Exercise 3 – Traffic analysis and identifying the OSI layers of the network packets

Difficulty: Hard

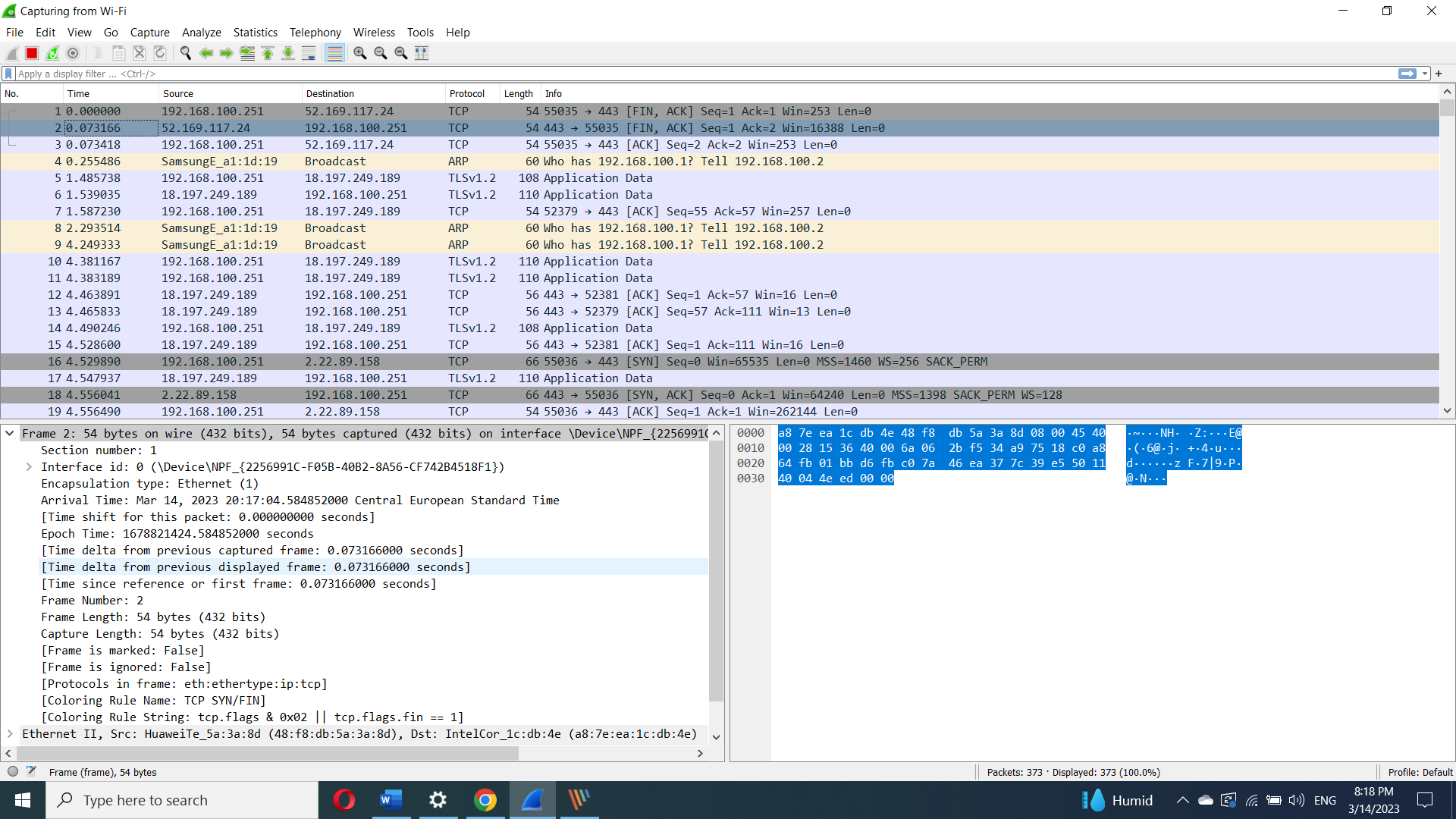
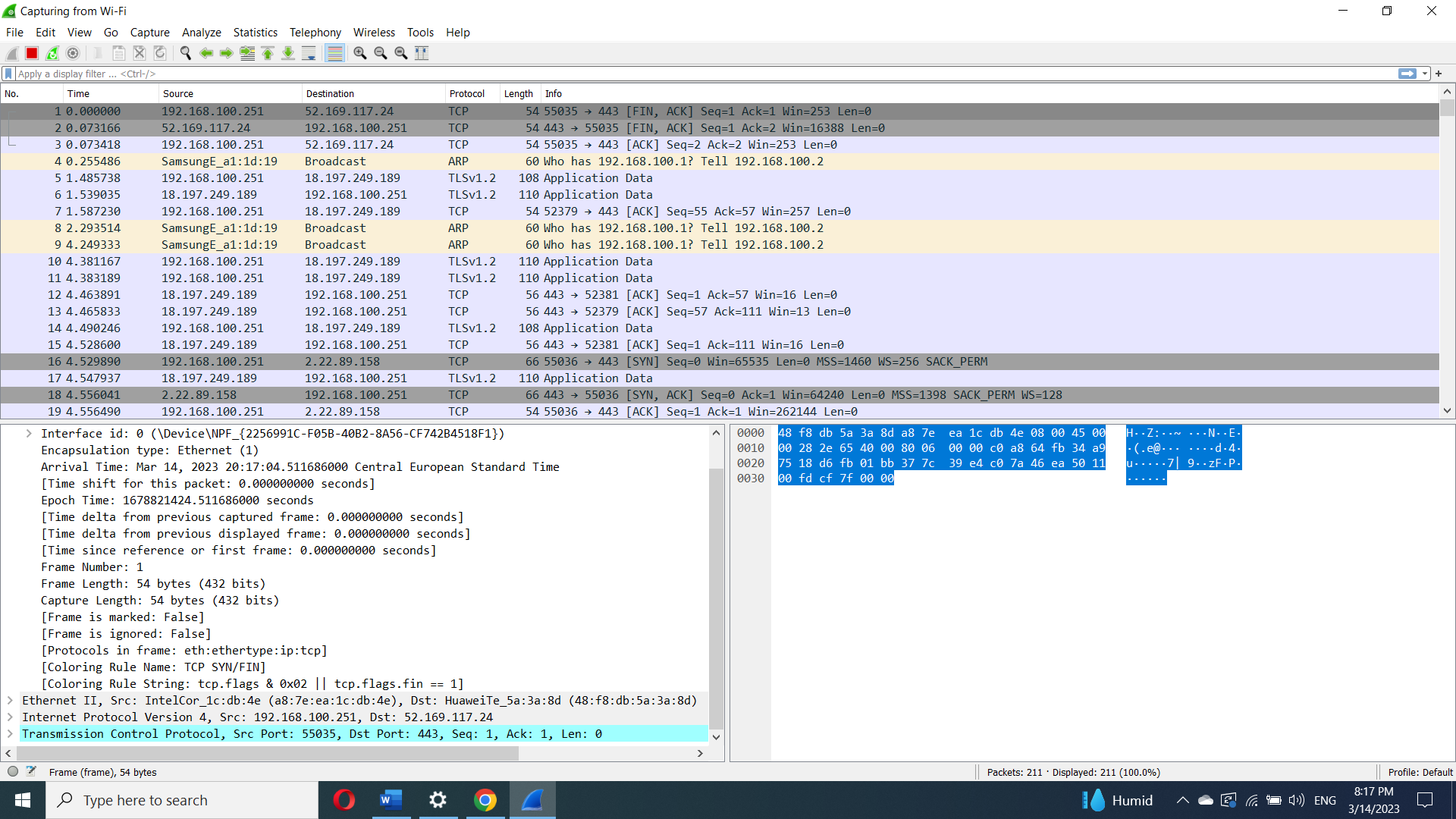
Prerequisite: Search online and get familiar with the TCP’s three-way handshake. Learn how to capture the three-way handshake using Wireshark. Install Wireshark on your computer and use it to capture traffic against a website or a server or your choice. It is recommended that you capture traffic against a simple website. Name and the IP address of the website you plan to capture traffic:

Analyze the TCP’s three-way handshake and using screenshots from the Wireshark window answer the questions below:

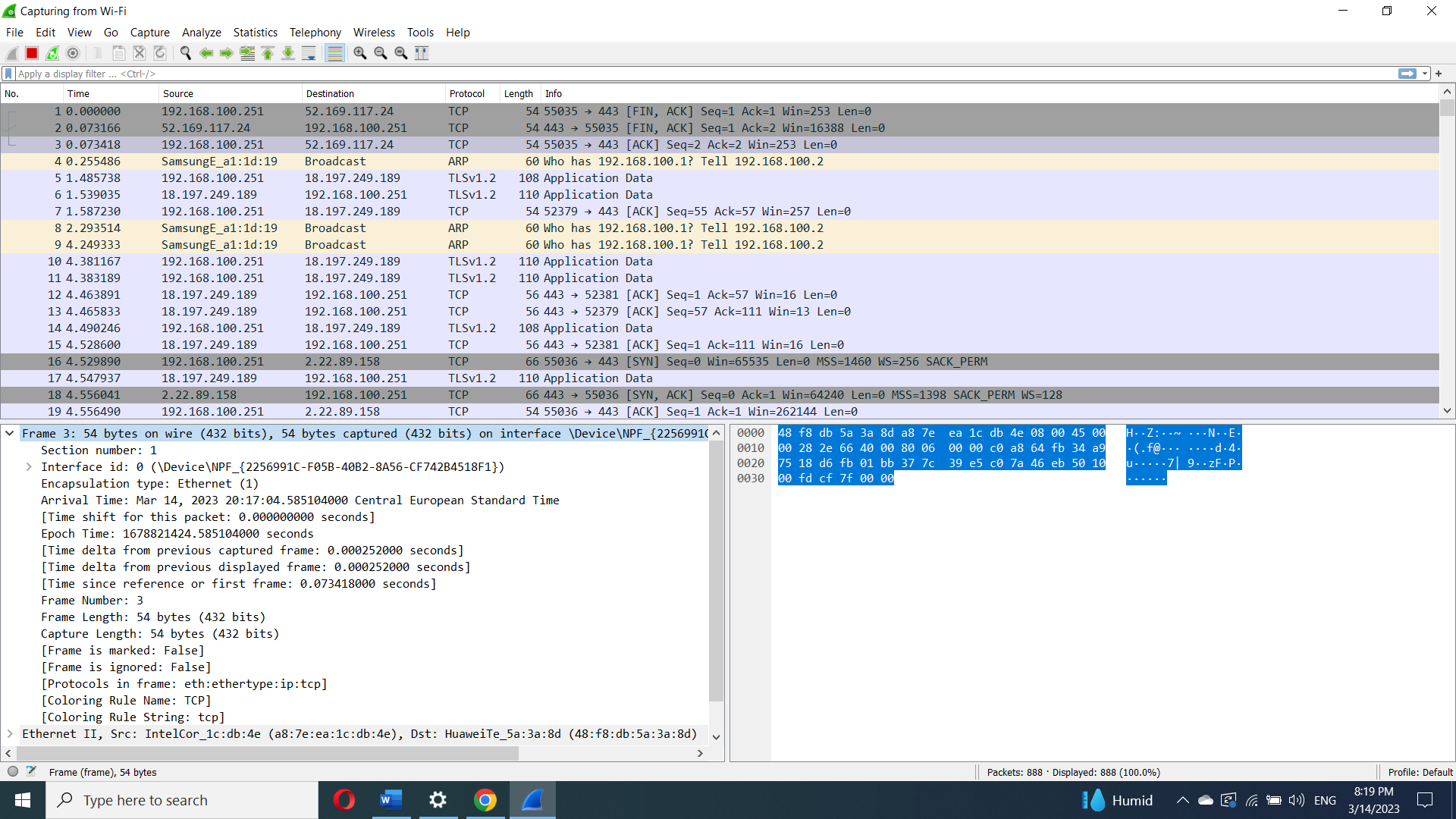
1. What is the source IP (of the initiating host): 192.168.100.251

2. What is the destination IP? (the target website): [34.149.120.3](https://www.whatismyip.com/34.149.120.3/)

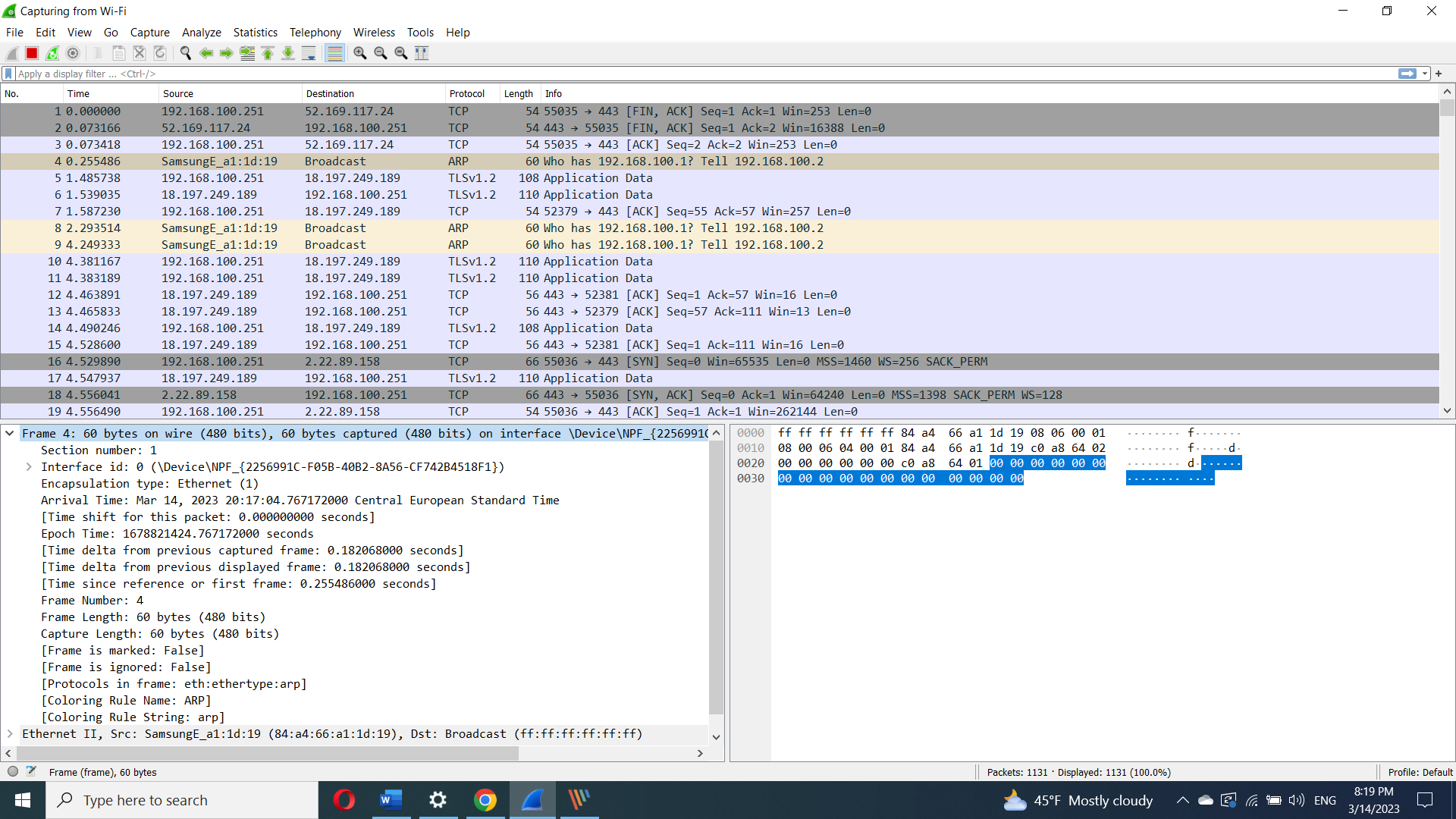
Identify the Network Interface (Layer 1 & 2) section of the SYN packet and paste a screenshot from it:



Identify the Network Layer 3 section of the SYN/ACK packet and paste a screenshot from it:



Identify the Transport Layer 4 section of the ACK packet and paste a screenshot from it bellow:



Look closely at the L2 section of the three-way handshake packet details. Each of them shows the source and destination MAC address of the packets.

Who is the owner of the destination MAC address of the SYN packet?

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