

CYTOSCAPE: Network Visualization

by Anthony Bushong

What is Cytoscape?

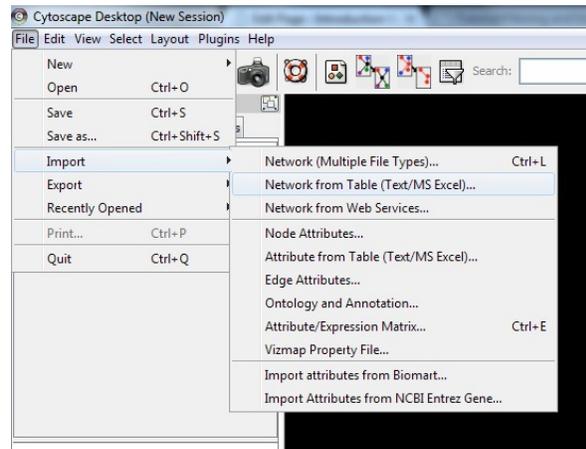
Cytoscape is a network visualization open source software that allows for analysis of large datasets, specializing in displaying relational databases.

Uploading a Dataset

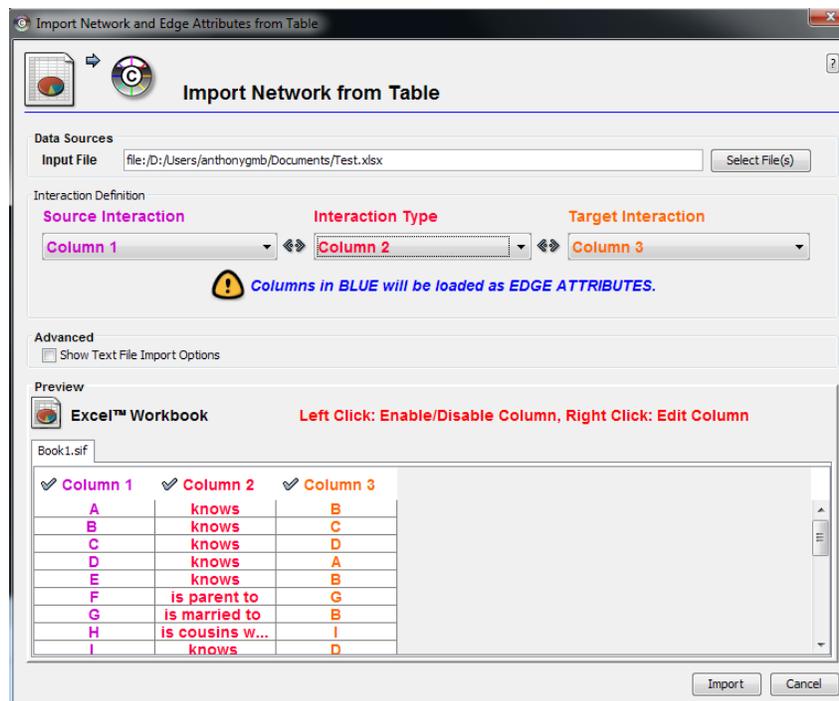
Cytoscape works with many file types, such as .sif, .xlsx, etc. For the purpose of this tutorial, use a dataset in an excel workbook.

- a. Open Cytoscape.
- b. To upload your dataset, go to:
 - a. File -> Import -> Network from Table (Text/MS Excel)

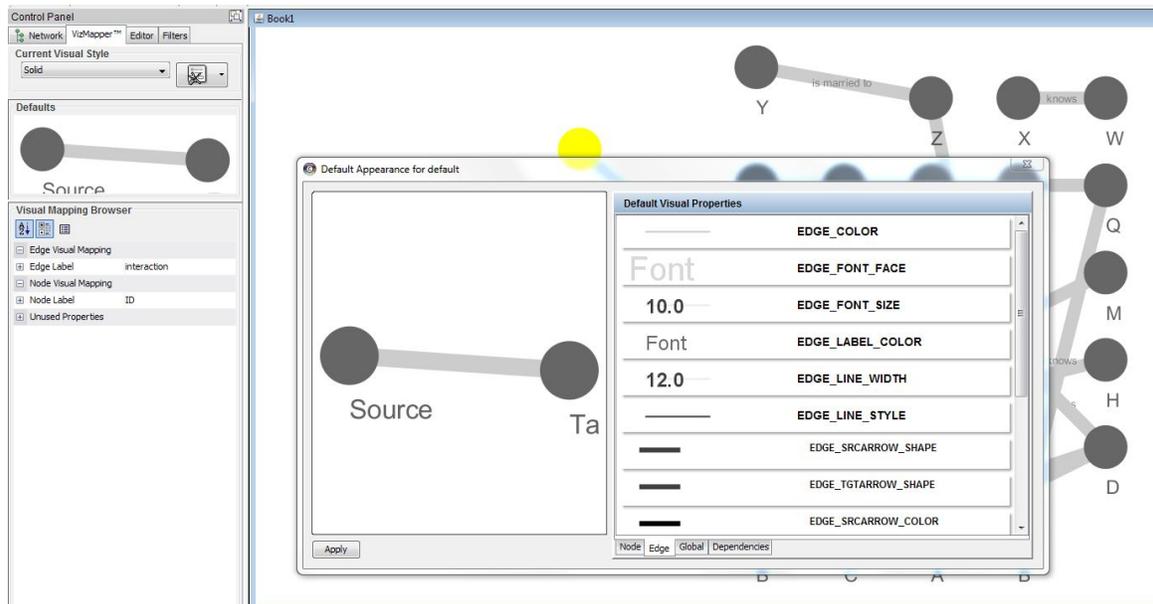
**See figure to the right*



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- c. From here, select your file, and then select your Source, your Interaction, and your Target fields. Your source interaction should be the first subject, while the interaction type defines the relationship between the source interaction and the target interaction. Each field should be labeled accordingly. Once you have defined the three fields, select Import.



Customizing Node and Edge Appearance



With Cytoscape's tool *VizMapper*, you can customize exactly how each aspect of your dataset appears.

- Click on the visualization under "Defaults" to reach the window where you can edit each aspect of the Nodes and Edges of your data visualization.
- Visit [Cytoscape's User Manual](#) to see the complete list of customizations that you can apply to your dataset.

Uploading Attribution

See: The [NCIBI's tutorial](#) regarding how to upload attribution data. Now that you have uploaded your Network Data, you will need to upload your attribution data to give each relationship, or "edge", value.

- Begin by going to File -> Import -> Attribute from Table. Select your file here. Make sure the radio button "Node" is selected when importing your table.
- Then make sure the screen looks as follows:
- Once this is selected, click import. Your data should now be accessible in the Data Panel.
- With data accessible in the Data Panel, you are officially ready to begin experimenting with visualization.

