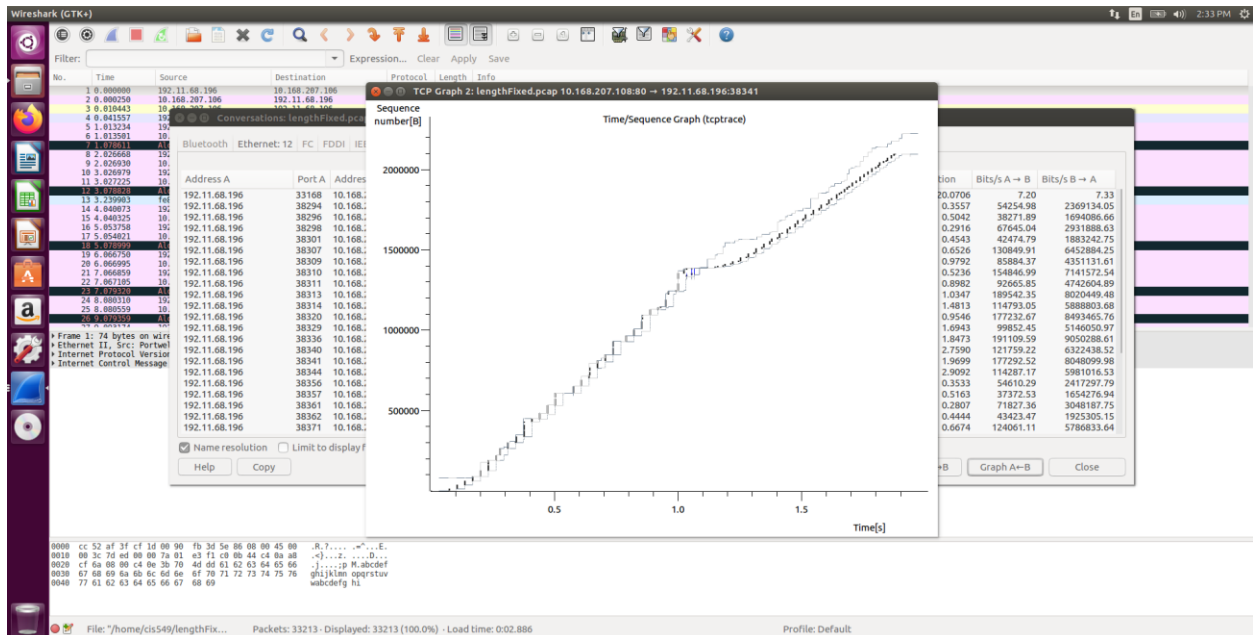CIS 549 – Paul DeSanctis Gordon Finn

Problem 3

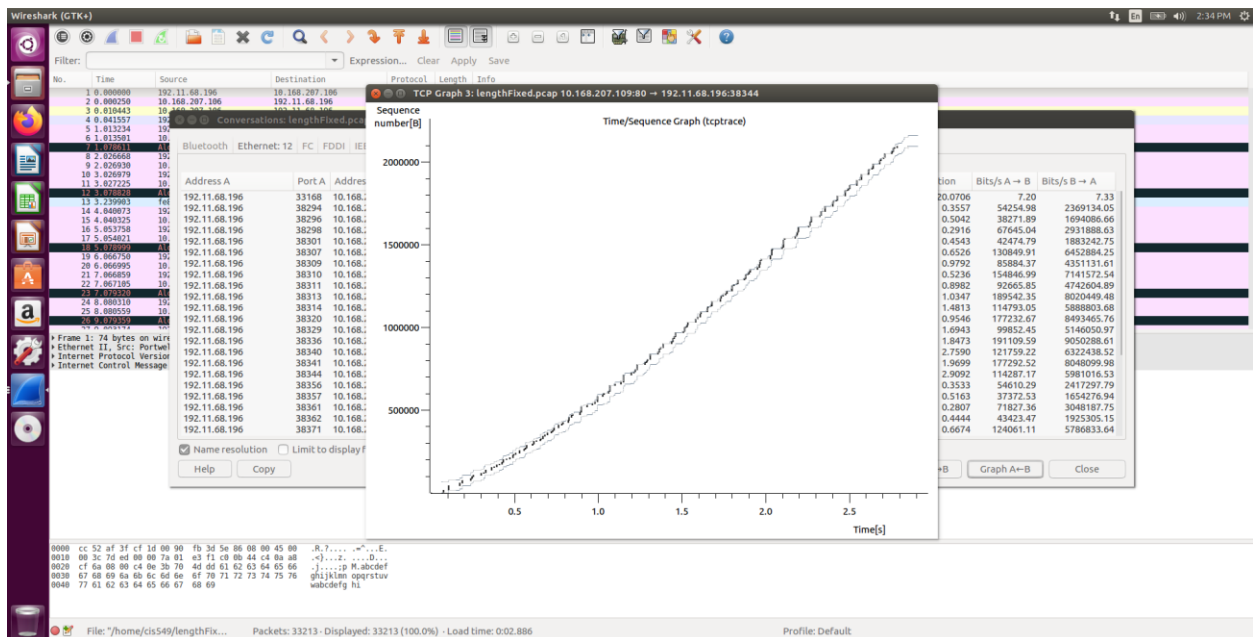See the data fields below from the tcptrace file

session	download time(sec)	Downloaded file size (bytes)	Throughput (bps)	Packet loss rate	Average RTT
1					
2	0.159	101262	284721	0	31.3
3	0.309	102650	203597	0	66
4	0.095	102719	352188	0	31.3
5	0.243	102719	226107	0	69.5
6	0.326	512250	775976	0	31.5
7	0.781	512250	523143	0	69.8
8	0.32	512319	858947	0	31.7
9	0.715	512319	570387	0	66.3
10	0.857	1048826	947010	0.02384292	31.6
11	1.273	1048826	708023	0	65.6
12	0.751	1048897	1021733	0	31.7
13	1.502	1048897	619059	0	70.3
14	1.645	2097402	1084874	0.00343879	31.5
15	2.552	2097402	760198	0	70.8
16	1.805	2097473	961890	0.00657414	31.8
17	2.714	2097473	719557	0	69.9
18	0.158	102650	290513	0	31.2
19	0.32	102650	198813	0	67.9
20	0.095	102719	365974	0	31.7
21	0.243	102719	231158	0	70.3
22	0.413	512250	695908	0	31.6
23	0.779	512250	522997	0	70.5
24	0.342	512319	821991	0	31.7
25	0.778	512319	528240	0	70.2
26	0.796	1048826	948415	0.01385042	31.9
27	1.266	1048826	720123	0	64.4
28	0.683	1048897	1092198	0	31.8
29	1.43	1048897	645093	0	65.5
30	1.387	2097402	1205639	0	31.8
31	2.343	2097402	827632	0	64.4
32	1.624	2097473	1135085	0.00956284	31.5
33	2.689	2097473	723494	0	68.3

Problem 4

See graph from first session (server 10.168.207.108:80 to client 192.11.68.196:38341)

Compare with graph from first session (server 10.168.207.109:80 to client 192.11.68.196:38341)

The first graph shows an interruption in the session, which is likely caused by the 9 transmitted packets containing 12492 bytes.

The total data file size is the same for both sessions (2097473 bytes), but throughput was higher in the first session (961890 bytes) even though there were retransmissions. The second session throughput

was only 719557 and the average round trip time of 69.9ms was more than double that of the first session (31.8ms).

There was also greater missed data (202648 bytes) in the first session than the second session (4164 bytes), probably having to do with the retransmissions.