12 TCP 66 [TCP Dup ACK 50#2] 52148 → 80 [ACK] Seq=430 Ack=1 Win=65536 Len=0 SLE=2921 SRE=4862
Frame 51: 483 bytes on wire (3864 bits), 483 bytes captured (3864 bits) on interface 0
Ethernet II, Src: IntelCor_24:4e:0c (64:80:99:24:4e:0c), Dst: Verizon_ae:98:a6 (48:5d:36:ae:98:a6)
Destination: Verizon_ae:98:a6 (48:5d:36:ae:98:a6)
Address: Verizon_ae:98:a6 (48:5d:36:ae:98:a6)
.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)
.... ...0 .... .... .... .... = IG bit: Individual address (unicast)
Source: IntelCor_24:4e:0c (64:80:99:24:4e:0c)
Address: IntelCor_24:4e:0c (64:80:99:24:4e:0c)
.... ..0. .... .... .... .... = LG bit: Globally unique address (factory default)
.... ...0 .... .... .... .... = IG bit: Individual address (unicast)
Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.1.233, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 52148, Dst Port: 80, Seq: 1, Ack: 1, Len: 429
Hypertext Transfer Protocol
GET /wireshark-labs/HTTP-ethereal-lab-file3.html HTTP/1.1\r\n
Host: gaia.cs.umass.edu\r\n
0000 48 5d 36 ae 98 a6 64 80 99 24 4e 0c 08 00 45 00 H]6 d $N E
0010 01 d5 0a d1 40 00 80 06 b6 3c c0 a8 01 e9 80 77 @ < w
0020 f5 0c cb b4 00 50 87 97 3d ea bb e4 9c 0b 50 18 P = P
0030 01 00 ad a0 00 00 47 45 54 20 2f 77 69 72 65 73 GE T /wires
0040 68 61 72 6b 2d 6c 61 62 73 2f 48 54 54 50 2d 65 hark-lab s/HTTP-e
0050 74 68 65 72 65 61 6c 2d 6c 61 62 2d 66 69 6c 65 thereal- lab-file
0060 33 2e 68 74 6d 6c 20 48 54 54 50 2f 31 2e 31 0d 3.html H TTP/1.1
0070 0a 48 6f 73 74 3a 20 67 61 69 61 2e 63 73 2e 75 Host: g aia.cs.u
Ethernet (eth), 14 bytes
Packets: 2139 · Displayed: 2139 (100.0%)
Profile: Default
Type here to search
9:01 PM
10/28/2018

3. What device has the MAC address shown in the destination? Verizon

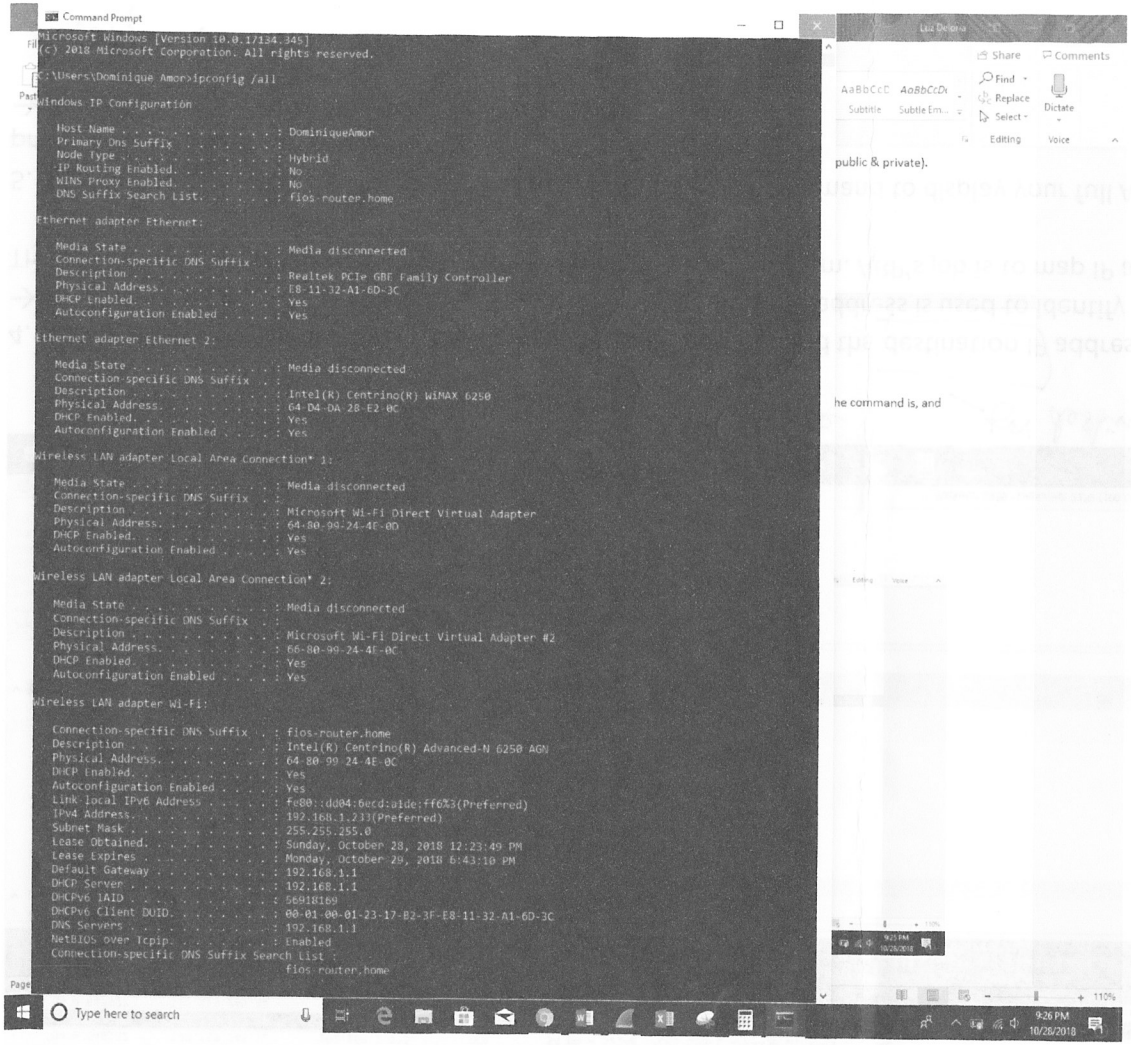



for next device — for destination (final)

4. Explain the relationship between the destination MAC address and the destination IP address.
→MAC address is a UNIQUE address given to a machine while an IP address is used to identify a machine over the internet (public & private). The ARP (Address Resolution Protocol) cache is the link between them. ARP's job is to map IP address to MAC address.

5. Using the terminal (cmd in Windows, Terminal in mac), run a command to display your full ARP list table. (Find out what the command is, and print a full screen shot of your result.)
→**ipconfig /all** is a command to display your full ARP list table.

arp -a.

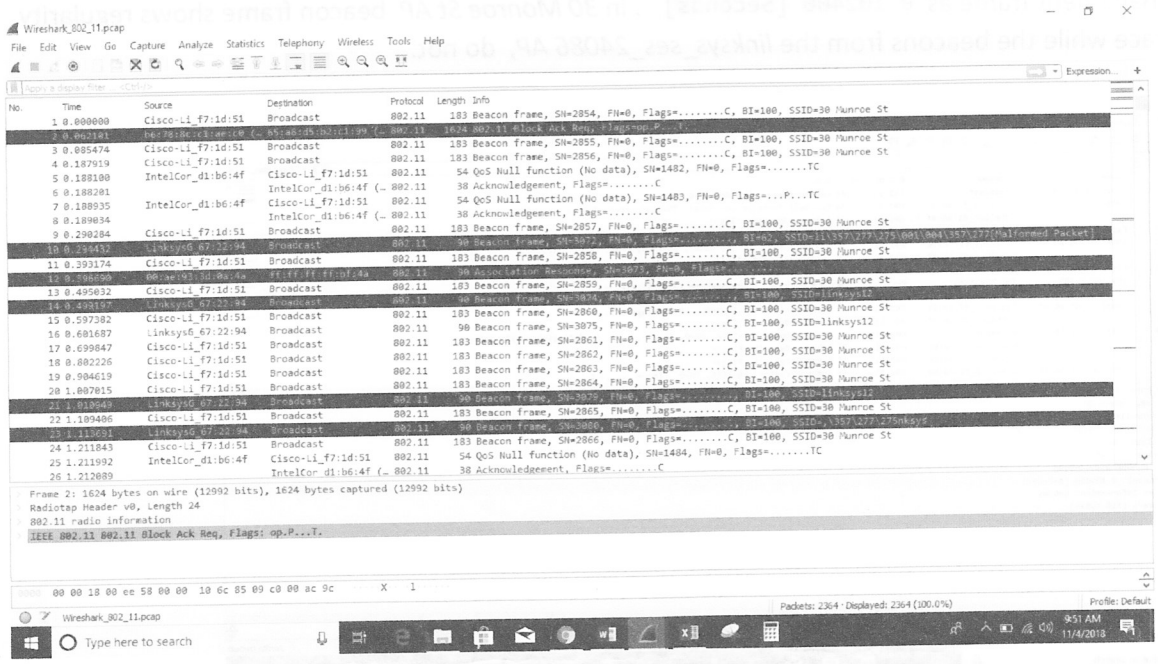

Command Prompt
Microsoft Windows [Version 10.0.17134.345]
(c) 2018 Microsoft Corporation. All rights reserved.
C:\Users\Dominique Amor>ipconfig /all
Windows IP Configuration
Host Name . . . . . : DominiqueAmor
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : fios-router.home
Ethernet adapter Ethernet:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Realtek PCIe GBE Family Controller
Physical Address. . . . . : E8-11-32-A1-6D-3C
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Ethernet adapter Ethernet 2:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Intel(R) Centrino(R) WiMAX 6250
Physical Address. . . . . : 64-D4-DA-28-E2-0C
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Wireless LAN adapter Local Area Connection* 1:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
Physical Address. . . . . : 64-80-99-24-4E-0D
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Wireless LAN adapter Local Area Connection* 2:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :
Description . . . . . : Microsoft Wi-Fi Direct Virtual Adapter #2
Physical Address. . . . . : 66-80-99-24-4E-0C
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Wireless LAN adapter Wi-Fi:
Connection-specific DNS Suffix . : fios-router.home
Description . . . . . : Intel(R) Centrino(R) Advanced-N 6250 AGN
Physical Address. . . . . : 64-80-99-24-4E-0C
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::dd04:6ecd:a1de:ff6%3(Preferred)
IPv4 Address. . . . . : 192.168.1.233(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Sunday, October 28, 2018 12:23:49 PM
Lease Expires . . . . . : Monday, October 29, 2018 6:43:10 PM
Default Gateway . . . . . : 192.168.1.1
DHCP Server . . . . . : 192.168.1.1
DHCPv6 IAID . . . . . : 56918169
DHCPv6 Client DUID. . . . . : 00-01-00-01-23-17-B2-3F-E8-11-32-A1-6D-3C
DNS Servers . . . . . : 192.168.1.1
NetBIOS over Tcpip. . . . . : Enabled
Connection-specific DNS Suffix Search List :
fios-router.home
Type here to search
9:26 PM
10/28/2018
Share
Comments
Find
Replace
Select
Dictate
Editing
Voice
public & private).
he command is, and
110%

5

**Luz Deloria**

**Lab -7**

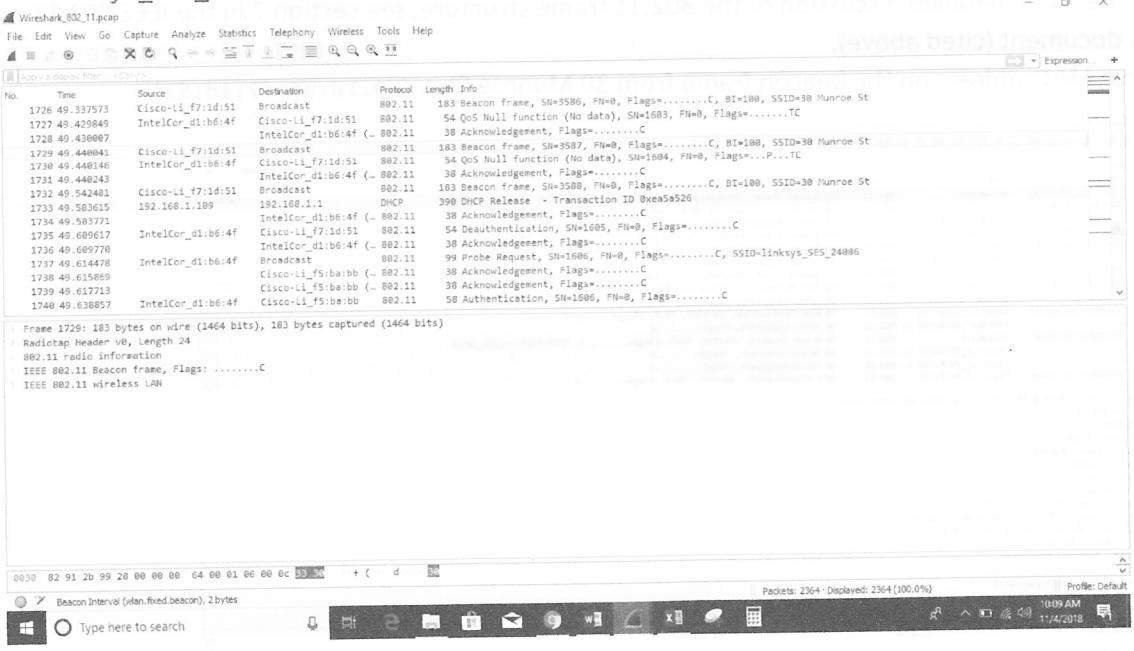
11/5/18




Questions:

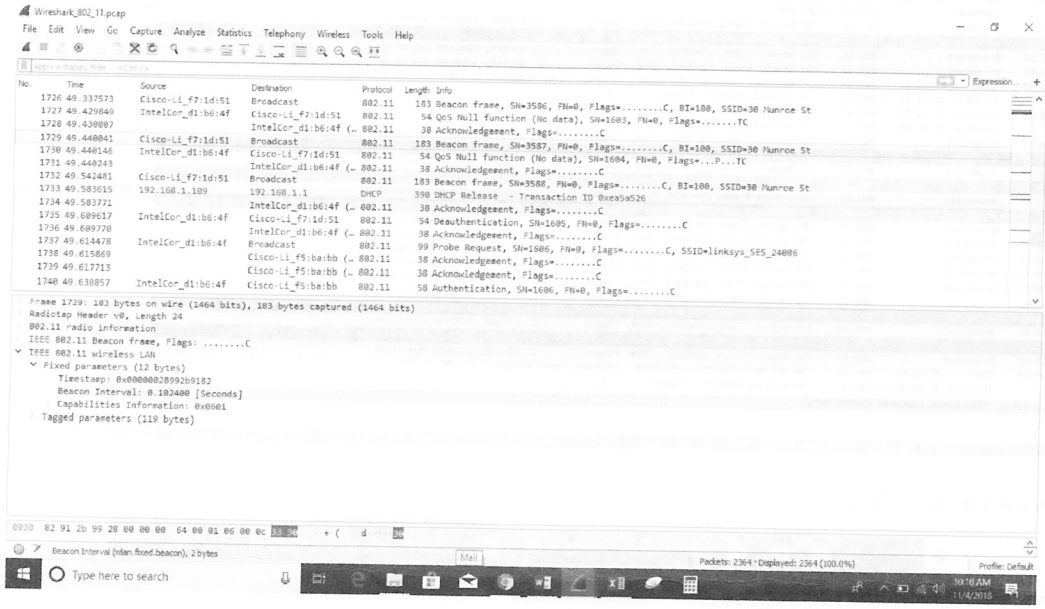
1. What are the SSIDs of the two access points that are issuing most of the beacon frames in this trace?

- The SSIDs of the two access points that are issuing most of the beacon frames in this trace are: 30 Munroe St & linksys_SES_24086.



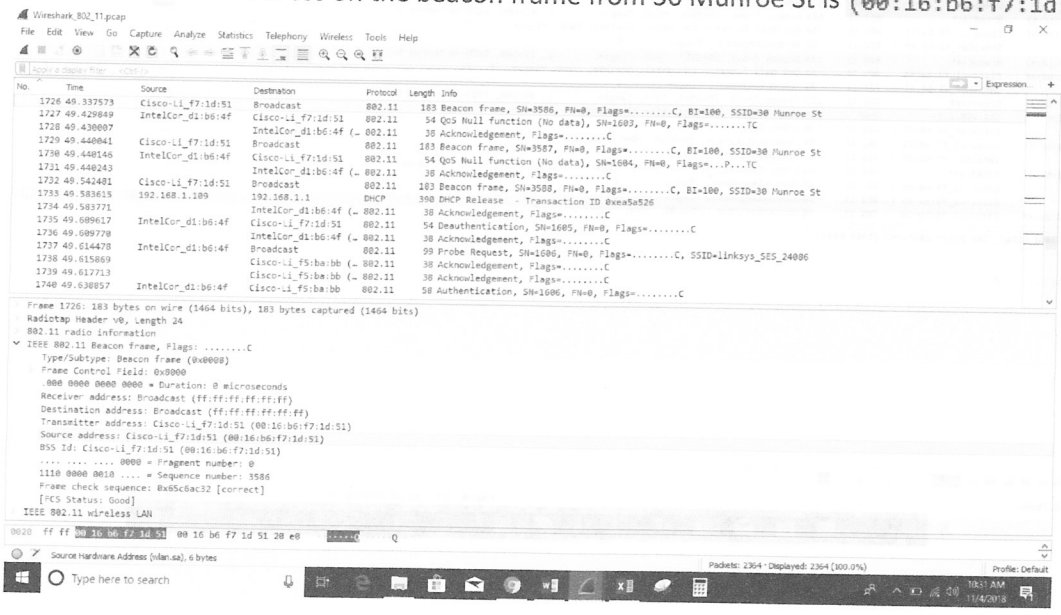
2. What are the intervals of time between the transmissions of the beacon frames the linksys_ses_24086 access point? From the 30 Munroe St. access point? (Hint: this interval of time is contained in the beacon frame itself).

- The beacon interval for both access points in reported in the beacon interval of the 802.11 wireless LAN management frame as `0.102400 [Seconds]` . In *30 Monroe St AP* beacon frame shows regularity in the trace while the beacons from the *linksys_ses_24086 AP*, do not.



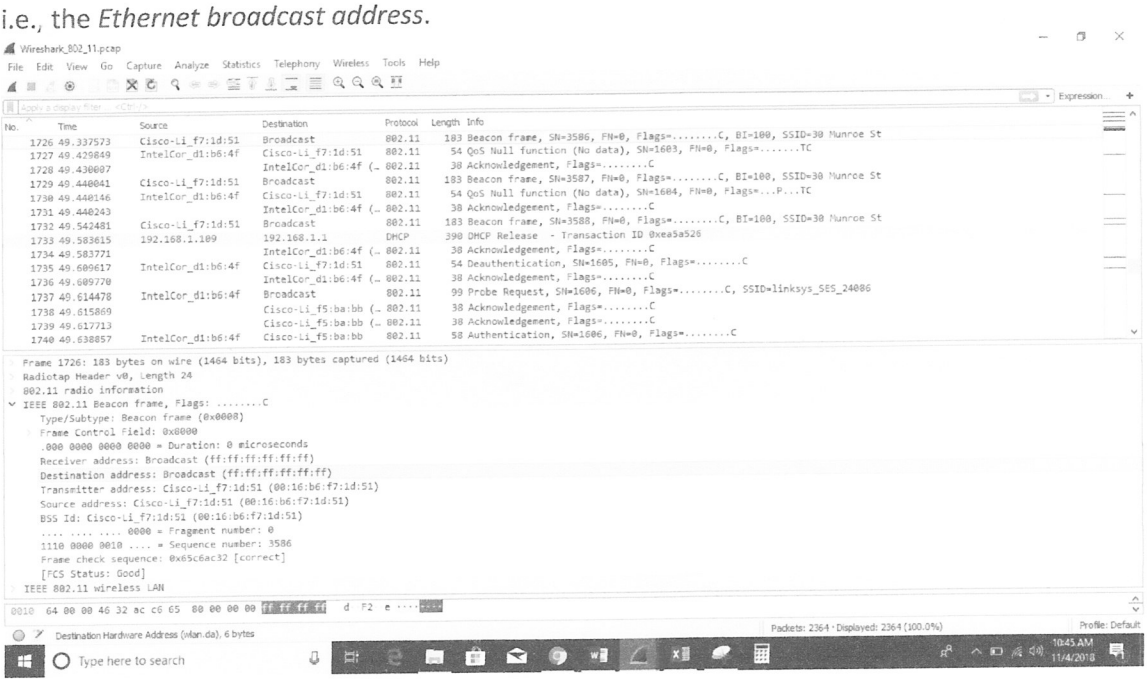

3. What (in hexadecimal notation) is the source MAC address on the beacon frame from 30 Munroe St? Recall from Figure 7.13 in the text that the source, destination, and BSS are three addresses used in an 802.11 frame. For a detailed discussion of the 802.11 frame structure, see section 7 in the IEEE 802.11 standards document (cited above).

- The source MAC address on the beacon frame from 30 Munroe St is `(00:16:b6:f7:1d:51)`



4. What (in hexadecimal notation) is the destination MAC address on the beacon frame from 30 Munroe St??

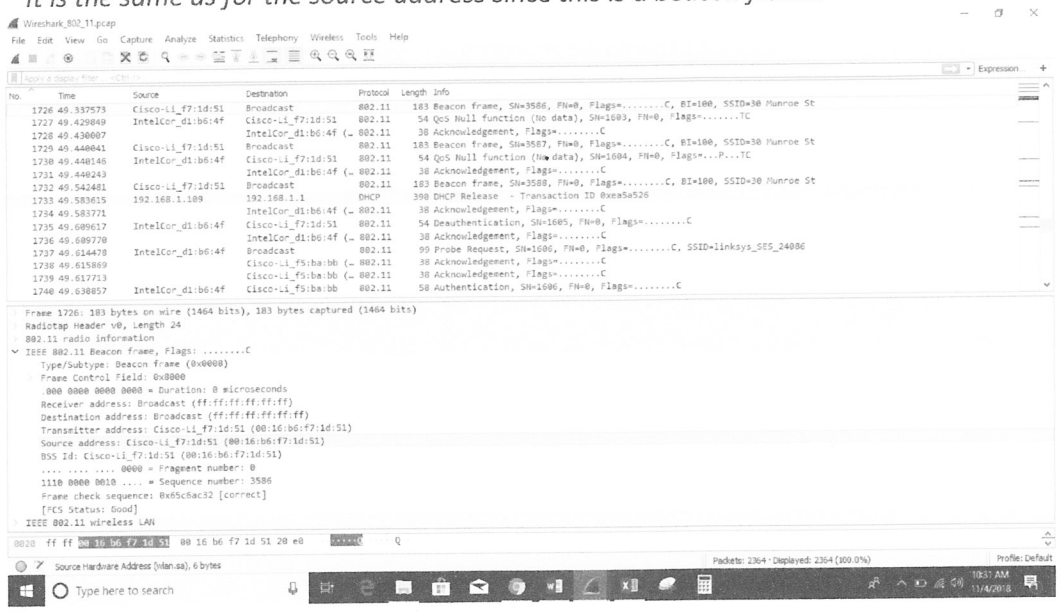
- The destination MAC address on the 30 Munroe St beacon frame is `(ff:ff:ff:ff:ff:ff)` i.e., the *Ethernet broadcast address*.




5. What (in hexadecimal notation) is the MAC BSS id on the beacon frame from 30 Munroe St?

- The MAC BSS ID on the 30 Munroe St beacon frame is `(00:16:b6:f7:1d:51)`

  *It is the same as for the source address since this is a beacon frame.*



C:\Users\Dominique Amor\AppData\Local\Temp\Temp1_wireshark-traces.zip\Wireshark_802_11.pcap 2364 total packets, 2364 shown

```
No.     Time           Source                Destination           Protocol Length Info
   1726 49.337573      Cisco-Li_f7:1d:51     Broadcast             802.11   183    Beacon frame, SN=3586, FN=0, Flags=.....
BI=100, SSID=30 Munroe St
Frame 1726: 183 bytes on wire (1464 bits), 183 bytes captured (1464 bits)
Radiotap Header v0, Length 24
802.11 radio information
IEEE 802.11 Beacon frame, Flags: ........C
    Type/Subtype: Beacon frame (0x0008)
    Frame Control Field: 0x8000
    .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: Cisco-Li_f7:1d:51 (00:16:b6:f7:1d:51)
    Source address: Cisco-Li_f7:1d:51 (00:16:b6:f7:1d:51)
    BSS Id: Cisco-Li_f7:1d:51 (00:16:b6:f7:1d:51)
    .... .... .... 0000 = Fragment number: 0
    1110 0000 0010 .... = Sequence number: 3586
    Frame check sequence: 0x65c6ac32 [correct]
    [FCS Status: Good]
IEEE 802.11 wireless LAN
    Fixed parameters (12 bytes)
        Timestamp: 0x00000028992a0182
        Beacon Interval: 0.102400 [Seconds]
        Capabilities Information: 0x0601
    Tagged parameters (119 bytes)
```