Mawlana Bhashani Science and Technology University

Lab-Report

Report No: 05

Course code: ICT-4202

Course title: Wireless and Mobile Communication Lab

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Session: 2015-2016

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Experiment No: 05

Experiment Name: Comparative Analysis of Wired and Wireless data using Wireshark.

Objectives:

- Firstly wireless data packages and wired data packages have to be find out using the Wireshark.
- Then we have to compare wired data packages with the wireless data packages.
- We have to filter the packages.
- Find out the host, IP of the data packages.
- Create the Statistics for both of the data packages.
- Finally compare the wired and wireless data packages simultaneously with the help of Wireshark.

Capturing Packets:

If we click any menu option, then it will show the available interfaces list. After clicking the menu, we have to start Capturing on interface that has IP address/Source/Host.

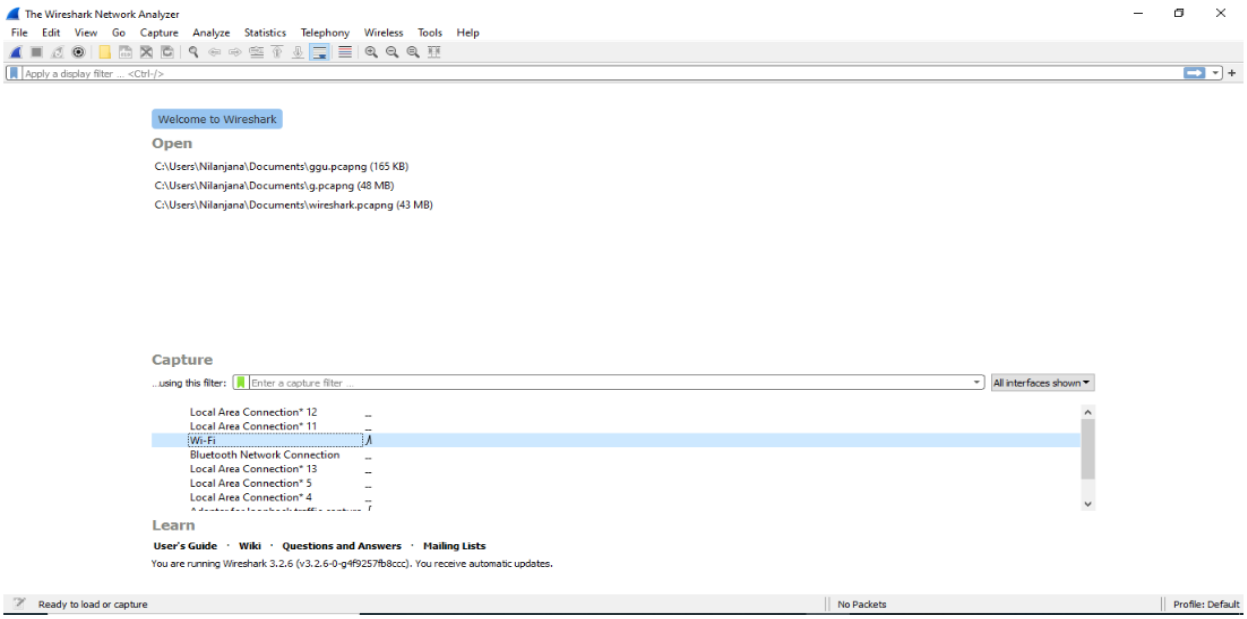

Figure 01: Wireshark Interface List

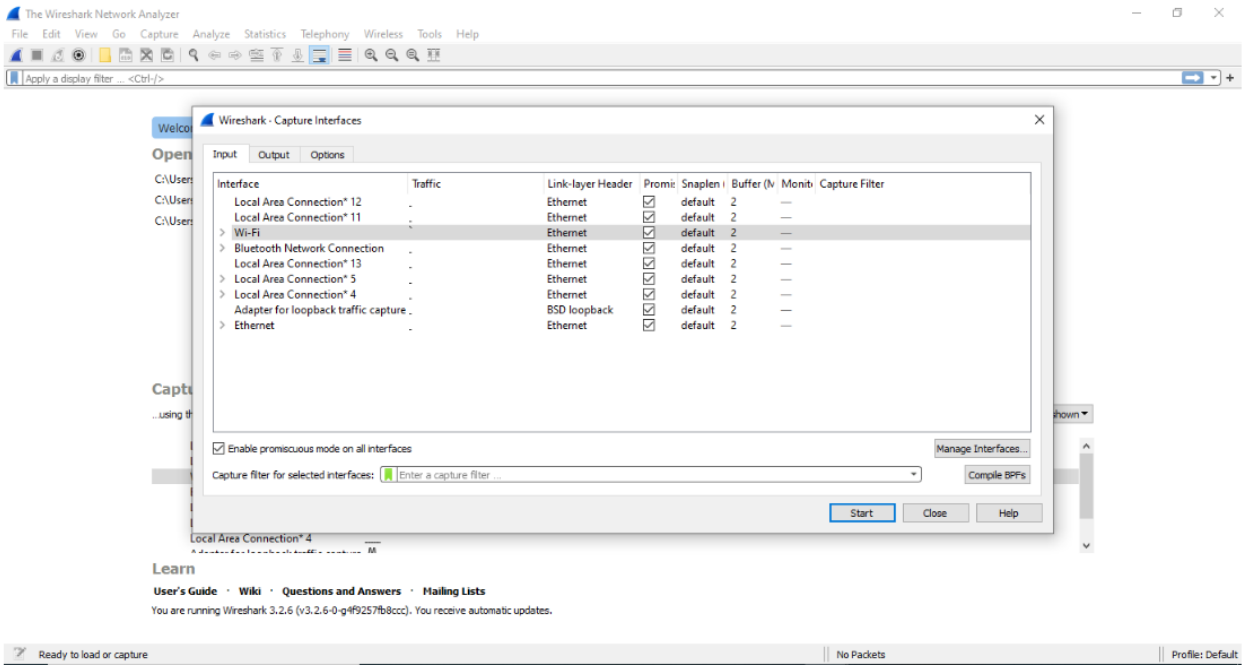

Figure 02-A: Start Capturing Interface that has for Wi-Fi (Wireless)

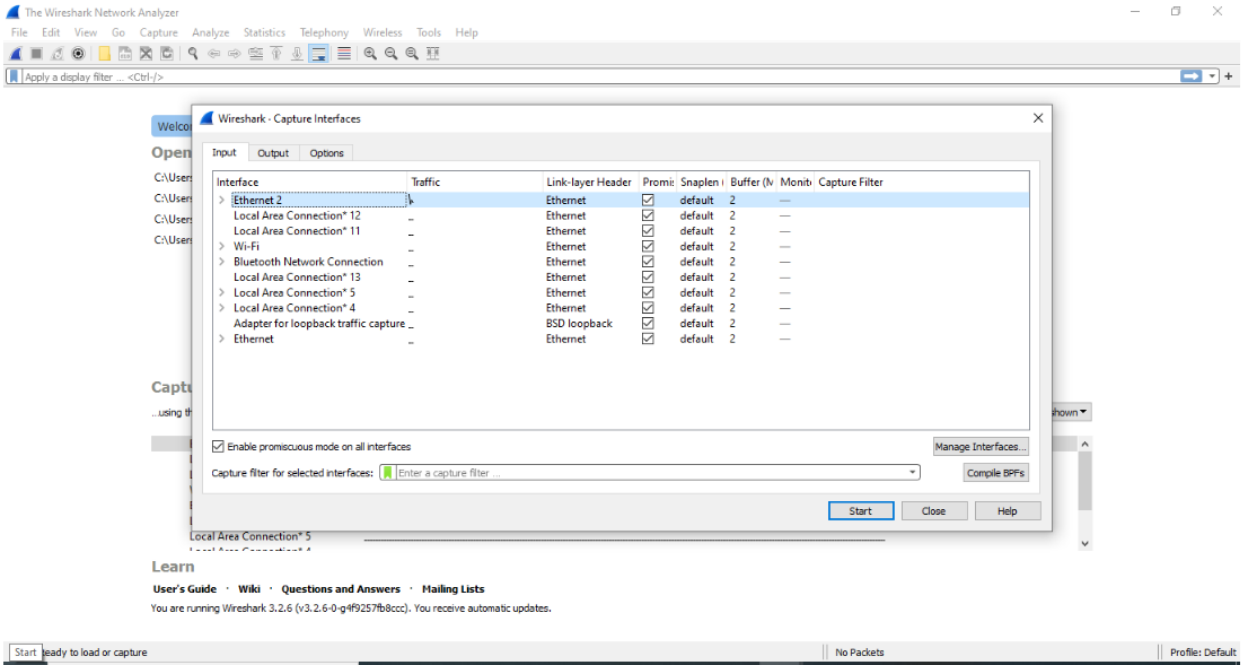

Figure 02-B: Start Capturing Interface that has for USB Tethering (Wired)

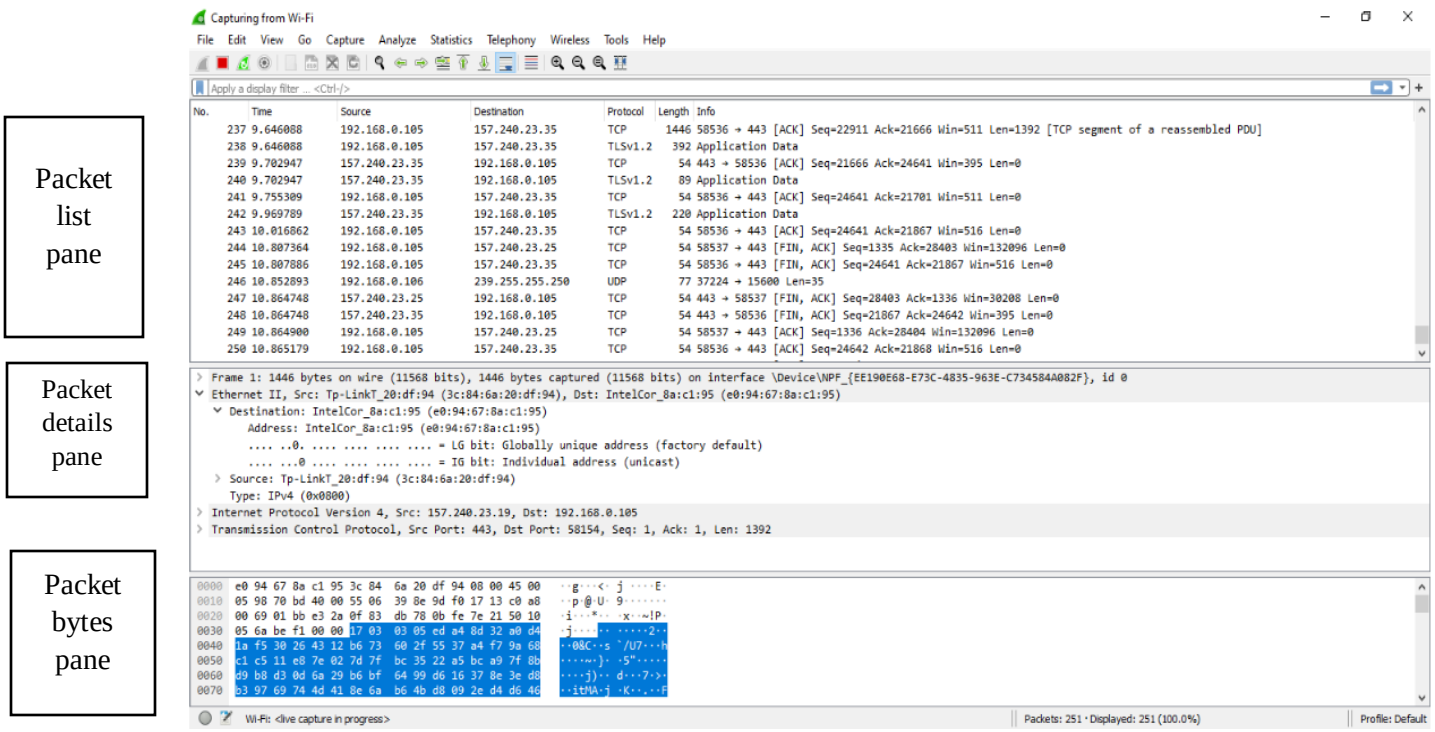

Figure 03-A: A sample packet capture window for Wireless Data Packages

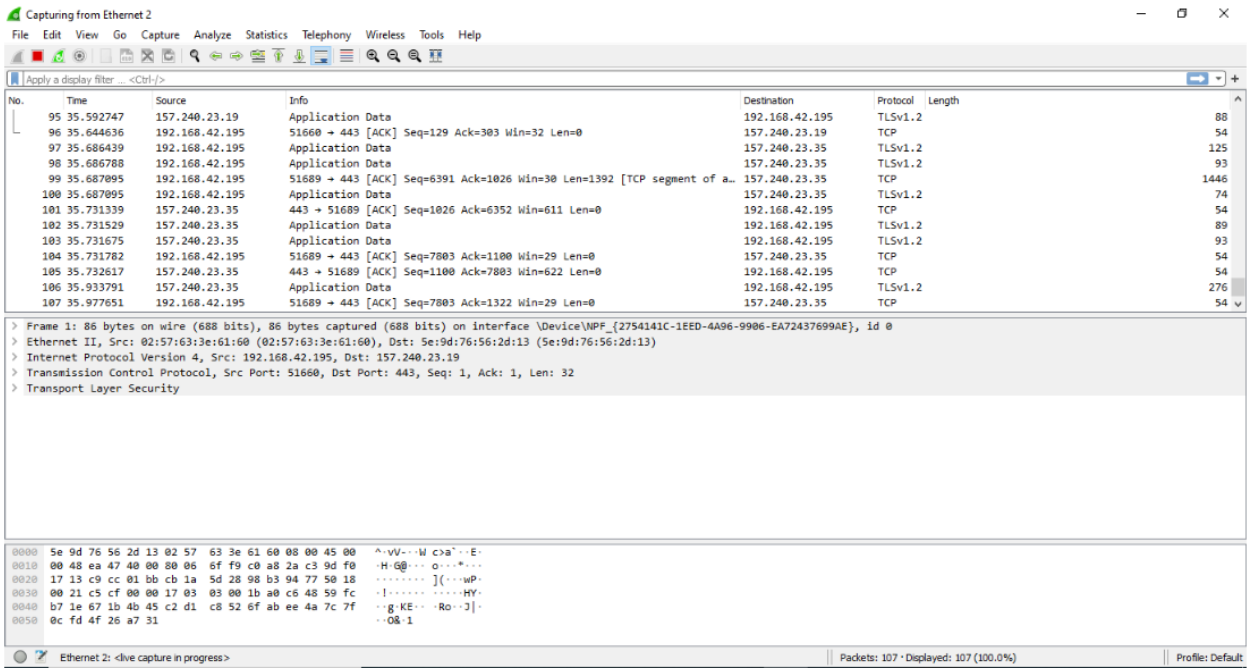

Figure 03-B: A sample packet capture window for Wired Data Pack

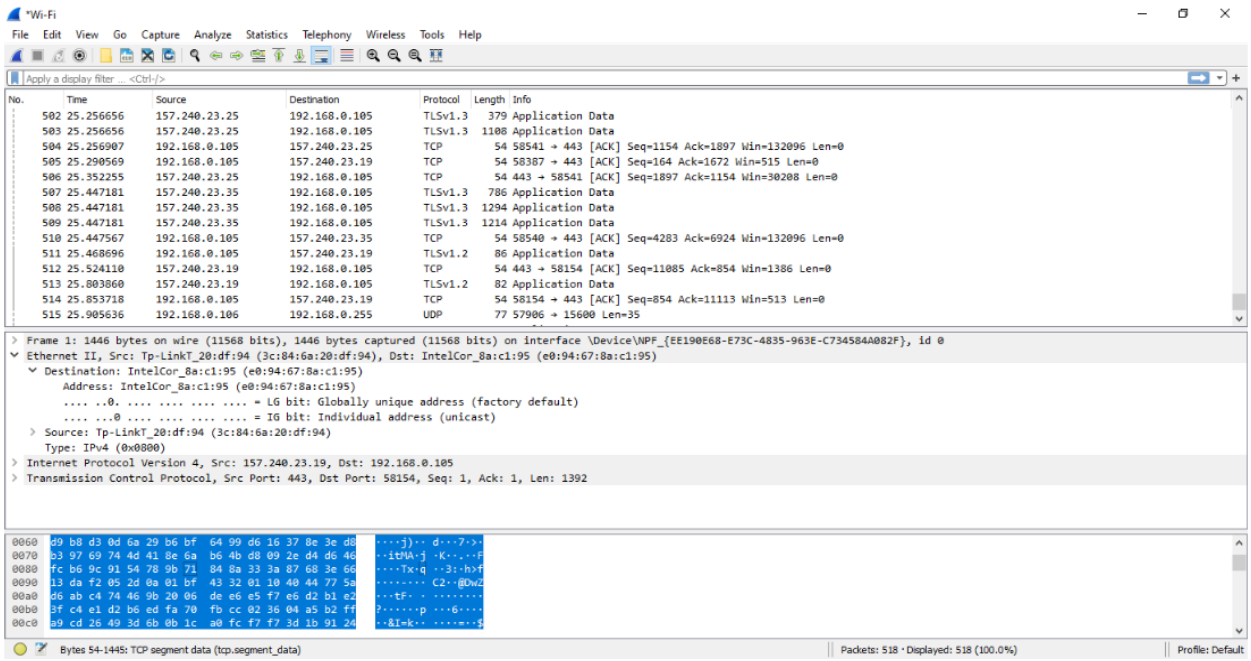

Figure 04-A: Stopping Capture for Wireless Data Packages

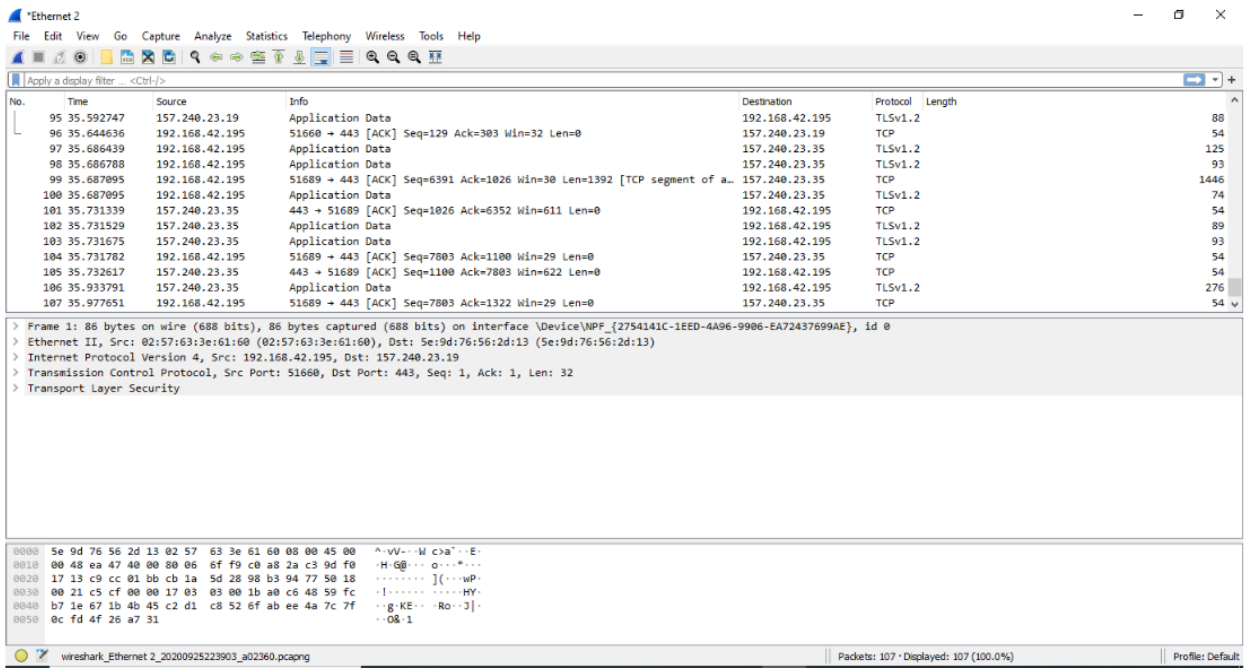

Figure 04-B: Stopping Capture for Wired Data Packages

Filtering:

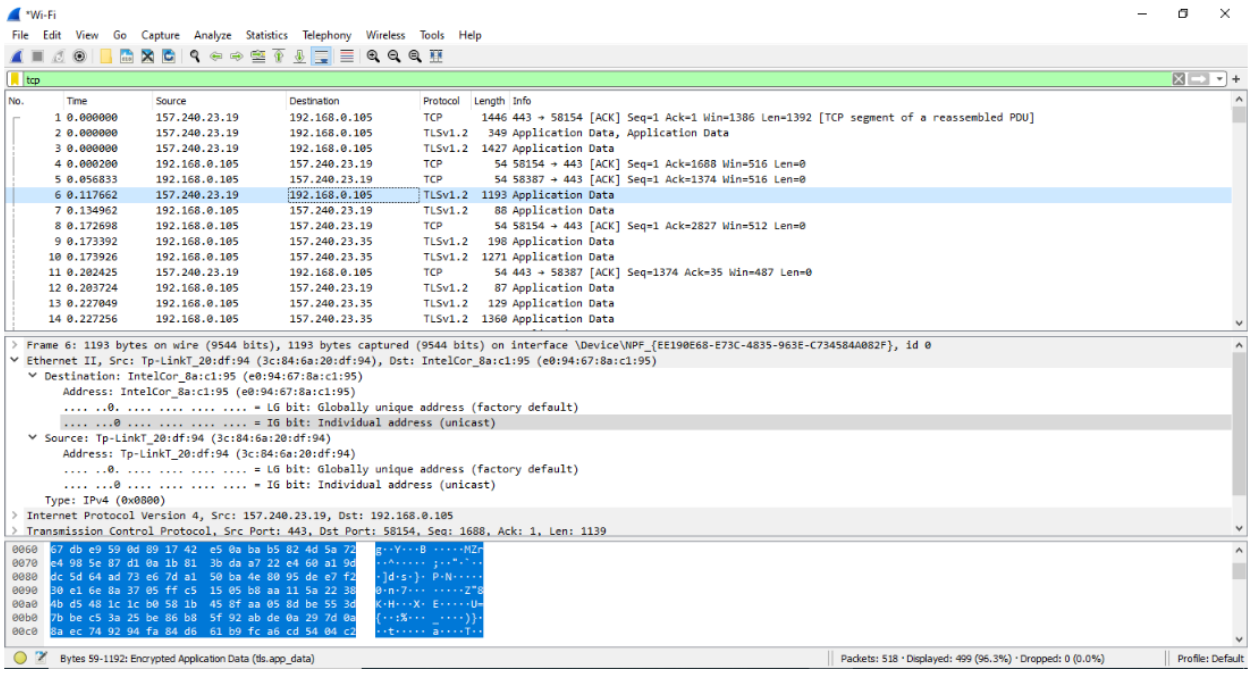

Figure 05-A: Filter by Protocol Wireless Data Packages

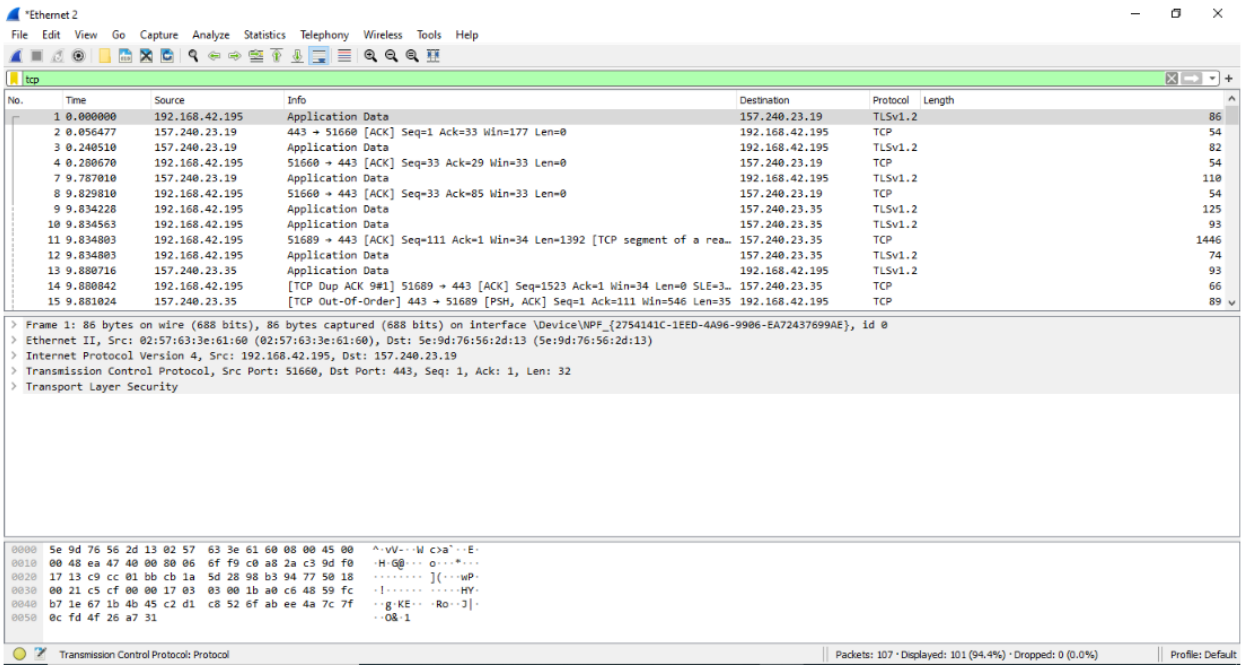

Figure 05-B: Filter by Protocol Wired Data Packages

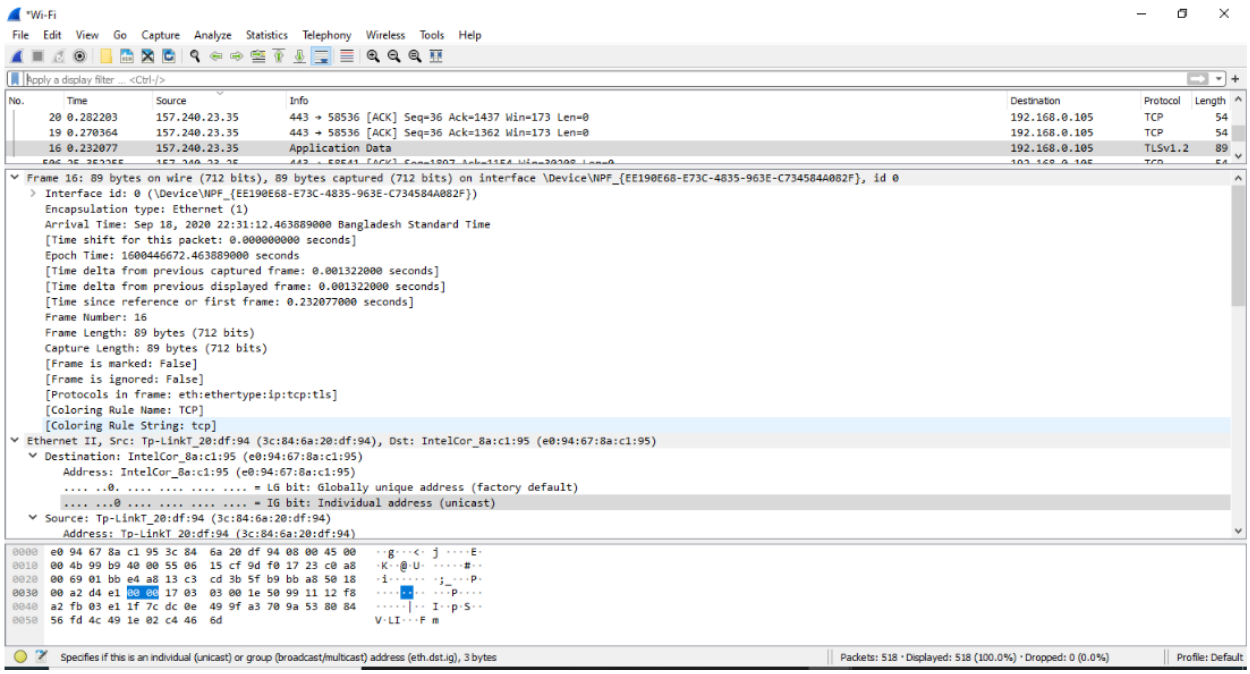

Figure 06-A: Packet Details Pane (Frame segment) for Wireless Data Packages.

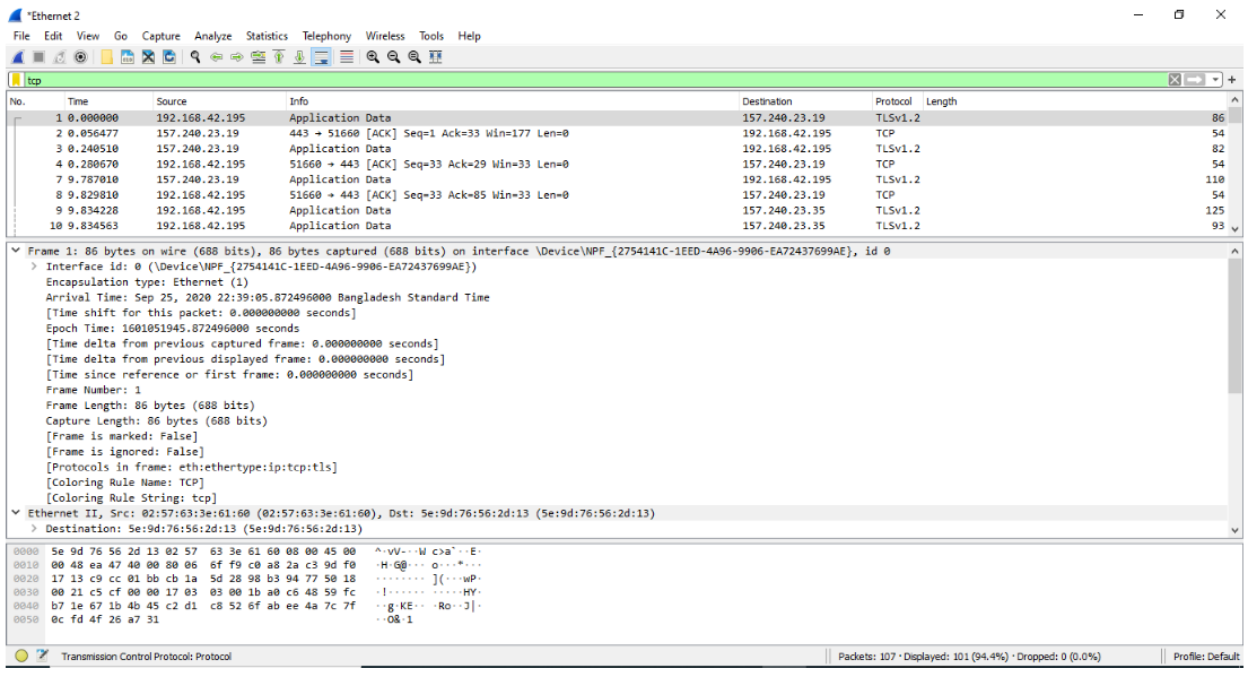

Figure 06-B: Packet Details Pane (Frame segment) for Wired Data Packages.

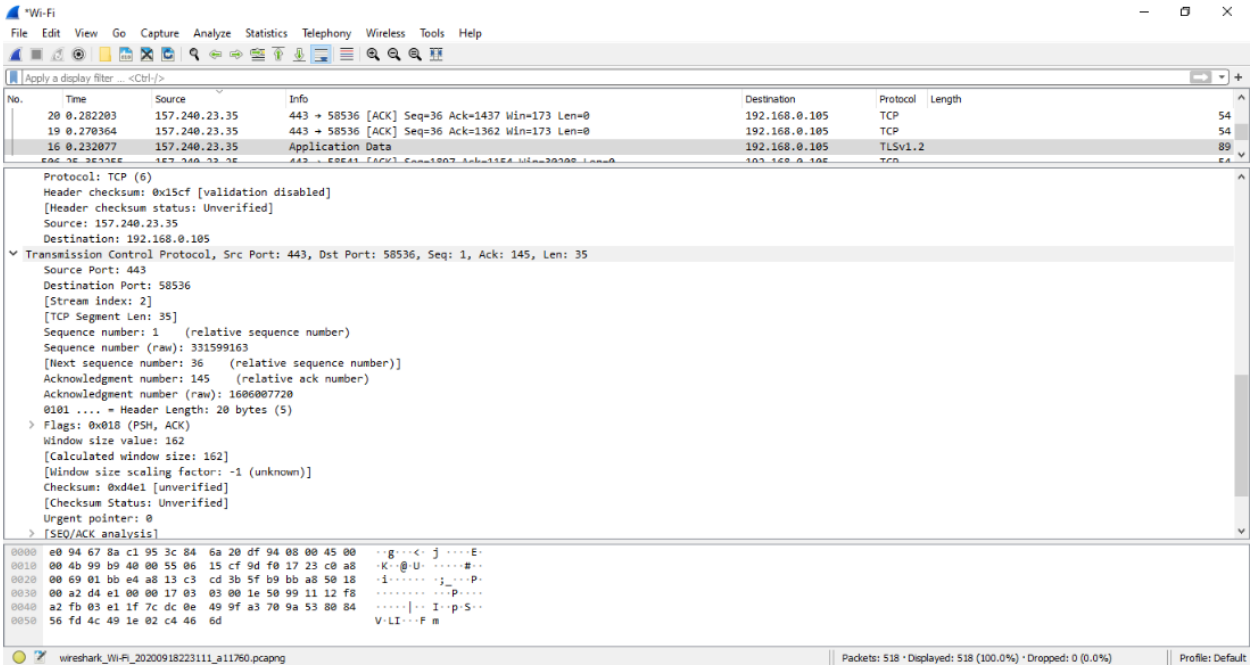

Figure 07-A: Packet Byte Pane for Wireless Data Packages

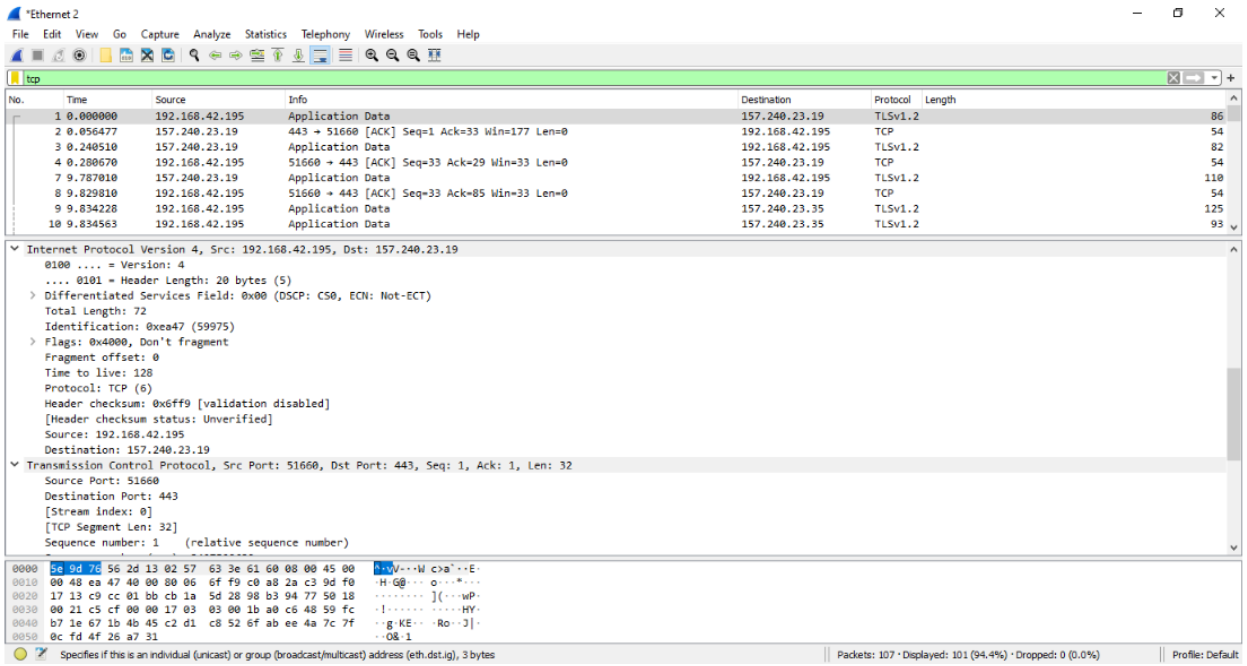

Figure 07-B: Packet Byte Pane for Wired Data Packages

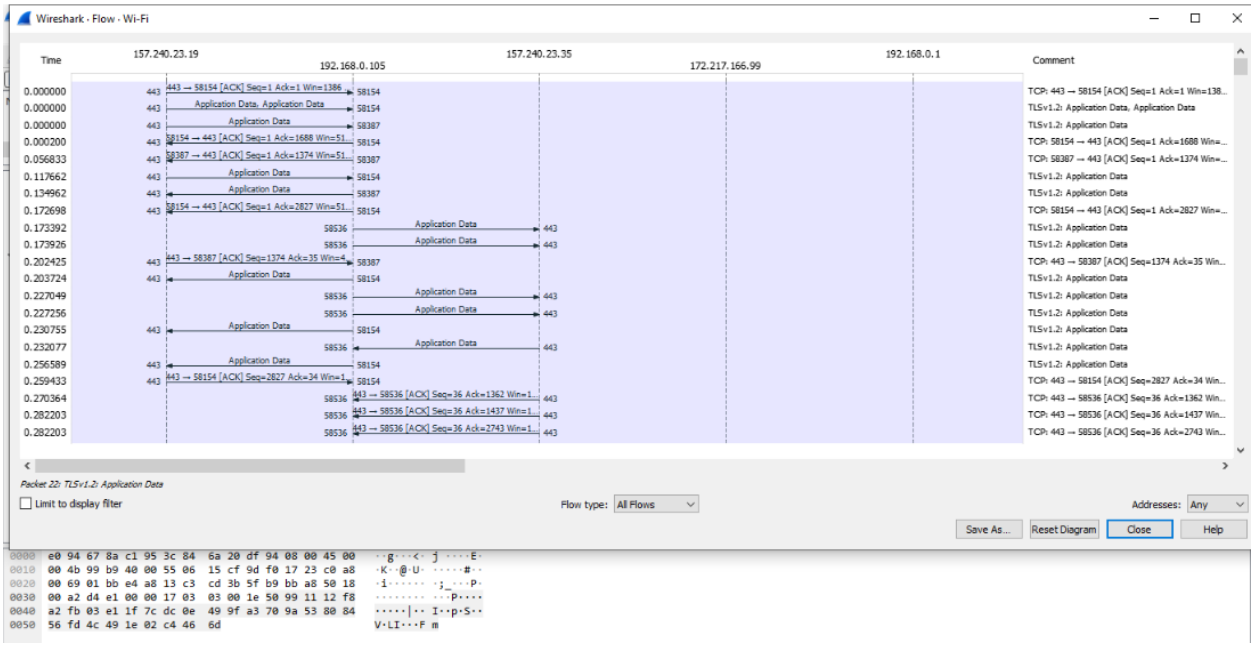

Figure 08-A: Statistics- Flow Graph -All Flows for Wi-Fi (Wireless Data Packages)

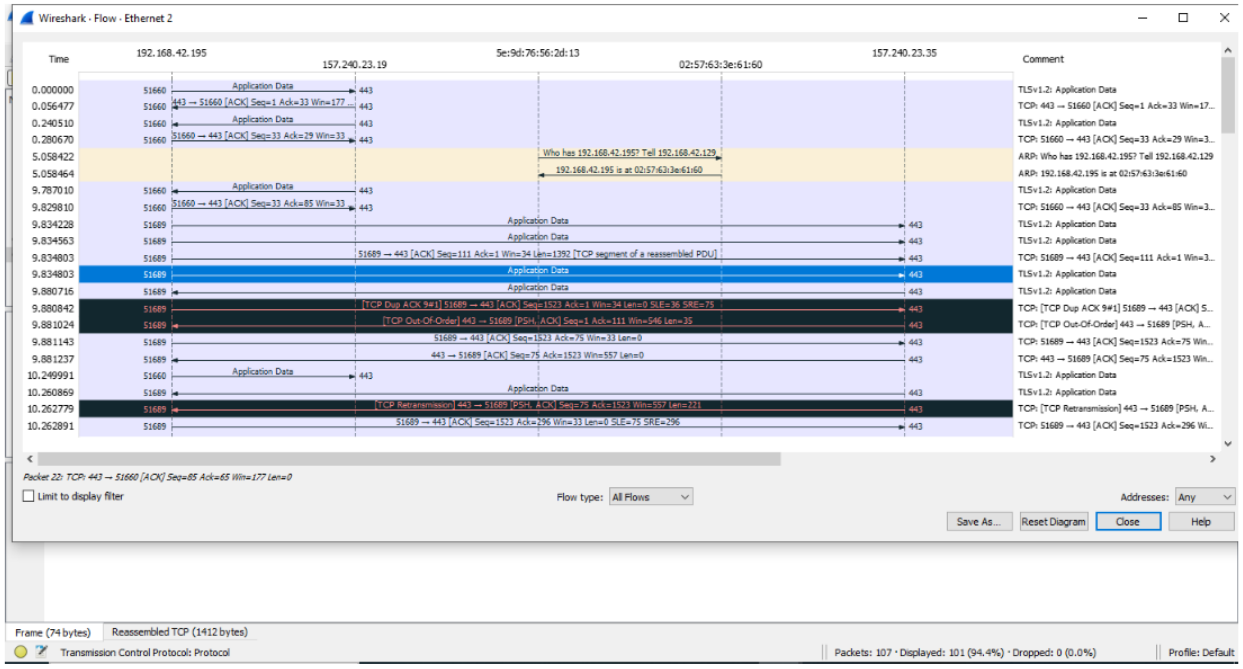

Figure 08-B: Statistics- Flow Graph -All Flows for Wired Data Packages

Conclusion:

A wireless network allows devices to stay connected to the network but roam untethered to any wires. A wired network uses cables to connect devices, such as laptop or desktop computers, to the Internet or another network.

Wired data are more secure and high speedy, On the other hand wireless data are less secure and low speedy.

The biggest disadvantage of wired network is that a device is tethered to a router. Between Wired and Wireless Network, wired network is much more efficient than wireless network. Because Wired data packages transfer rate are very much smoother than Wireless.