

CS 536 - Lab2
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In v3, here is the output I get when running the app in the afternoon:

Beginning to send 10 ping messages

Completed sending of ping messages

Minimum: 122719

Maximum: 123145

Mean: 123073

Standard Deviations: 119

In the evening, I got this output from the app:

Beginning to send 10 ping messages

Completed sending of ping messages

Minimum: 122620

Maximum: 123118

Mean: 123032

Standard Deviations: 140

I would not remark this as a significant change, but the slight difference I might attribute to more students being on campus in the afternoon rather than the evening. Running the ping app showed similar results, with a trivial increase in the afternoon rather than the evening. Maybe the difference would be more substantial if I ran it in the middle of the night.

Bonus:

After pinging www.upenn.edu, I received these statistics (all in msec):

Min = 6.092

Avg = 6.231

Max = 6.398

Mdev = 0.120

Using the average of 6.231 ms, let's estimate the distance. Using SOL = 300,000,000 m/s or 3.0×10^8 m/s, or 3.0×10^5 m/ms.

$300000 \times 6.231 = 186,930 \text{ m} = 186.93 \text{ km}$, but accounting for indirect routes and sub SOL transmission speeds, I would estimate the actual distance to be 1400.

Picking a further distance (ZHAW in Zurich, Switzerland www.zhaw.ch), my ping packets got these statistics:

Min = 102.944

Avg = 103.037

Max = 103.115

Mdev = 0.068

Again using the average of 103.037:

$300000 \times 103.037 = 30,911,100 \text{ m} = 30,911.1 \text{ km}$, this I would imagine is even more indirect, with slower transmission times since it has to cross the ocean, so I would give an actual estimate of 10,000km