Social Network Simulator

Progress Report

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Agent behavior

There are two types of nodes, blue and red. They have their corresponding type of news. The news can spread across the network. Once the node receives the news, they will first see if they are interested to the news. If they are interested in it, they will further spread the news.

System Measurement

I want to use the average number of neighbors as the measurement of entire network (how connected the network is).

1. Given the situation of network, randomly pick the starting node and calculate its centrality and local cluster coefficient. Note down how many node received the news. We will get graph centrality versus number of nodes received news and local cluster coefficient versus number of nodes received news.

2. Run the code to grow the graph. Every node follows the rule that if he thinks the news is interesting, he will follow the news creator. After couple of rounds network growth, we will have a new network with increased average number of neighbors. Then we run the news spread function and measure new relationship among centrality, local cluster coefficient and number of nodes received news.

We will compare the relationship between centrality and number of nodes received news, and one between local cluster coefficient and number of nodes received news within a graph. Besides, we can compare the influence to these two relationships as graph grow and become more connected.

HubNet model

I am working on a HubNet Model. Everyone can control one node. He will determine the person he wants to follow. There will be a limit for the number of people you can follow. The purpose is to receive the maximum number of news within 20 news periods.