COP 5615 – PROJECT 2 (README FILE)

Group Members: Deepak Nair (UFID:13361231)
Abhishek Potnis (UFID:57164619)

Gossip_PushSum.scala file is in folder

PROJECT2_UFIDs_13361231_57164619\Gossip\src\GossipNetworks\Gossip_PushSum.scala

What is working?

We have implemented Gossip and PushSum for line, full, 2D and imperfect 2D topologies.

In Gossip, an actor terminates when it receives a rumor 10 times.

In PushSum, an actor terminates if it's s/w ratio do not change more than 10^{-10} in 3 consecutive rounds.

Convergence: When an actor terminates, all its neighbors removes this actor from their respective neighbor list and the network continues to gossip until there are no nodes left.

Largest Network we managed for Gossip: (Did not try for more nodes)

Topology	Largest number of nodes	Time
Line	2000	5824
Full	2000	5313
2D	2000	601
Imperfect 2D	2000	558

Largest Network we managed for PushSum: (Did not try for more nodes)

Topology	Largest number of nodes	Time
Line	2000	127445
Full	2000	612
2D	2000	37264
Imperfect 2D	2000	1024

Graphs for each topology for both algorithms shows the dependency of convergence time as a function of size of network. Graphs are presented in Report.pdf file.