

Step 1: I use Fruchterman-Reingold algorithm to layout the graph. But in order to have a faster convergence, I choose the `speed` parameter as `speed = 20`. This parameter expand the graph in a faster rate.

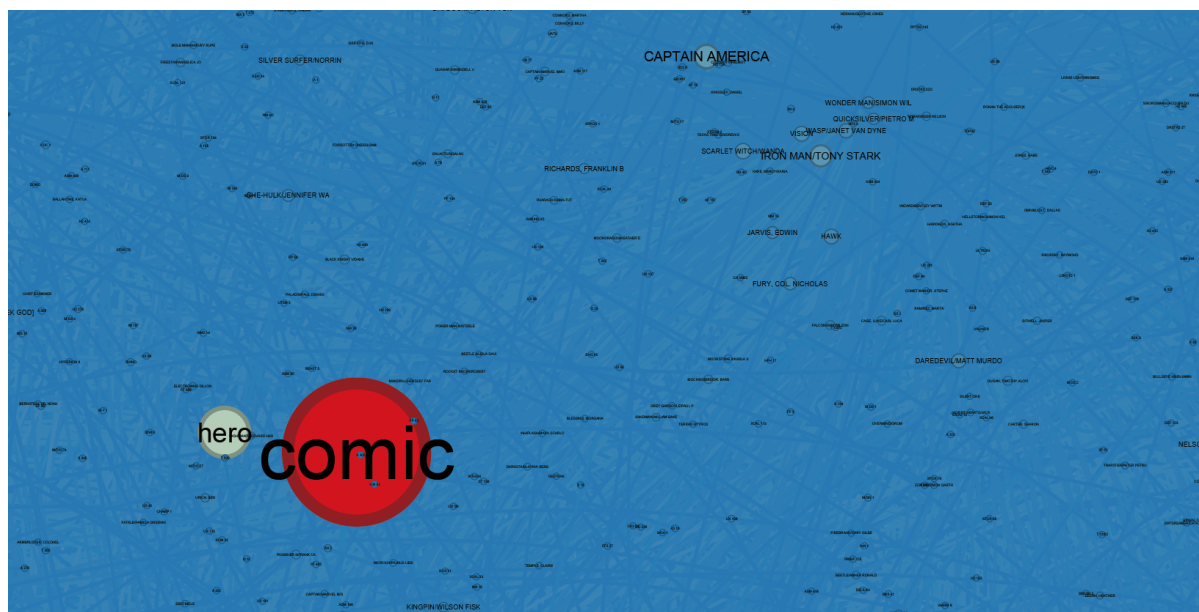
Step 2: After I set the minimum degree to 2, there are total 19095 nodes and 115196 edges in this graph.

Step 3: After the running of network diameter, it shows that the diameter of this graph is 4, with radius 2 and average path length 2.36.

Step 4: I use `min size = 1`, `max size = 30` to balance the size of the nodes in the graph. By this way, the most important keywords are apparent distinguished among other nodes, while the nodes are not too big to overlap with each other.

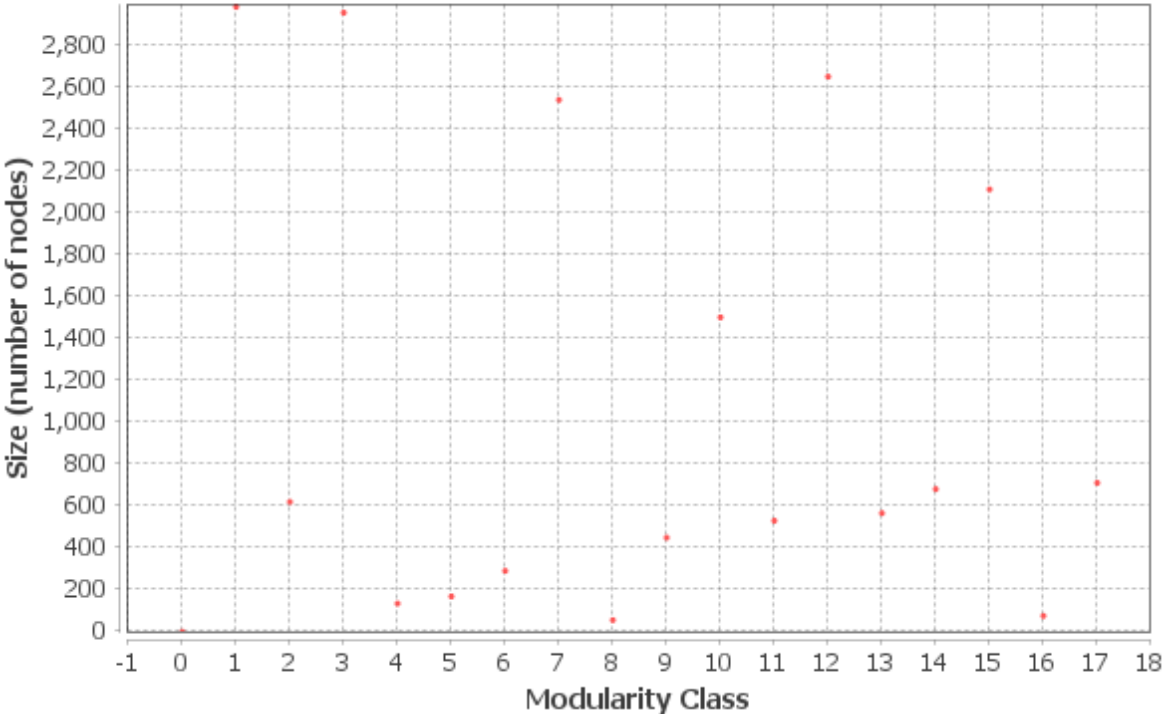
Step 5: The "blue-yellow-red" color scheme can be achieved by selecting the "red-yellow-blue" color scheme and revert it.

Step 6: The following screenshot shows the center of the file `gephi_degree_centrality.pdf`. Actually, it is more elegant in the preview panel.



Step 7: **Community number: 18**. The following shows the size distribution of the 18 communities:

Size Distribution



Step 10: After coloring the graph by community, the saved file `gephi_communities` looks like this:

