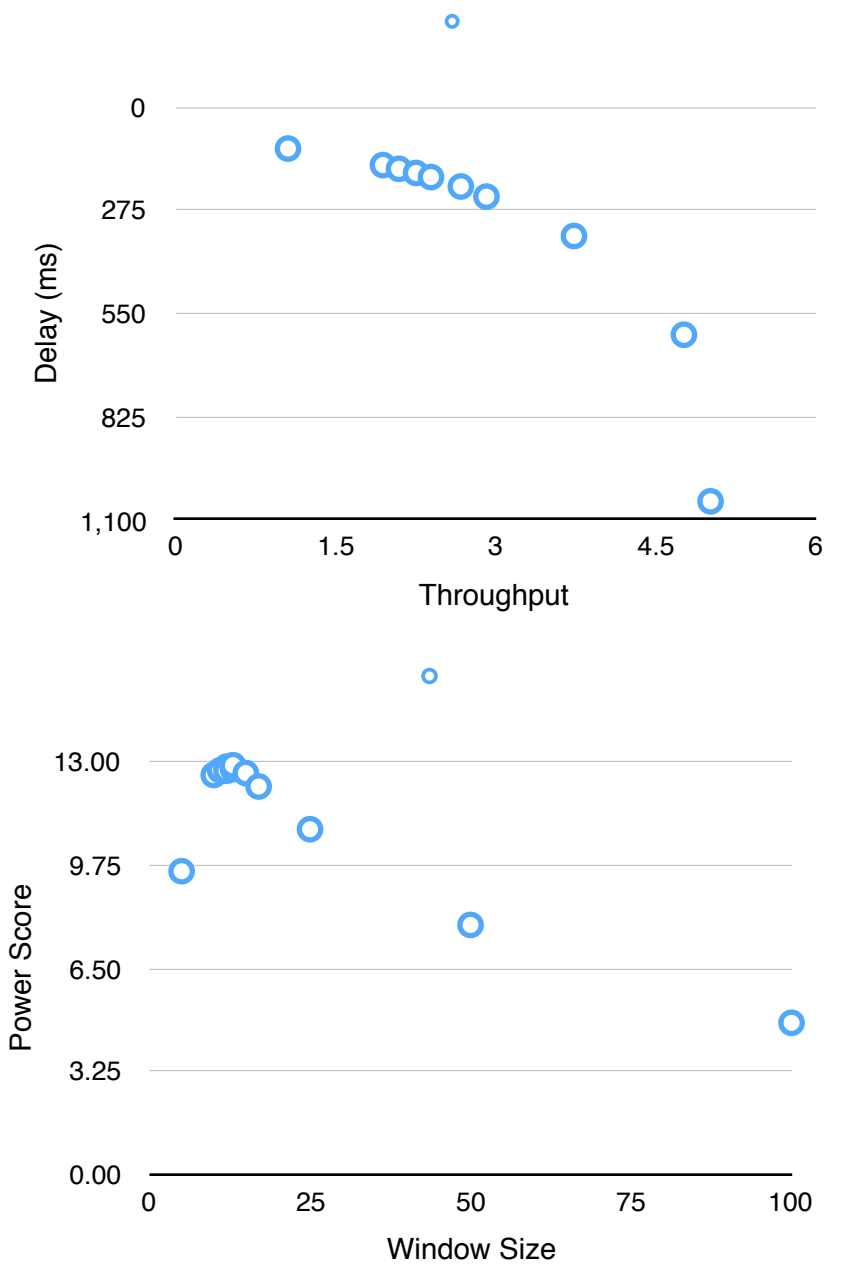Keith Major (keithm2)
Mark Xue (markxue)

CS244 Project 2 Writeup
GitHub repo:
https://github.com/keithm2/CS244_Proj2

Exercise 1: The best single window size to maximize the score was a window size of 13, and a average power score of 12.83. The stddev of our measurements was ~.05 for 12,13 and 14

Exercise 2:
We implemented AIMD with parameters
window := window + a
window := window x b
for values
a = 1/ window, 1/(2*window)
b = 1/8, 1/4, 1/2

These schemes produced results much lower than a fixed window size. Our best result was for a = 1/ (2*window), b = 1/4
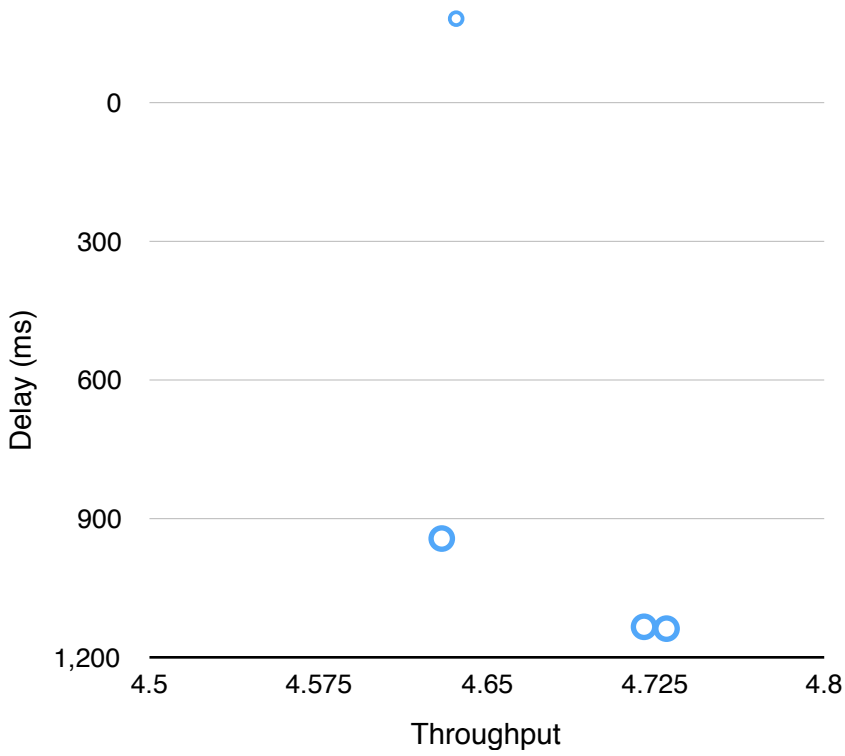
Exercise 3:
We implemented a delay based congestion, initially with AIMD triggered by delay over/under a constant value of 100, 150, and 300ms.

We then modified the addition and recovery mechanisms and got much higher power scores.
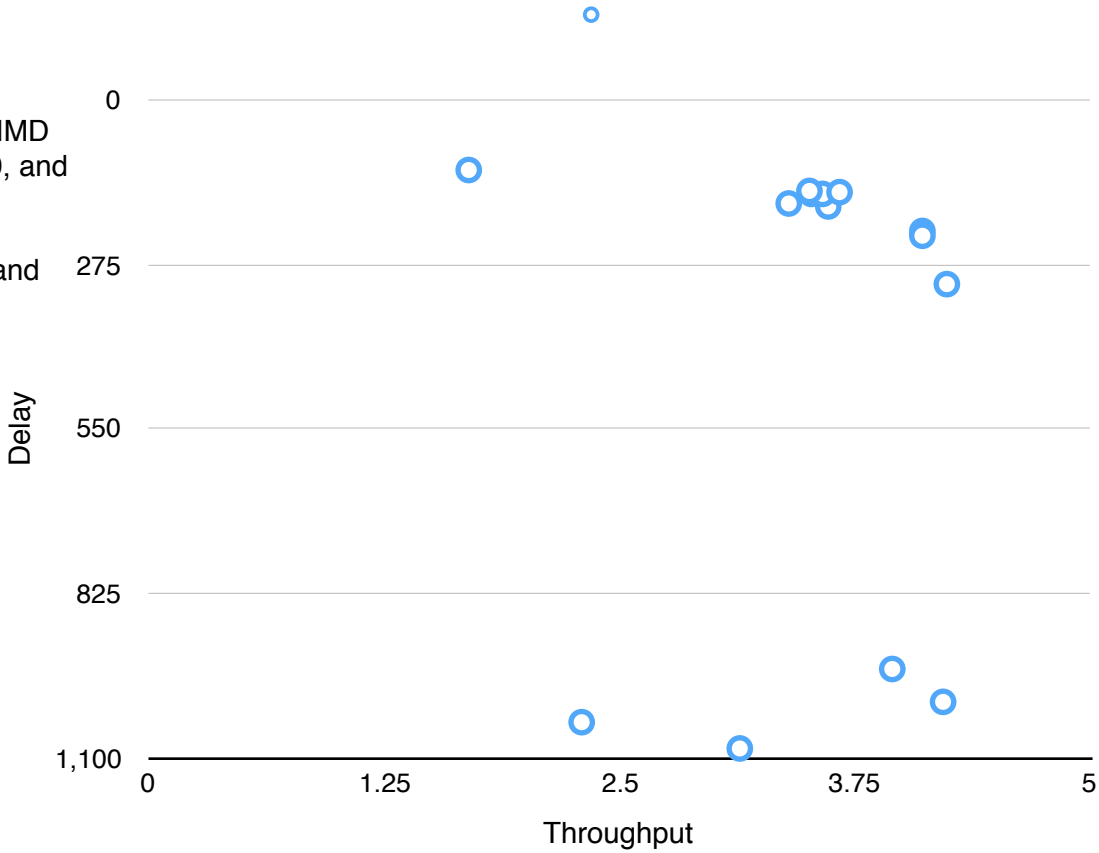
Window Sz	Throughput	Signal delay	Power	Signal delay		
5	1.06	111	9.55	-111	5	
10	1.95	155	12.58	-155	10	
11	2.10	165	12.73	-165	11	
12	2.26	176	12.84	-176	12	0.05
12	2.26	176	12.84	-176	12	0.06
12	2.26	176	12.84	-176	12	12.82
12	2.26	176	12.84	-176	12	12.83
12	2.26	176	12.84	-176	12	
12	2.25	177	12.71	-177	12	
13	2.40	187	12.83	-187	13	
13	2.40	188	12.77	-188	13	
13	2.41	187	12.89	-187	13	
15	2.68	212	12.64	-212	15	
17	2.92	239	12.22	-239	17	
25	3.74	344	10.87	-344	25	
50	4.77	607	7.86	-607	50	
100	5.02	1051	4.78	-1051	100	

Ex 2

a	b	Throughput	Delay	
1/window	1/2	4.73	1137	-1137
	1/4	4.72	1133	-1133
	1/8	4.72	1135	-1135
1/2*wnd	1/4	4.63	942	-942

Ex 2-1

threshold	a	b	Throughput	Delay	

threshold	a	b	Throughput	Delay	
	1/cwnd	**1/4**	4.22	1007	-1007
	1/cwnd	**1/2**	4.22	1007	-1007
150ms	**1/cwnd**	**1/4**	3.14	1085	-1085
100ms	**1/cwnd**	**1/2**	2.30	1041	-1041
			1.7	117	-117
			4.24	308	-308
			3.4	173	-173
			3.61	178	-178
			3.52	157	-157
			3.58	157	-157
			3.67	154	-154
			3.51	152	-152
			4.11	219	-219
			4.11	227	-227
					0
					0