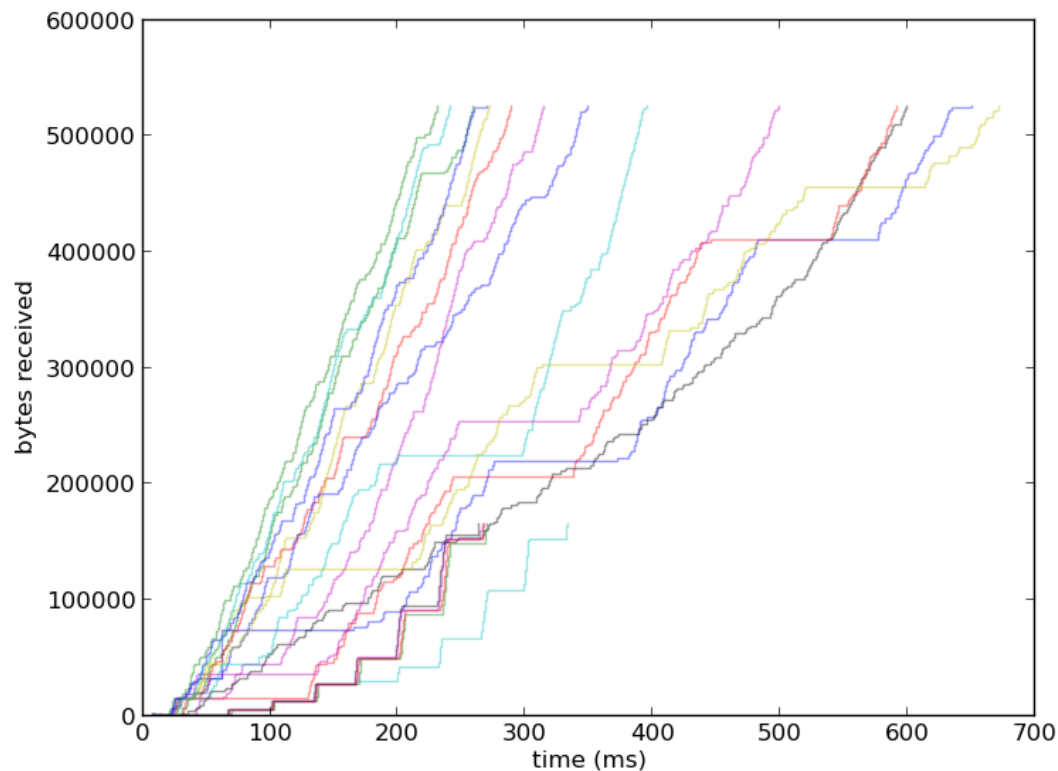


My Timing Chart:
Elizabeth Duncan



The first thing I learned from this chart is that I'm way too click-happy. It would have been much easier to analyze with only 5 (like suggested). However, this graph is still easy to analyze. There are two main groups: those who received over 500000 bytes before 350 ms and those who didn't.

The groups that took longer than 350 ms usually had long periods of horizontal "wait" where no bytes were received. One such case (pink line) took almost 100 ms to start receiving bytes again. This behavior was seen in Downey's paper "TCP..." in Figure 17a. As described, this is caused by a bottleneck situation – when the congestion window is greater than the slow start threshold. In other words, although we only see these packet transmissions, others are occurring and are making these packets queue. This makes sense because these downloads occurred on a personal computer that was running many other browsers.

The groups that took shorter than 350 ms show an ideal situation where the slow start continues (due to few dropped packets) for an exponential growth that explodes. These downloads are fast and painless.

Note: The streams that stop under 200000 were residual data from Allen Downey's previous experiment – disregard them.