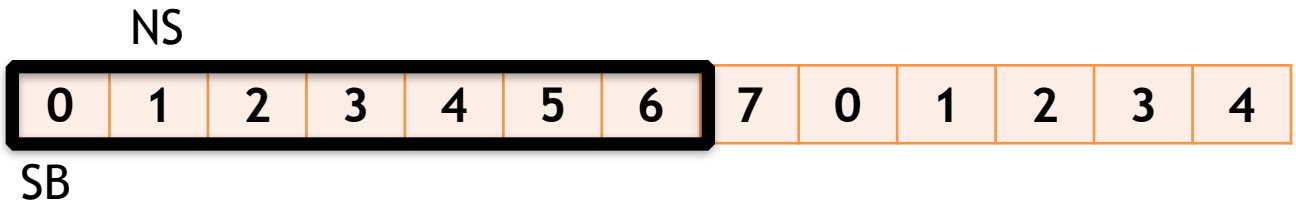
Example of GBN for PA2 – Maxwell Young

This is an example with file1.txt using a drop probability of 0 (as done in the screen shot). For simplicity, I'm using the following notation:

send_base = SB nextseqnum = NS

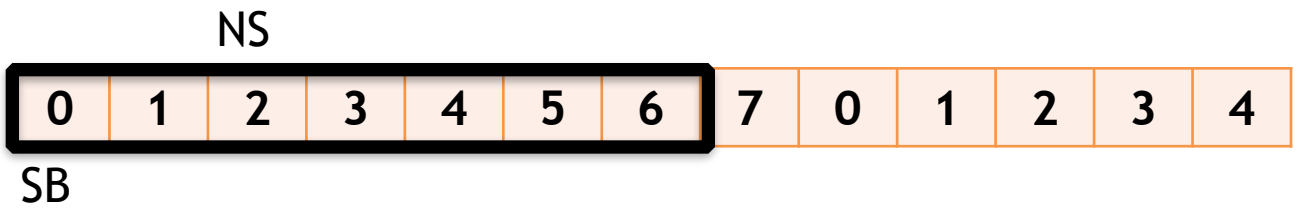
The black box is the window.

After sending the packet sqn# 0 "Wow. Never … me." we have:

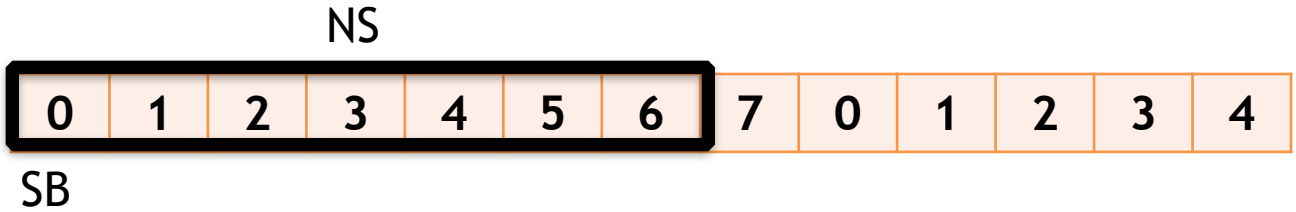


Client keeps sending until window is full since packets are available.

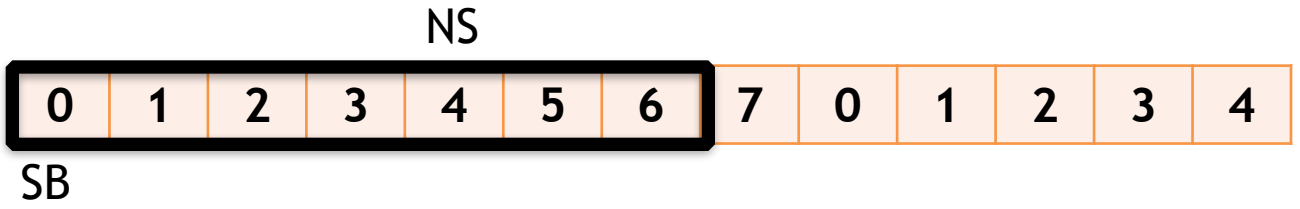
Sends packet sqn# 1 "What cologne … wit"



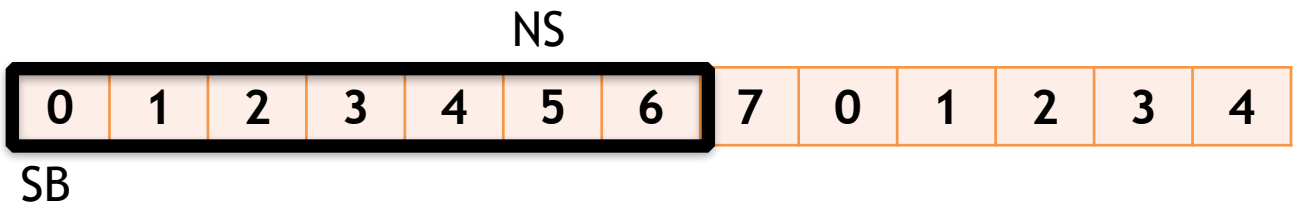
Sends packet sqn# 2: "h? London … wait."



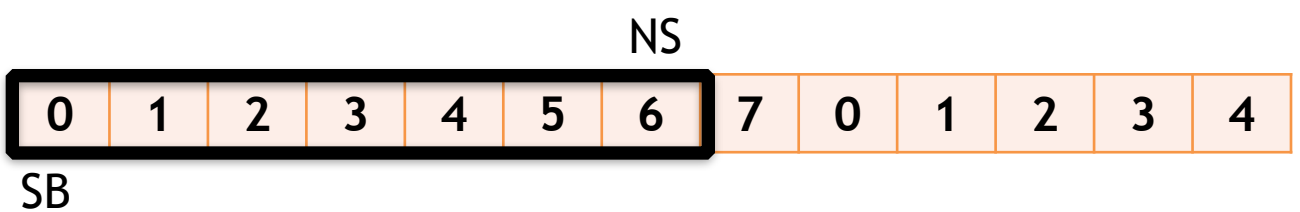
Sends packet sqn# 3: “No, no … Blackbear”



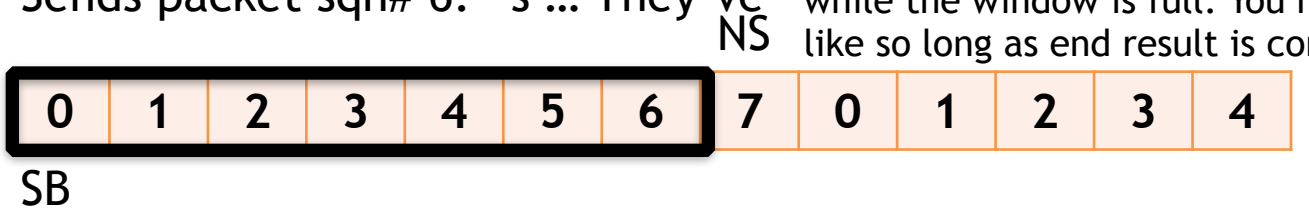
Sends packet sqn# 4: “d’s … gonna”



Sends packet sqn# 5: “be honest … smell”



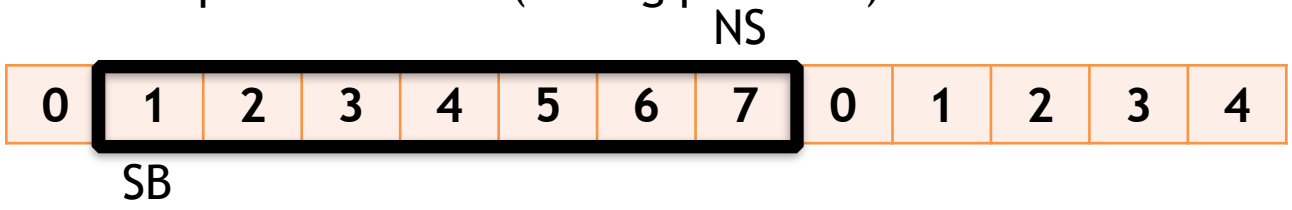
Sends packet sqn# 6: “s … They’ve”



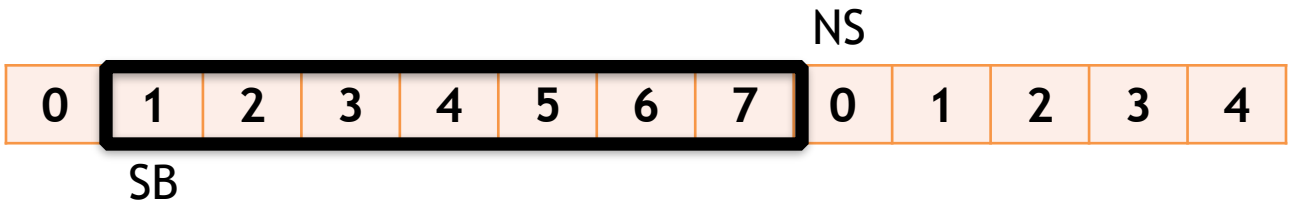
In my code, I push the variable corresponding to NS one outside the window while the window is full. You may do as you like so long as end result is correct.

There are still packets to send, but the window is full. The client sets a timer and listens.

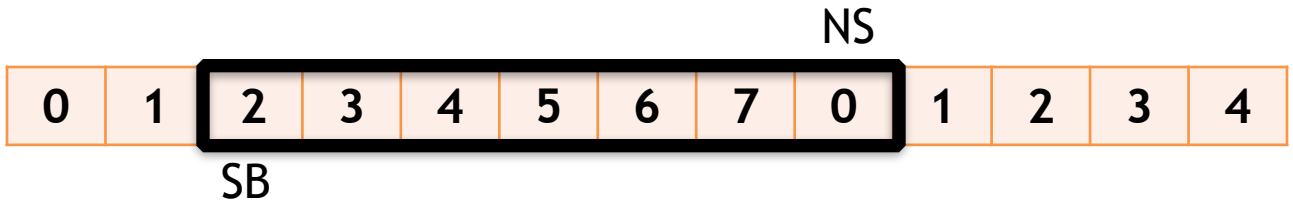
Receives packet ack# 0 (acking packet 0) : “WOW. … ME.”



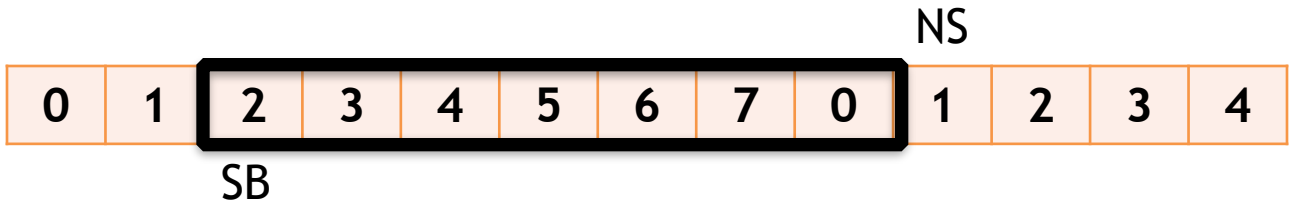
Sends packet sqn# 7: “done studies … of”



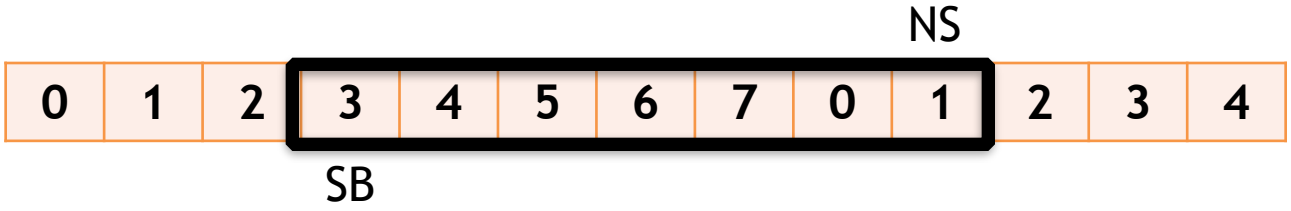
Receives packet ack# 1 (acking packet 1) : “WHAT. … WIT”



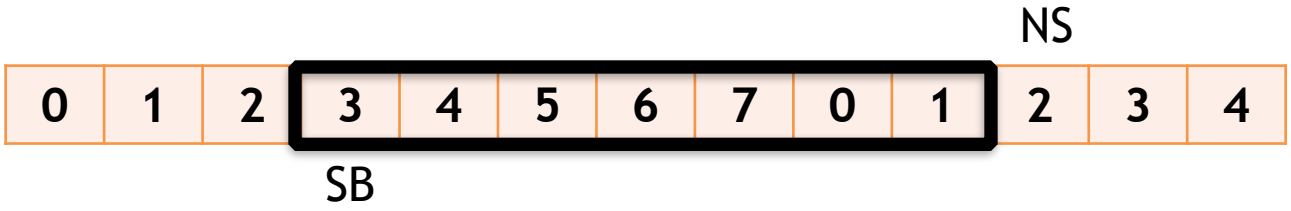
Sends packet sqn# 0: “the time, … time”



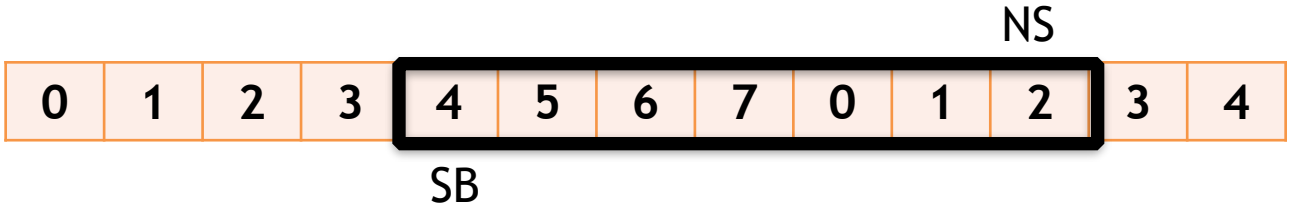
Receives packet ack# 2 (acking packet 2) : “H? … WAIT.”



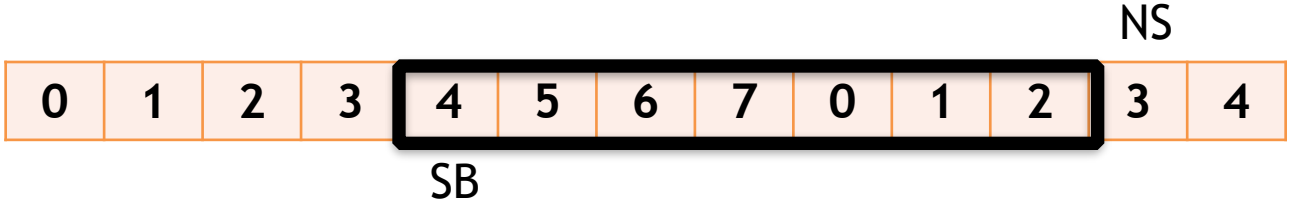
Sends packet sqn# 1: “. I saw … a g”



Receives packet ack# 3 (acking packet 3) : “NO, … BLACKBEAR”

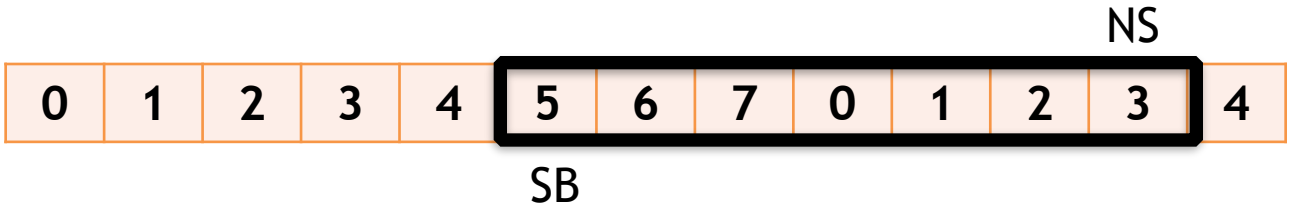


Sends packet sqn# 2: “uy. … trident?”

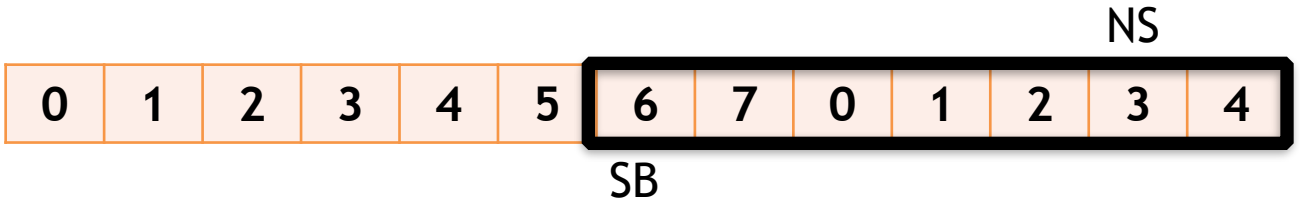


There are no more packets to send, so the sender is now listening (and has a timer se

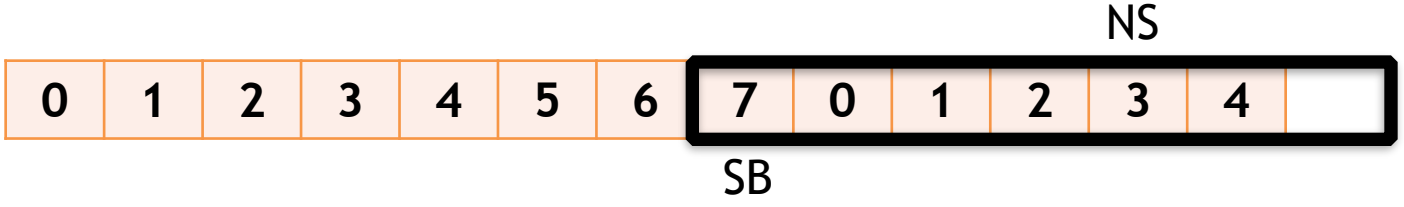
Receives packet ack# 4 (acking packet 4) : “D’S … GONNA”



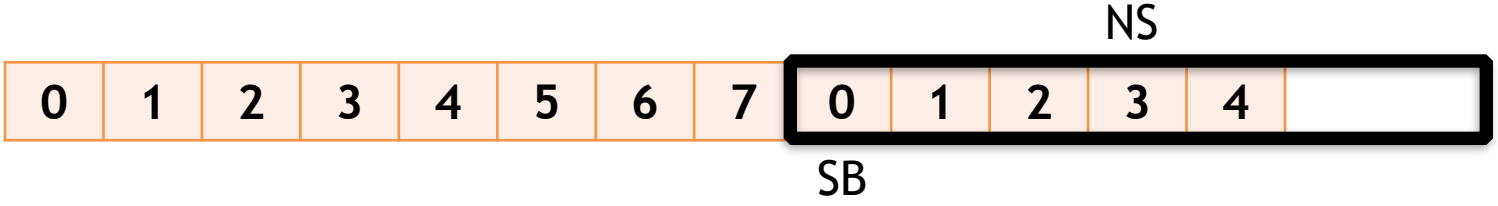
Receives packet ack# 5 (acking packet 5) : “BE … SMELL”



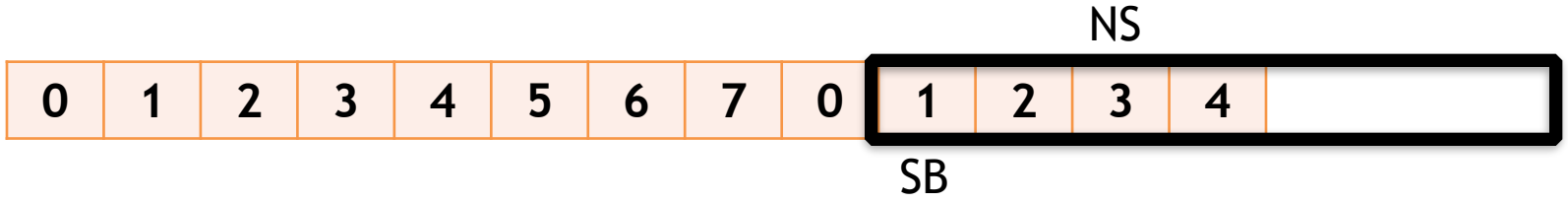
Receives packet ack# 6 (acking packet 6) : “S … THEY’VE”



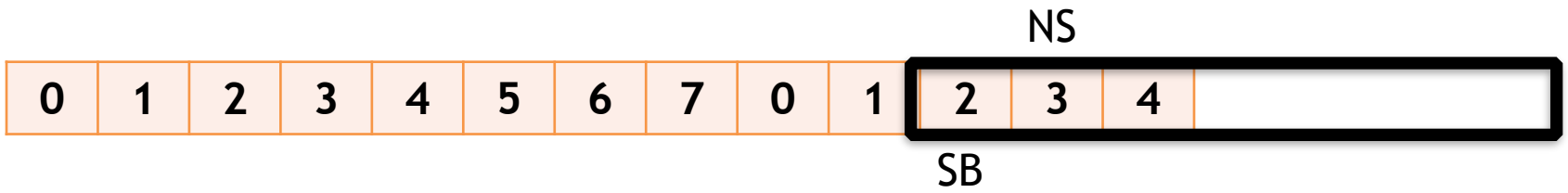
Receives packet ack# 7 (acking packet 7) : “DONE … OF”



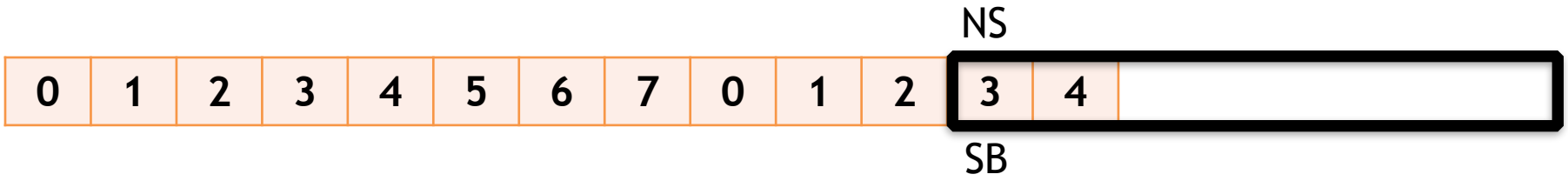
Receives packet ack# 0 (acking packet 0) : “ THE … TIME”



Receives packet ack# 1 (acking packet 1) : “ . I SAW … A G”



Receives packet ack# 2 (acking packet 2) : “UY. … TRIDENT?”



Client sends EOT packet with seqnum # 3 (type=3, length = 0) to server, written to seqnum.log.
Server receives this, records 3 in arrival.log, sends back EOT packet (type = 2, length=0), and terminates. Client receives EOT, records ack # 3 in ack.log, and terminates.

Here are what your output files should look like in this case:

seqnum.log should read:
0
1
2
3
4
5
6
7
0
1
2
3

ack.log should read:
0
1
2
3
4
5
6
7
0
1
2
3

arrival.log should read:
0
1
2
3
4
5
6
7
0
1
2
3