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HOMEWORK V
SOCIAL NETWORKS VISUALIZATION

Introduction

For this project, the network that has been used is the one gathered from Twitter regarding The Grammys that took place recently.

There are 171 nodes and 244 edges. The giant component is composed of 37 nodes and 73 edges.

Detect and visualize communities

Parameters:

Randomize: On
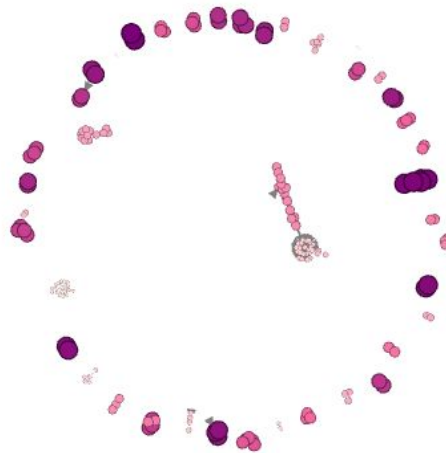
Use edge weights: On

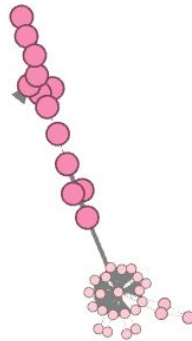Resolution: 1.0

Results:

Modularity: 0.890

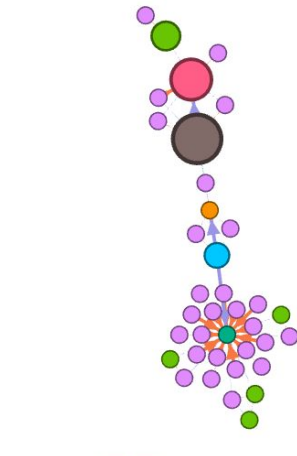Modularity with resolution: 0.890

Number of Communities: 45

As the gephi tool says, there are 45 communities in this network, which can be pretty much be seen towards the circle formed around the giant component (which is another community by its own)
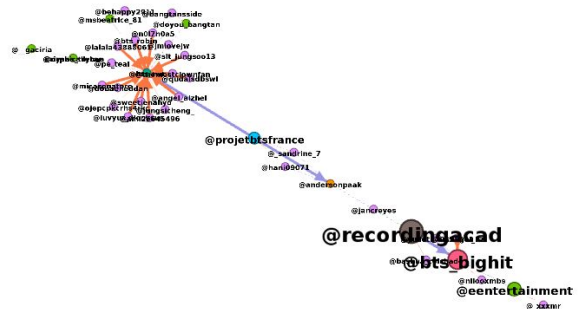
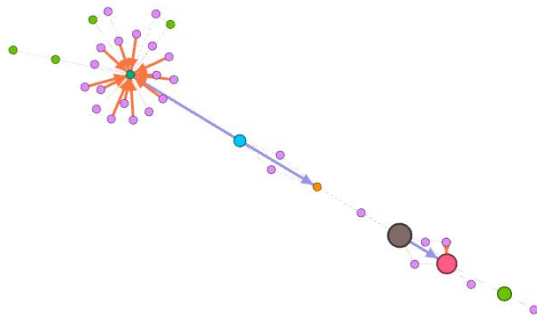And this is how the giant component looks like:

Size Distribution

Apply three different layouts

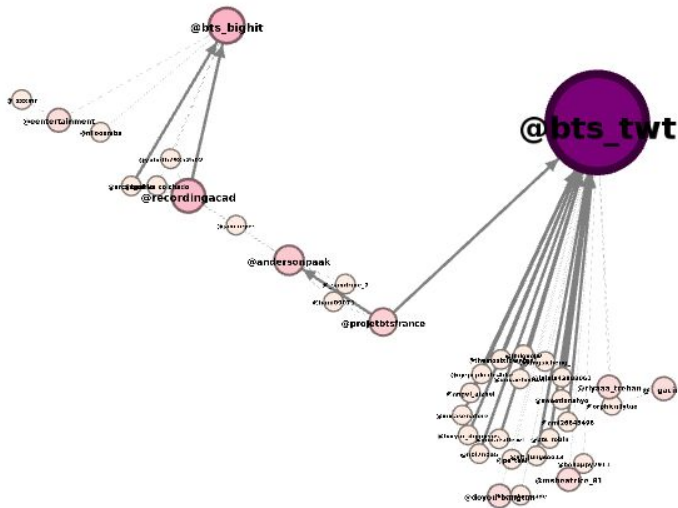## Layout 1 - Force Atlas

Layout 2 - Yifan Hu Proportional

Layout 3 - Contraction:

Centrality metrics for node size

Centrality metric: followers count

This time the network has been represented with the Yifan Hu layout and the followers count centrality metric. We can see that the biggest nodes are the **@bts_bighit** and **@bts_twt**. Both of them represent official accounts for a Corean group that performed at the Grammys gala.
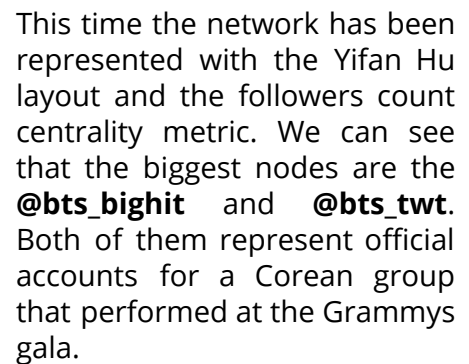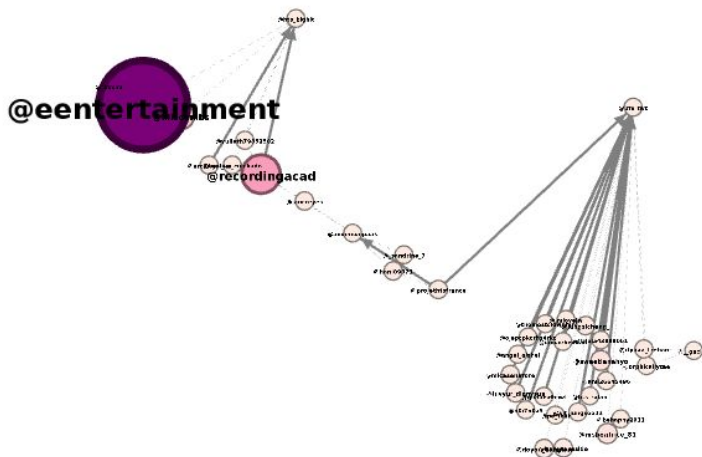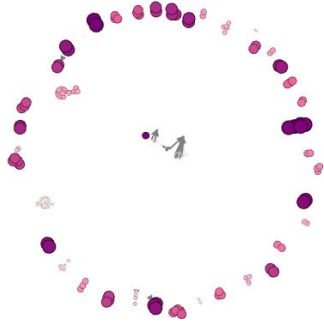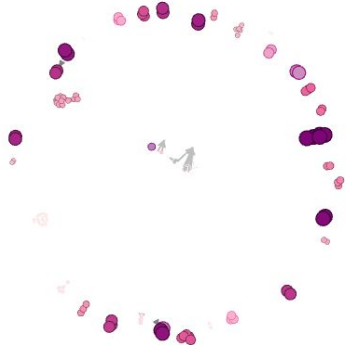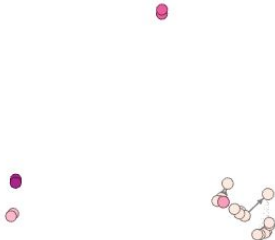
Centrality metric: in-degree

Again, the most noticeable nodes are **@bts_bighit** and bts_twt. In this case **@bts_twt** is larger. Apparently this is the account that obtained more mentions regarding the Grammys night.

Centrality metric: friends count

As for the friends count metric, we can see that the two previous larger nodes are no longer that big. Now the node appearing to be the largest is **@eentertainment**. This user is an account for celebrities and shows news. It has 65,9m followings while the other two official accounts, **@bts_bighit** and **@bts_twt** have only 22 and 130 followings respectively.

Visualize the K-core

Graph visualization	K-core value
	1
	2
	3

We can observe that the highest k-core value is 3 and is basically formed by the giant component (which is the biggest subnetwork we can see in the picture above).