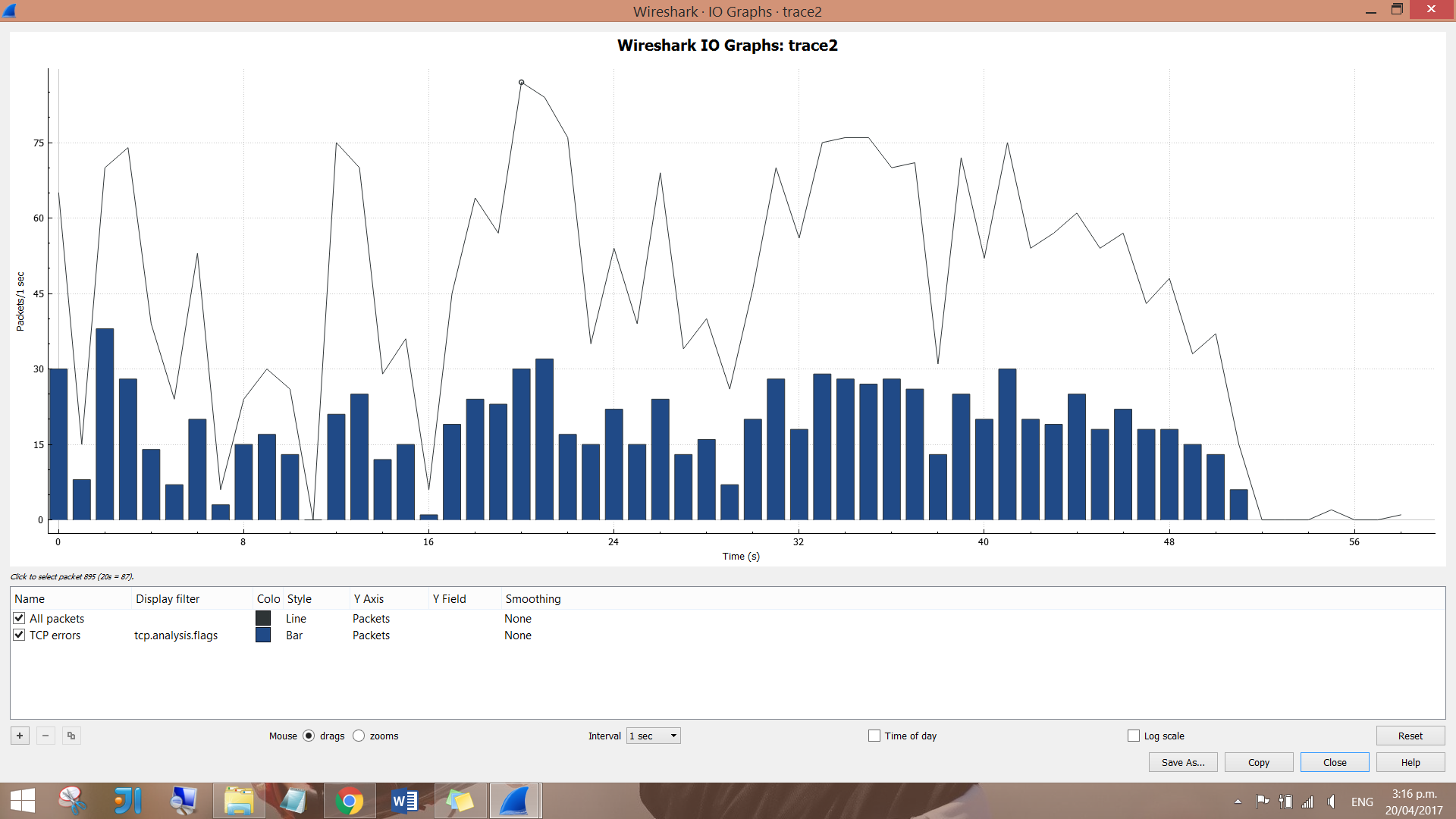
SOFTENG 364 Assignment 1

840454023, elee353

Task 1

Task 2

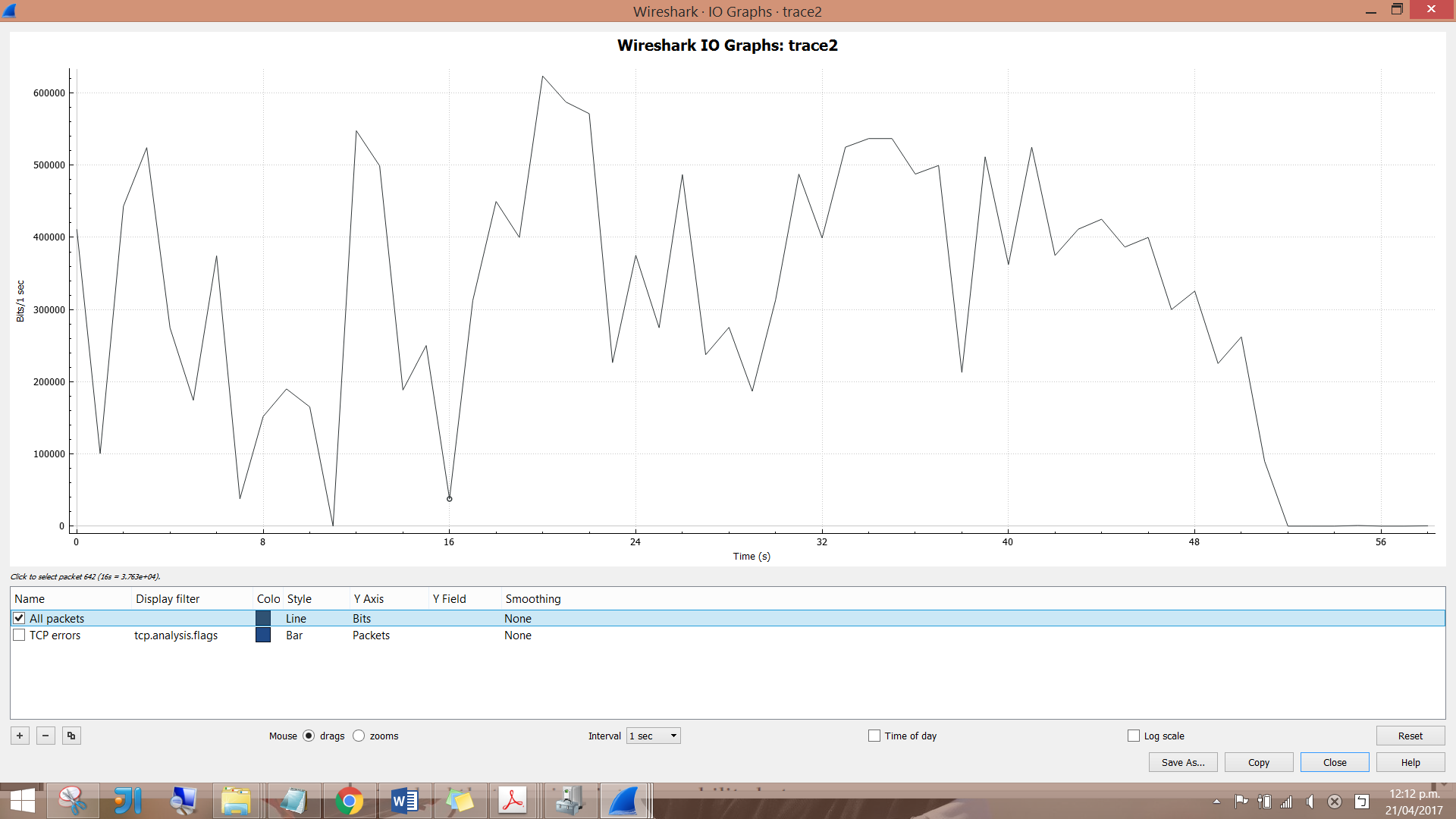
Q1.



The highest packets-per-second value seen was 87 packets per second.

It occurred in the 20th second.

Q2.

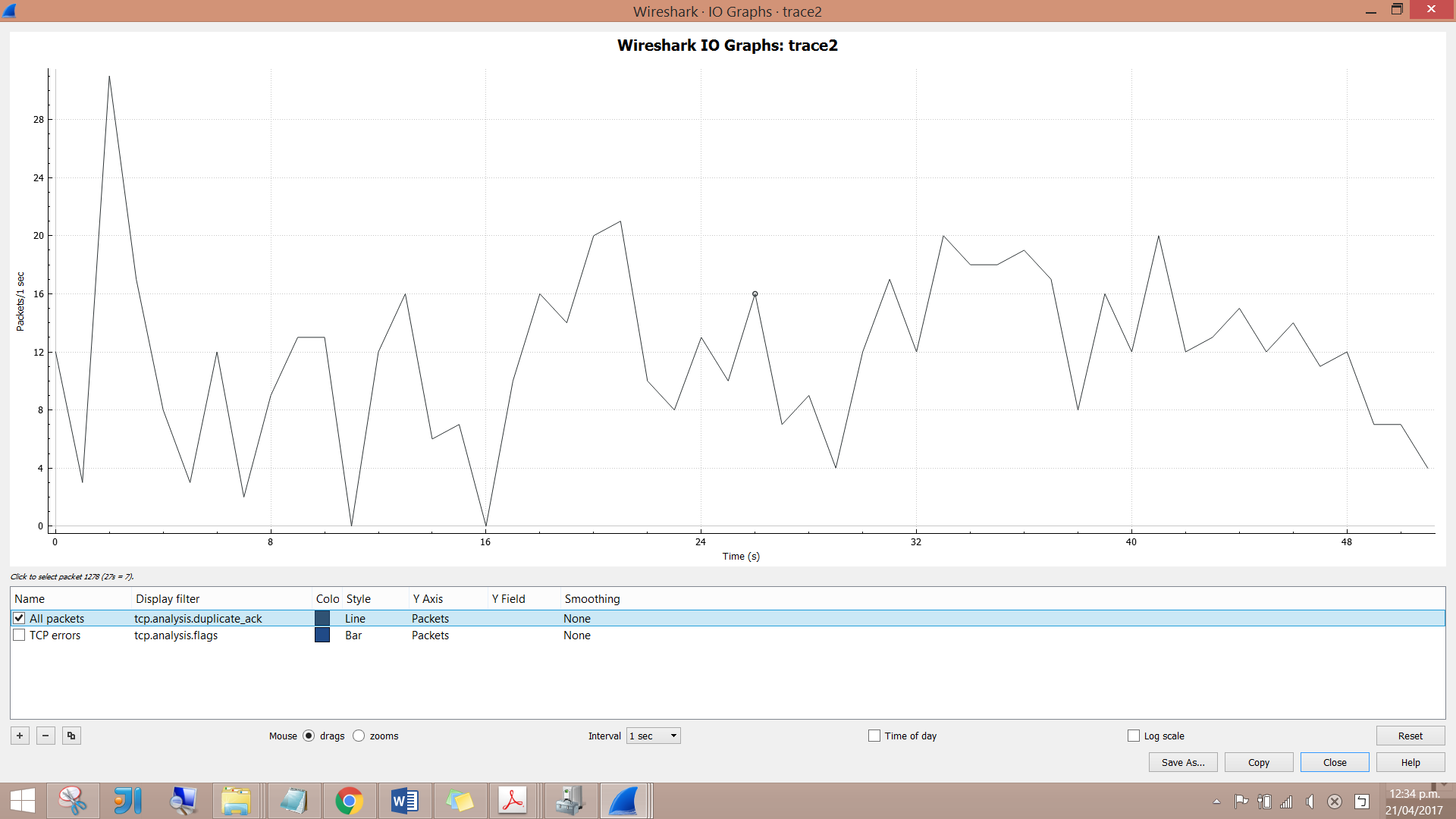


The highest bits-per-second value is 6.235 \* 105.

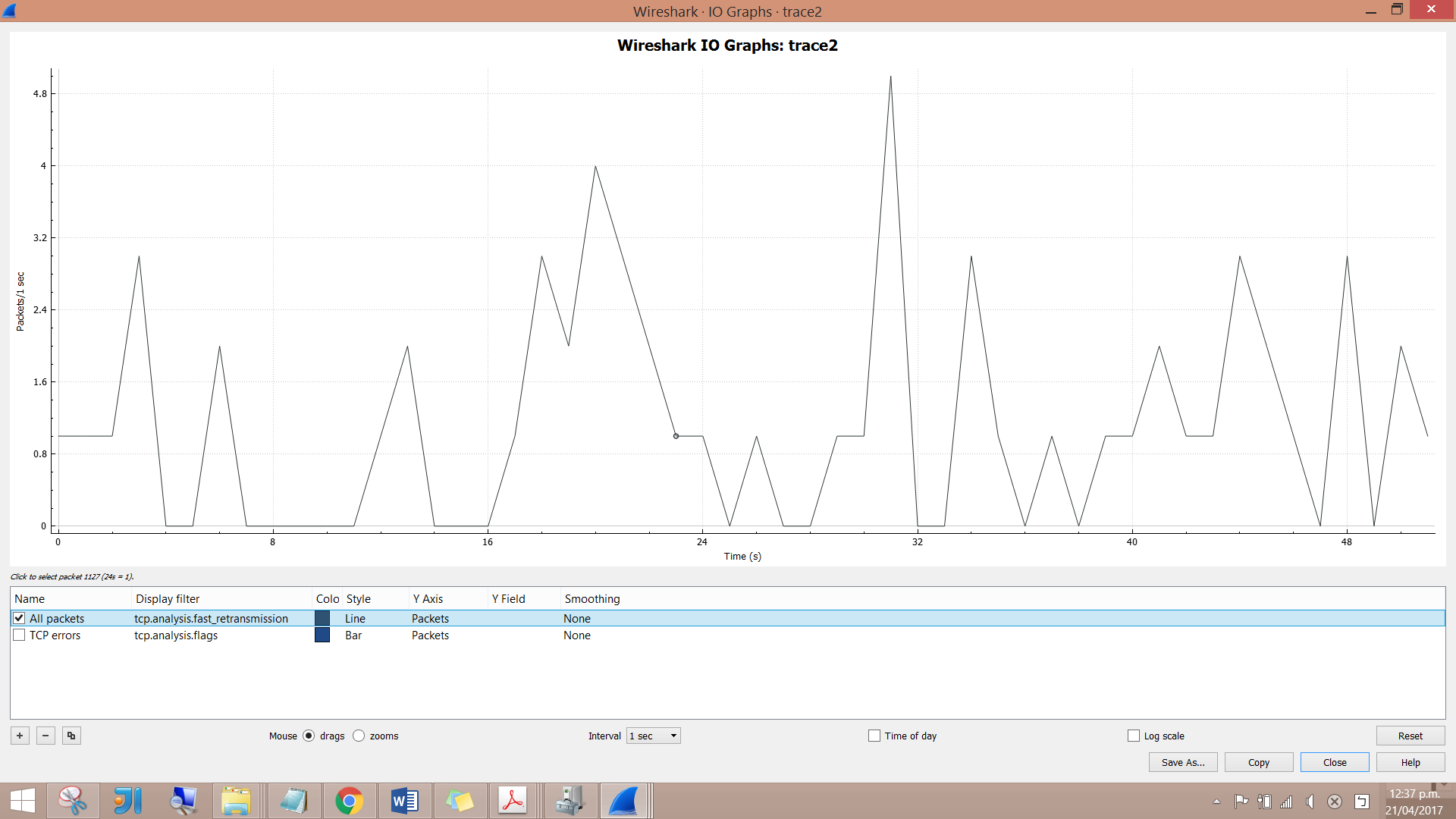
It occurred in the 20th second.

Q3.

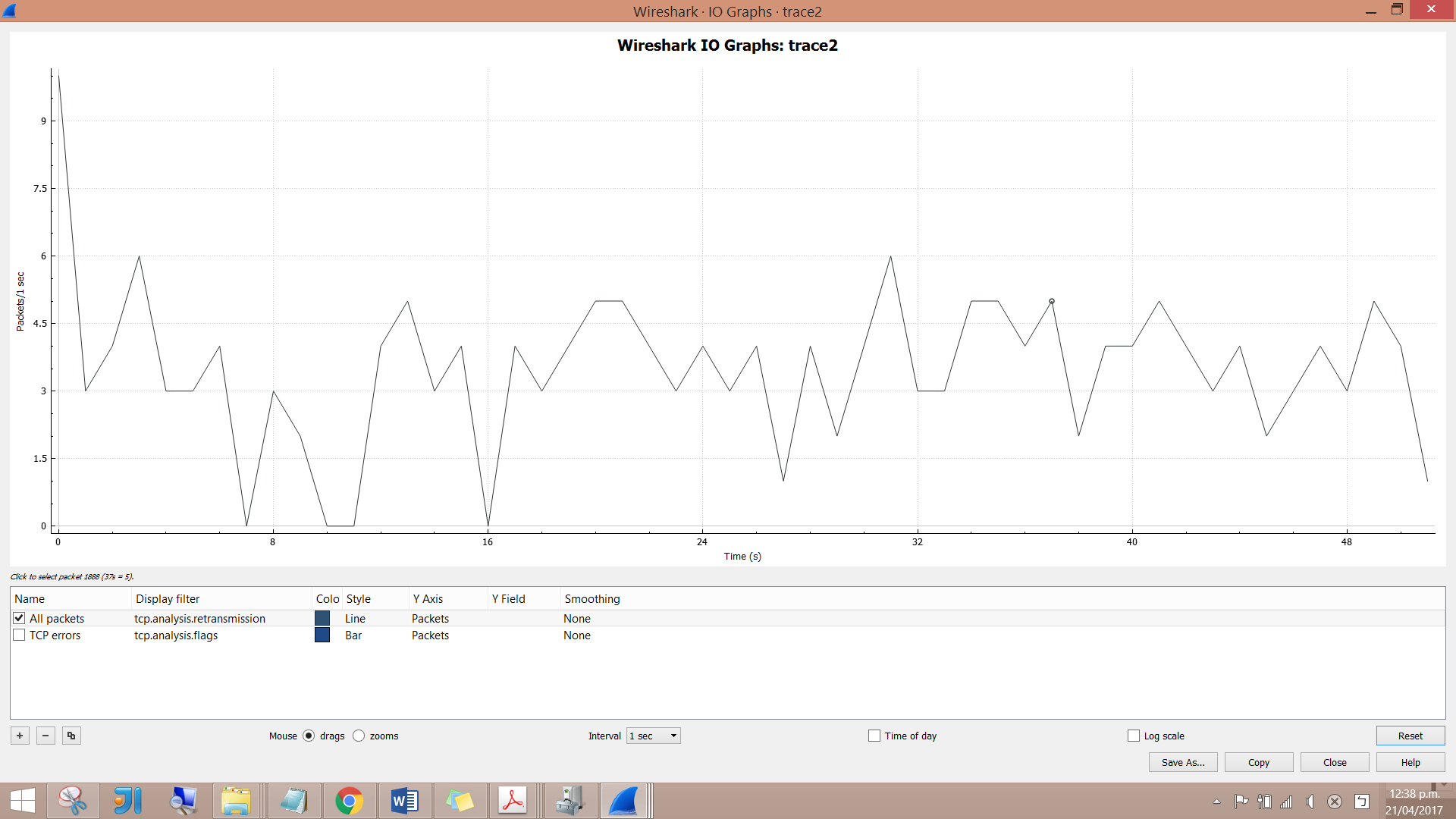
tcp.analysis.duplicate\_ack



tcp.analysis.fast\_retransmission



tcp.analysis.retransmission

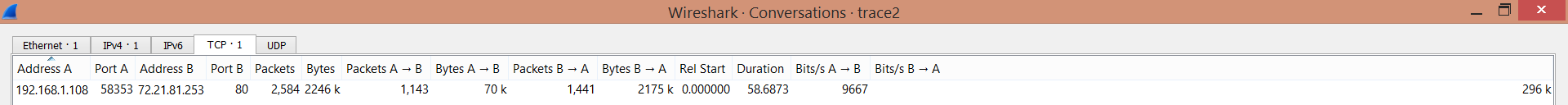


Q4.

Duplicate ACKs are sent when the receiver sees a gap in the packets it receives.

This duplicate ACK is used as a signal for packet loss.

Q5.



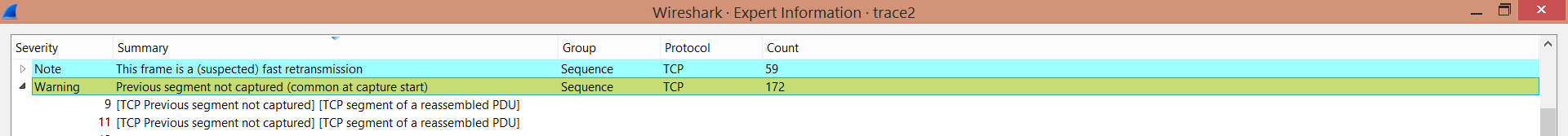


Only one TCP conversation.

Q6.

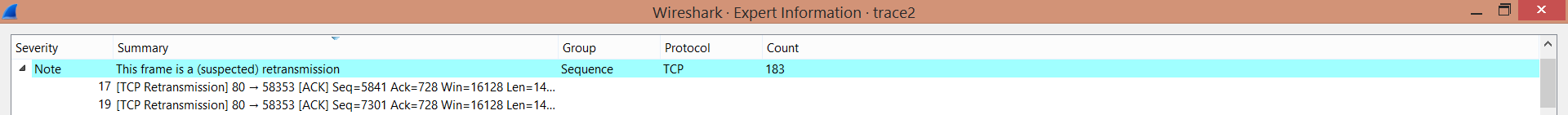
"Tcp previous segment not captured" means Wireshark did not see a packet that should have been in the trace.

This is caused by either the packet really wasn't seen on the wire due to a packet loss, or Wireshark did not record the packet fast and timely even though it **had been** on the wire.

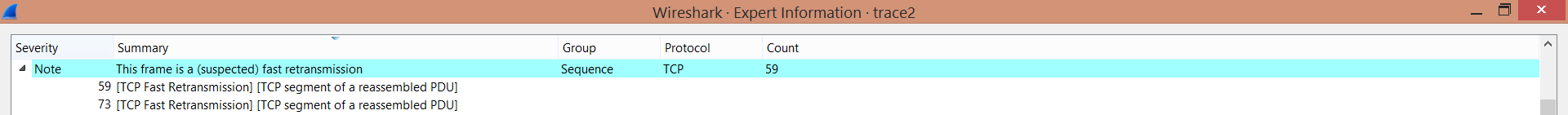


There is 172 times “previous segment not captured” has been detected.

Q7.



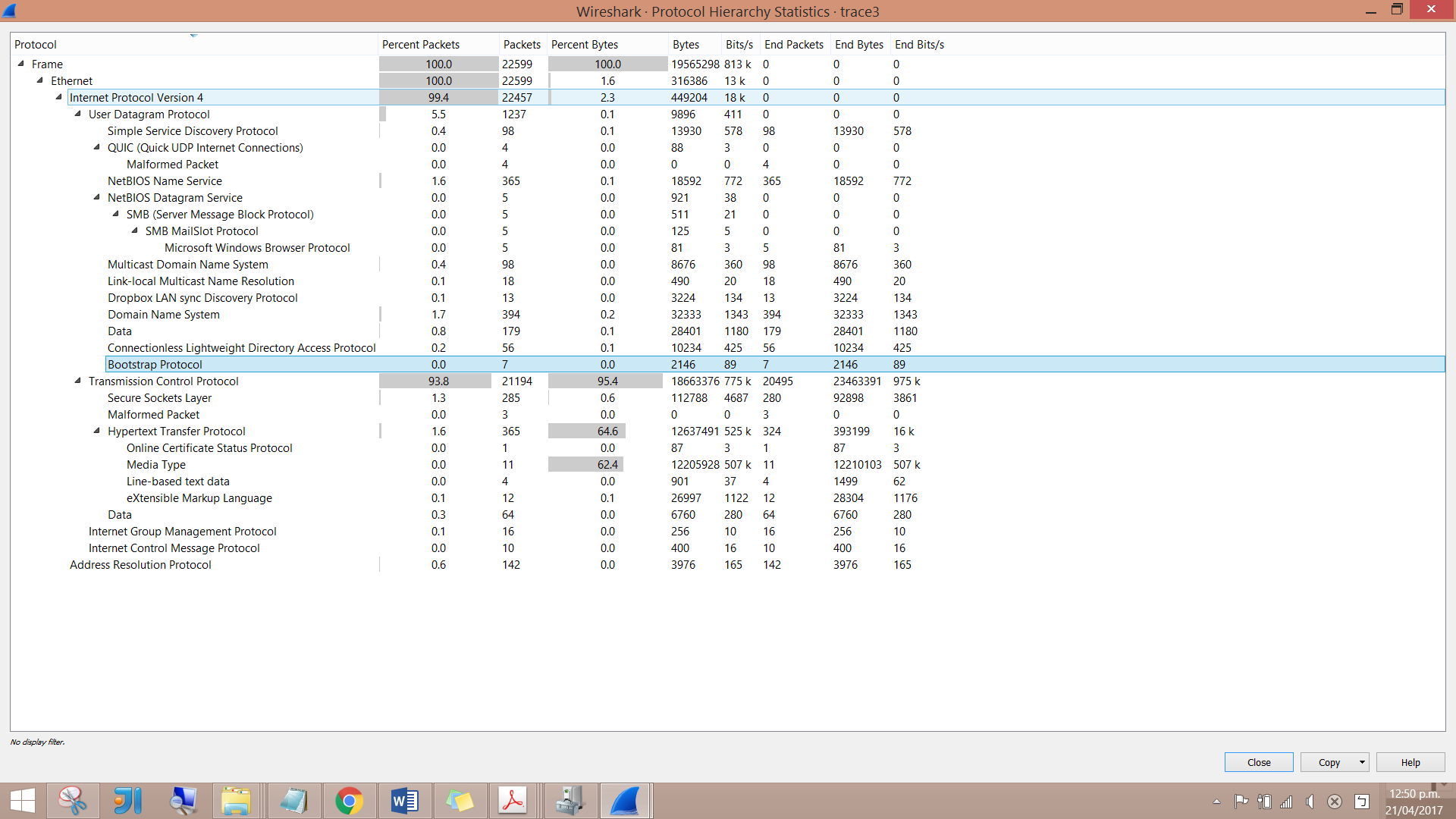
There are 183 retransmissions.



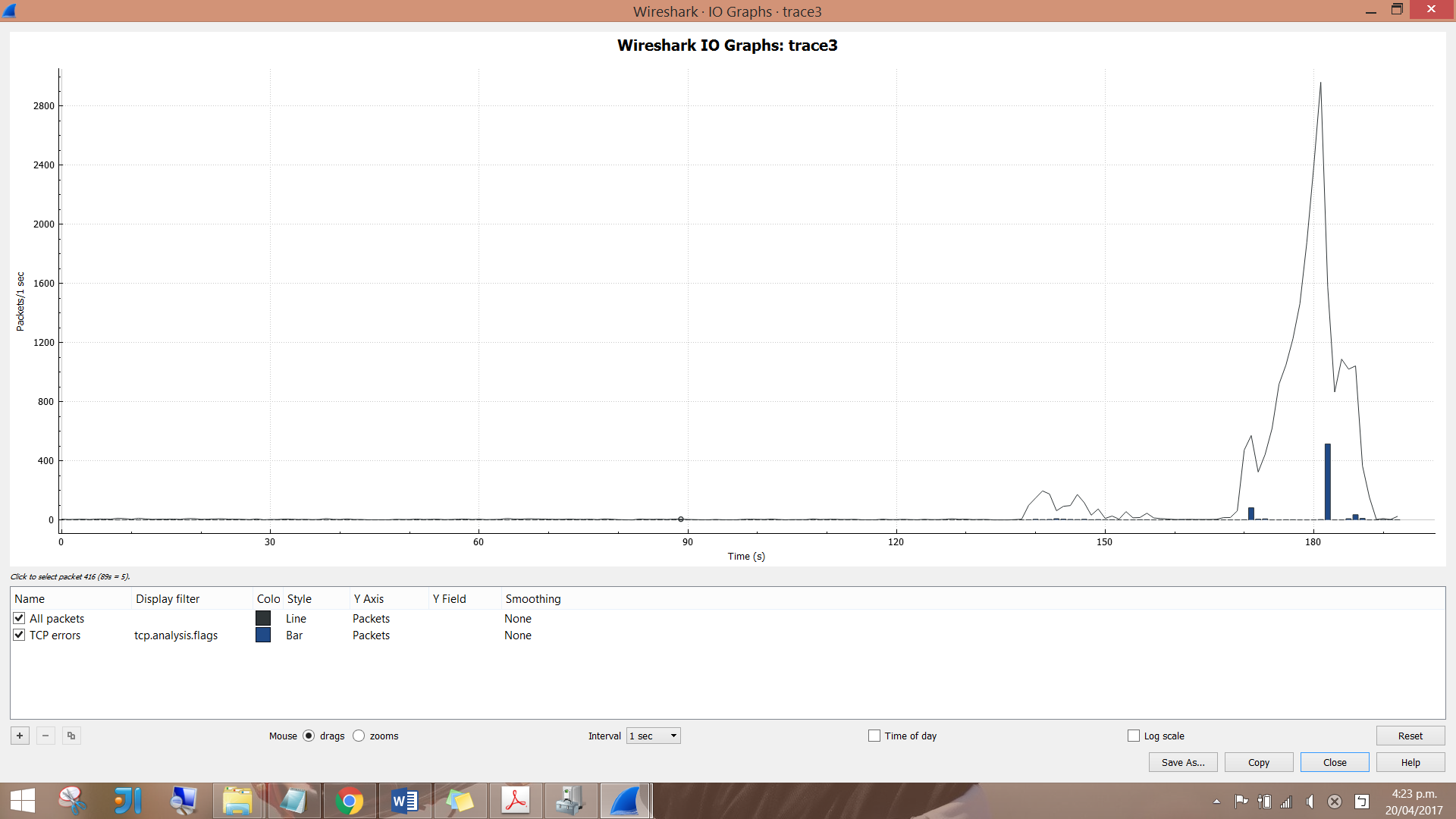
There are 59 fast transmissions.

Task 3

Q1.



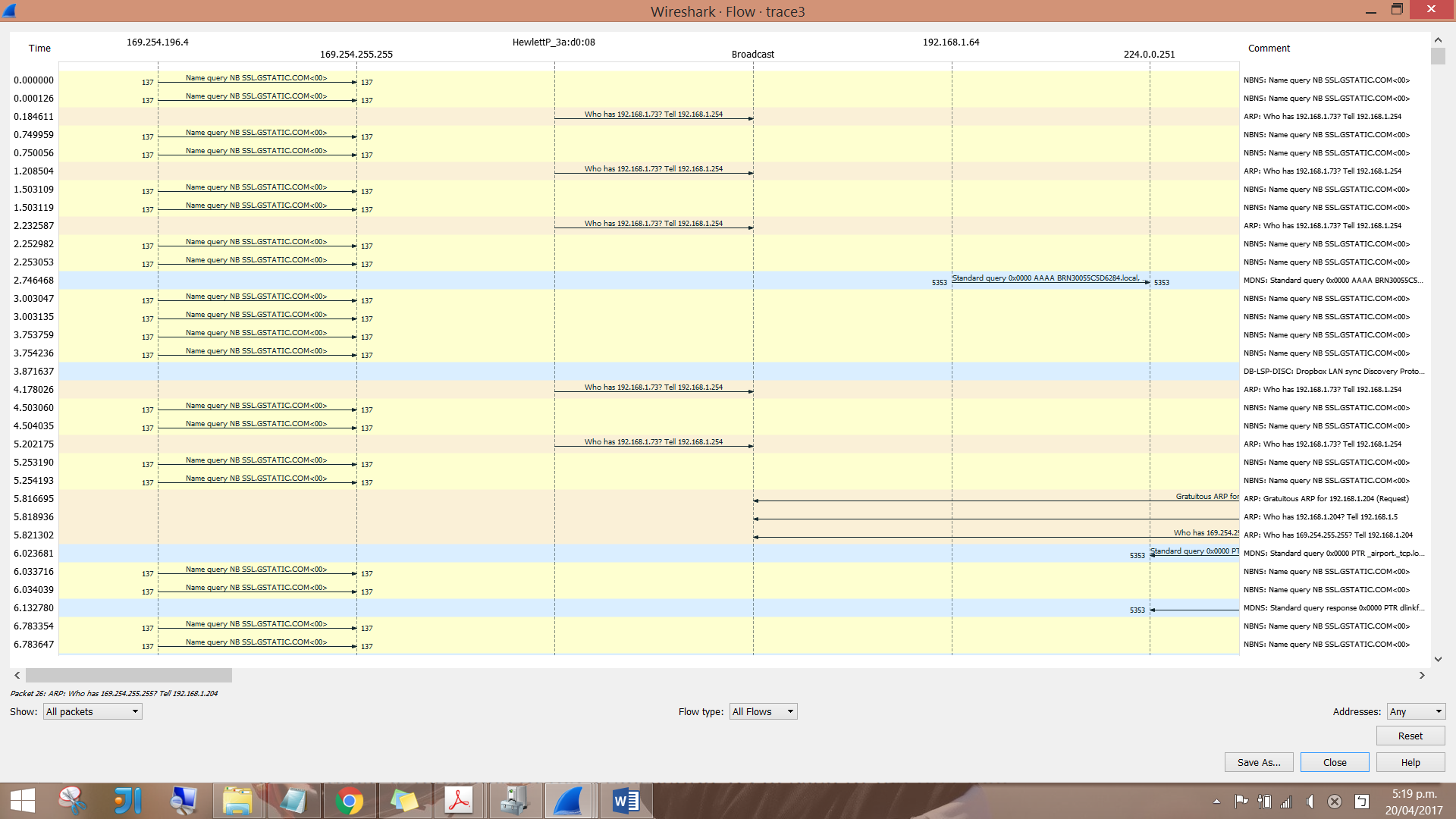
* ARP, NBNS, BROWSER, CLDAP, DB-LSP-DISC, DHCP, DNS, HTTP, OCSP, QUIC, SSDP, TCP, TLSv1, TLSv1.2, UDP
* 0 percent of the total
* Both TCP and UDP are used here.

Q2. 

Q3.

Q4.

Q5.



Q6.

Q7.

Q8.

Task 4

* General

Video traffic is the major consumer of internet bandwidth, because multimedia files are generally large. Videos are a sequence of images displayed at a constant rate, while digital images are arrays of pixels.

* Netflix
* YouTube
* Lightbox
* CDN, DASH
* Discuss how video streaming on the internet is achieved in general
* then discuss the approaches taken by the above three services
* the protocols involved
* facts pertaining to New Zealand
* Pictures
* reference all your sources, including any images taken from other sources
* 1200 words