Bowei Wang 1462495

Part1:
The different part of this version's code is that if the current node is not a host it will directly transfer information to next link instead of handle that.(line 107 -111)
Then the two set handler is only checked when node is host. (lin163-167).

Part2:

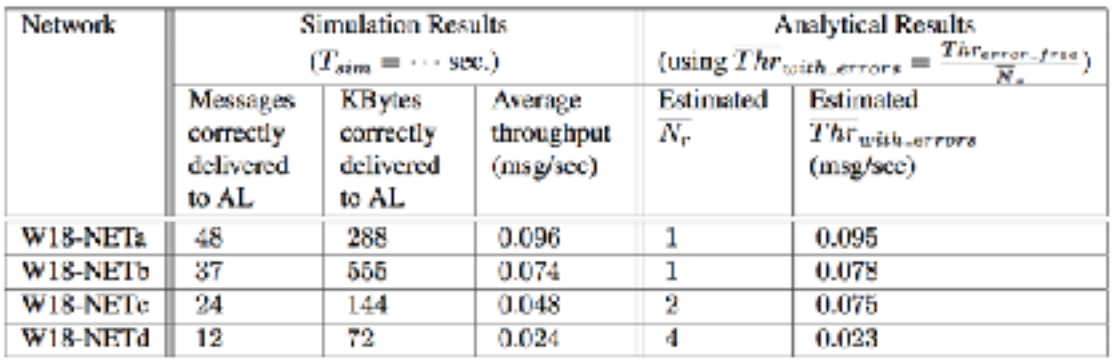
Simulation results is got by running correspond cnet files.

Analytical Results:
For NETa with corrupt probablity q = 0;
Nr = 1/(1 – q) = 1
Threrror-free = 1/(Tpkt + RTT) = 1/(6*8*2/60 + 4*2.2+0.1) = 1/10.5
Estimated Thrwith errors (msg/sec):
Thr = Threrror-free/Nr = 1/10.5/1 = 0.095

For NETb with corrupt probablity q = 0;
Nr = 1/(1 – q) = 1
Threrror-free = 1/(Tpkt + RTT) = 1/(15*8*2/60 + 4*2.2+0.1) = 1/12.9
Estimated Thrwith errors (msg/sec):
Thr = Threrror-free/Nr = 1/12.9/1 = 0.078

For NETc with corrupt probablity q = 0.5;
Nr = 1/(1 – q) = 2
Threrror-free = 1/(Tpkt + RTT) = 1/(6*8*2/60 + 4*2.2+0.3) = 1/10.7
Estimated Thrwith errors (msg/sec):
Thr = Threrror-free/Nr = 1/10.7/2 = 0.047

For NETd with corrupt probablity q = 0.75;
Nr = 1/(1 – q) = 4
Threrror-free = 1/(Tpkt + RTT) = 1/(6*8*2/60 + 4*2.2+0.3) = 1/10.7
Estimated Thrwith errors (msg/sec):
Thr = Threrror-free/Nr = 1/10.7/4 = 0.023



Network	Simulation Results ($T_{sim} = \cdots$ sec.)			Analytical Results (using $\overline{Thr}_{with\_errors} = \frac{Thr_{error\_free}}{\overline{N}_r}$)	
	Messages correctly delivered to AL	KBytes correctly delivered to AL	Average throughput (msg/sec)	Estimated $\overline{N}_r$	Estimated $\overline{Thr}_{with\_errors}$ (msg/sec)
W18-NETa	48	288	0.096	1	0.095
W18-NETb	37	555	0.074	1	0.078
W18-NETc	24	144	0.048	2	0.075
W18-NETd	12	72	0.024	4	0.023

From the table we can find that the simulation result's average throughput is close to analytical result. That show that the simulation is close to the real cases.

Part3:
Design Overview: This program uses several methods to handle this case.
First, check the cases as requested. If the recwindow is okay to be handled. Handle it and move the position of rcvBuf. Similarily, handle the sendBuf.

Program Status: The program will first send several messages to another host. When the message get the message, it will check whether the message is the message that it expected. If so, it will and this flame to window and check whether the window should be refreshed and pass some flame to AL. Send the largest f.seq as ACK.
ACK part in this program do something similar.

Testing: The program works good.