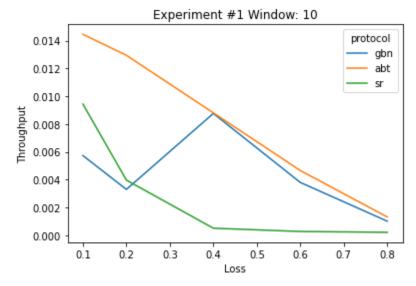
#### CSE 489: Modern Networking Concepts Programming Assignment 2 Report

Jonathan Choi | UBIT: jmchoi | UB# 50256079 James Holtzman | UBIT: jholtzma | UB# 50295824 Voltaire Vergara | UBIT: janvolta | UB# 50284048 ZeMing Zhang | UBIT: zemingzh | UB# 50273324

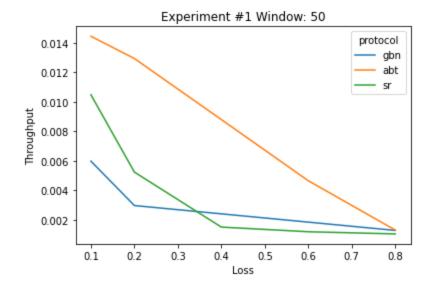
"I have read and understood the course's academic"

## **Experiment #1**

#### Window Size = 10



Window Size = 50



# **Alternating Bit Protocol:**

ADVANCED TESTS:

```
Testing with MESSAGES:1000, LOSS:0.0, CORRUPTION:0.4, ARRIVAL:50, WINDOW:0 ...
Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#4 [seed=3333] ... Done!
Run#5 [seed=4444] ... Done!
Run#6 [seed=5555] ... Done!
Run#7 [seed=6666] ... Done!
Run#8 [seed=7777] ... Done!
Run#9 [seed=8888] ... Done!
Run#10 [seed=9999] ... Done!
Testing with MESSAGES:1000, LOSS:0.0, CORRUPTION:0.6, ARRIVAL:50, WINDOW:0 ...
Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ... Done!
Run#4 [seed=3333] ... Done!
Run#5 [seed=4444] ... Done!
Run#6 [seed=5555] ... Done!
Run#7 [seed=6666] ... Done!
Run#9 [seed=8888] ... Done!
Run#10 [seed=9999] ... Done!
PASS!
Testing with MESSAGES:1000, LOSS:0.0, CORRUPTION:0.8, ARRIVAL:50, WINDOW:0 ...
Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ... Done!
Run#4 [seed=3333] ... Done!
Run#5 [seed=4444] ... Done!
Run#7 [seed=6666] ... Done!
Run#8 [seed=7777] ... Done!
Run#9 [seed=8888] ... Done!
Run#10 [seed=9999] ... Done!
ADVANCED TESTS: PASS
```

#### **SANITY TESTS:**

```
Testing with MESSAGES:20, LOSS:0.0, CORRUPTION:0.0, ARRIVAL:1000, WINDOW:0 ...
Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ... Done!
Run#4 [seed=3333] ... Done!
Run#5 [seed=4444] ... Done!
Run#6 [seed=5555] ... Done!
Run#8 [seed=7777] ... Done!
Run#9 [seed=8888] ... Done!
Run#10 [seed=9999] ... Done!
Testing with MESSAGES:20, LOSS:1.0, CORRUPTION:0.0, ARRIVAL:1000, WINDOW:0 ...
Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ... Done!
Run#4 [seed=3333] ... Done!
Run#5 [seed=4444] ... Done!
Run#6 [seed=5555] ... Done!
 Run#9 [seed=8888] ... Done!
Run#10 [seed=9999] ... Done!
Testing with MESSAGES:20, LOSS:0.0, CORRUPTION:1.0, ARRIVAL:1000, WINDOW:0 ...
Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#3 [seed=2222] ... Done!
Run#4 [seed=3333] ... Done!
Run#5 [seed=44444] ... Done!
Run#6 [seed=5555] ... Done!
Run#7 [seed=6666] ... Done!
Run#8 [seed=7777] ... Done!
Run#9 [seed=8888] ... Done!
 Run#10 [seed=9999] ... Done!
SANITY TESTS: PASS
```

### **Go-Back-N Protocol:**

#### **ADVANCED TESTS**:

```
Running simulator [10 Runs] ...

Running simulator [10 Runs] ...
```

#### **SANITY TESTS:**

```
Running simulator [10 Runs] ...
Running simulator [10 Runs] ...
Running simulator [10 Runs] ...
SANITY TESTS: PASS
```

## **Selective Repeat Protocol:**

#### **ADVANCED TESTS:**

```
Run#2 [seed=1111]
                                                      Done!
Run#3 [seed=2222] ...
Run#4 [seed=3333] ...
                                                    Done!
                                                    Done!
                                                    Done!
 Run#6 [seed=5555] ...
                                                    Done!
Run#7 [seed=6666] ... Done!
Run#8 [seed=7777] ... Done!
Run#9 [seed=8888] ... Done!
Run#10 [seed=9999] ... Done!
Testing with MESSAGES:1000, LOSS:0.0, CORRUPTION:0.4, ARRIVAL:50, WINDOW:10 ... Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ... Done!
Run#4 [seed=3333] ... Done!
Run#5 [seed=4444] ... Done!
Run#6 [seed=5555] ... Done!
Run#7 [seed=6666] ... Done!
Run#8 [seed=7777]
 Run#8 [seed=7777] ... Done!
Run#9 [seed=8888] ... Done!
  Run#10 [seed=9999] ... Done!
PASS!
  Testing with MESSAGES:1000, LOSS:0.0, CORRUPTION:0.6, ARRIVAL:50, WINDOW:10 ...
Running simulator [10 Runs] ...
Running simulator [10 Runs]
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ... Done!
Run#4 [seed=3333] ... Done!
Run#5 [seed=4444] ... Done!
Run#6 [seed=5555] ... Done!
Run#7 [seed=6666] ... Done!
Run#8 [seed=7777] ... Done!
Run#9 [seed=8888] ... Done!
Run#10 [seed=9999] ... Done
 Run#10 [seed=9999] ... Done!
PASS!
Testing with MESSAGES:1000, LOSS:0.0, CORRUPTION:0.8, ARRIVAL:50, WINDOW:10 ... Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ... Done!
Run#4 [seed=3333] ... Done!
Run#6 [seed=5555] ... Done!
Run#7 [seed=6666]
Run#7 [seed=6666] ... Done!
Run#8 [seed=7777] ... Done!
Run#9 [seed=8888] ... Done!
 Run#10 [seed=9999] ... Done!
  PASS!
ADVANCED TESTS: PASS
```

#### **SANITY TESTS:**

```
Run#2 [seed=1111] ...
                          Done!
Run#3 [seed=2222] ...
                          Done!
                          Done!
Run#5 [seed=4444]
                          Done!
Run#6 [seed=5555] ...
                          Done!
Run#7 [seed=6666] ...
                          Done!
Run#8 [seed=7777] ...
Run#9 [seed=8888] ...
                         Done!
                         Done!
Run#10 [seed=9999] ... Done!
PASS!
Testing with MESSAGES:20, LOSS:0.0, CORRUPTION:0.0, ARRIVAL:50, WINDOW:50 ...
Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ...
                          Done!
Run#4 [seed=3333] ...
Run#5 [seed=4444] ...
                         Done!
                          Done!
Run#6 [seed=5555] ...
                          Done!
Run#7 [seed=6666] ...
                          Done!
Run#8 [seed=7777] ...
                          Done!
Run#9 [seed=8888] ... Done!
Run#10 [seed=9999] ... Done!
PASS!
Testing with MESSAGES:20, LOSS:1.0, CORRUPTION:0.0, ARRIVAL:50, WINDOW:50 ...
Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ...
                          Done!
Run#4 [seed=3333] ...
                          Done!
Run#5 [seed=4444] ...
                          Done!
Run#6 [seed=5555] ...
                          Done!
Run#7 [seed=6666] ...
                          Done!
Run#8 [seed=7777] ...
Run#9 [seed=8888] ...
                         Done!
                          Done!
Run#10 [seed=9999] ... Done!
PASS!
Testing with MESSAGES:20, LOSS:0.0, CORRUPTION:1.0, ARRIVAL:50, WINDOW:50 ...
Running simulator [10 Runs] ...
Run#1 [seed=1234] ... Done!
Run#2 [seed=1111] ... Done!
Run#3 [seed=2222] ...
Run#4 [seed=3333] ...
                          Done!
                         Done!
Run#5 [seed=4444] ...
                          Done!
Run#6 [seed=5555] ...
                          Done!
Run#7 [seed=6666] ...
                         Done!
Run#8 [seed=7777] ...
                          Done!
Run#9 [seed=8888] ... Done!
PASS!
SANITY TESTS: PASS
```