

Gossip simulator

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Version:

1. Scala 2.11.7
2. SBT (the Simple Build Tool) 0.13.9
3. Akka 2.4-SNAPSHOT

Overview

There are two versions of code for this project uploaded, the normal and the bonus version. In the normal version, number of nodes, topology and algorithm are specified as three program inputs, while an extra argument can be chosen in the bonus version in order to set a number of nodes randomly distributed in the network into dead nodes that do not transmit any information.

Largest network

The size of largest network that this program can handle is found to be topology-dependent only. Since the numbers of edges, i.e. the numbers of neighbors belonging to a node are different for each topology, the size of the network is then mainly restricted by the memory available. Herein gives the largest number of nodes for each topology along with the number of edges:

| Topology | Largest number of nodes tested |
|--------------|--------------------------------|
| Line | 10^6 |
| Full | 3000 |
| 3D | 95^3 |
| Imperfect 3D | 93^3 |

Run the code of Proj2 | Proj2_bonus:

1. `cd` into the Proj2|Proj2_bonus directory .
2. Type `sbt` to start the interactive mode
3. Type `run <num of nodes> <topology> <algorithm>` to start Proj2 program |
Type `run <num of nodes> <topology> <algorithm> <num of dead nodes>` to start the Proj2_bonus program

* This project is accomplished individually.