Lab: Mapping your Social Network

COM 300: Concepts of New Media

The purpose of this lab is to bring your own social media connections into the classroom as a form of raw data and utilize network visualization tools to analyze the data.

If you have any questions about this lab, please to contact me, Aiden: aiden@uw.edu.

You will get exposure to an evolving opensource network analysis program.

Computer resources you will need access to in order to complete this lab:

- **Excel 2007**: Available on all campus computers. Earlier versions of Excel will not support the NodeXL plug-in.
- **NodeXL plug-in and template**: Available at http://www.codeplex.com/NodeXL.
- **You will need to be using Windows**: the NodeXL plug-in is not yet compatible with Mac versions of Excel.

Overview: You will collect a raw list version of your Facebook friend network. The 'friend data' will then be put into Excel 2007 and the NodeXL template. In NodeXL, you will be able to create a map of your friend network.

Outline

1. Installing NodeXL

2. Collecting your 'friend data' from Facebook

3. Formatting the data in NodeXL

4. Generating your Network Map

5. Adding your unique Attribute(s)

1. Installing NodeXL

NodeXL is a plug-in for Excel 2007 that creates maps from two columns of data. Each column contains a list of **nodes**. When two nodes are in the same row, next to each other in two columns, this creates what is called an **edge**, or a line between the two, in the map that is created.

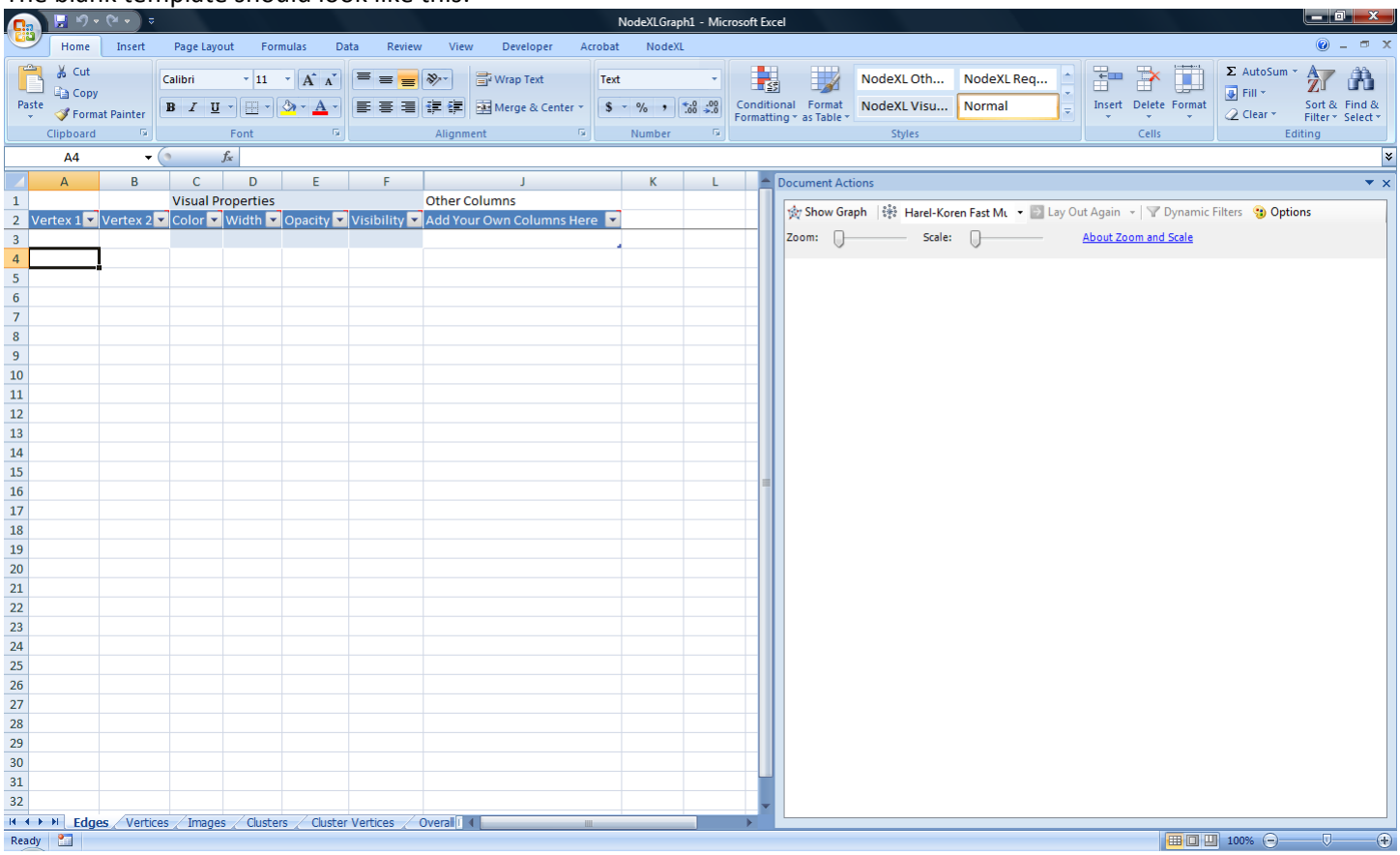
Check out some examples here: [NodeXL Social Media Network Maps] or by scrolling down on the NodeXL

In this case each column will contain a list of friends' names and when two friends are in the same row it is because they are friends, people that share many friends in common will grouped closer together. You will see more about this in the next section of instructions.

Follow these steps to install the NodeXL plug-in and save a copy of the template with a new name:

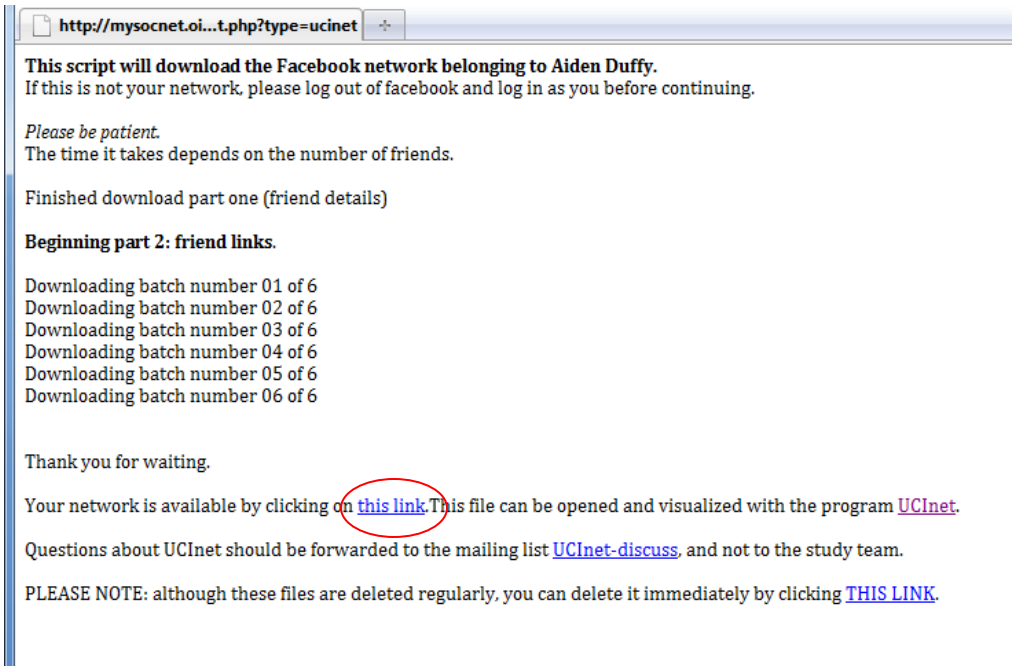
1. **Download the Zip file on** http://www.codeplex.com/NodeXL.
2. **Unzip it into any folder.** right-click the Zip file in Windows Explorer and select "Extract All."
3. **Close Excel if it is running.**
4. **Run the "Setup.exe" file.** You need to be an administrator to do this. (You don't need to be an administrator to actually use the NodeXL template once it's installed, however.) If this is the first Excel 2007 template you've installed, the setup will install some Microsoft prerequisites.
5. **Open the template.** In the Windows Start menu, click "All Programs" (Windows 7 or Vista) or "Programs" (XP), then "Microsoft NodeXL," then "Excel 2007 Template."
6. **Save As and give this document a new name so that you still have a blank original.**

The blank template should look like this:

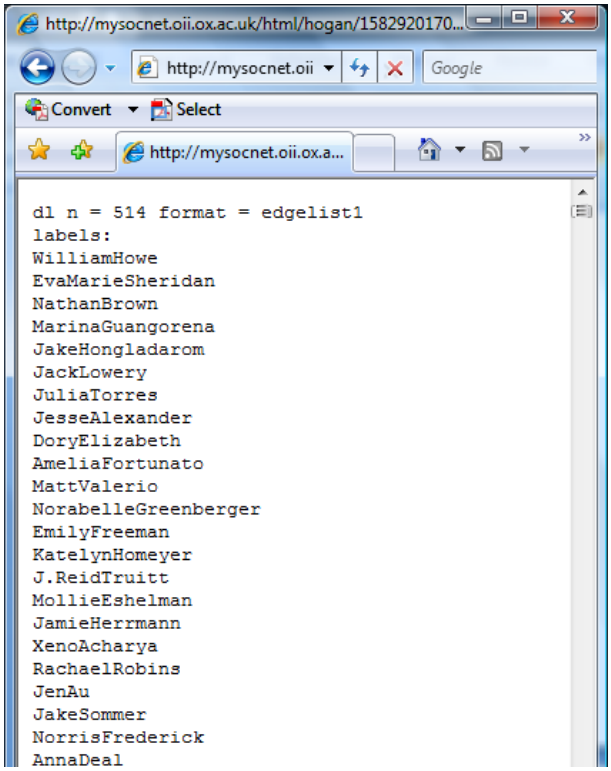


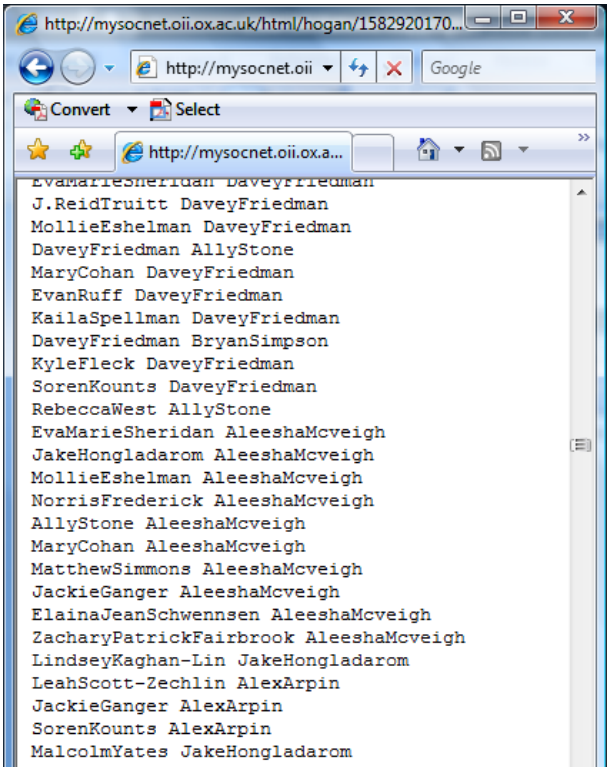
2. Collecting your 'friend data' from Facebook

To collect the kind of raw data you need for this exercise, you will need go to My Online Social Network and log in to your account. Once you log in, the site will start pulling a list of your friends and your mutual friends with each of your friends, it should look like this when it is finished:



Click on "this link" in the window to display the data. The first portion of the list will just be a single column with the names of your friends and after that there will be two columns of names, friends and the mutual friends they share with you, separated by a space.





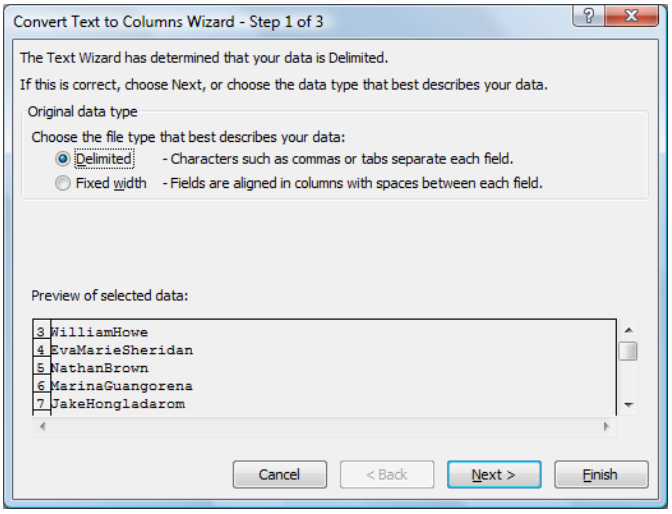
This data is now ready to be copied into NodeXL document.

3. Formatting the data in NodeXL

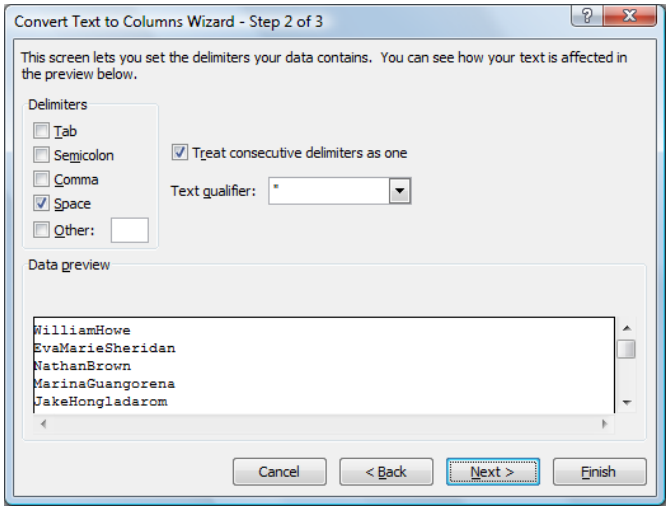
Copy and paste all of the Facebook 'friend data' you just generated into a Word or text-only document, delete the first two rows of text that don't contain friend names, and save this document so that you have a back-up copy of the information.

You probably noticed that there are no spaces between a friend's first and last name, but there are spaces between two different friends. This is helpful because you will now need to separate the names at that space into two columns using the **Text to Columns** function in Excel. Select the entire list starting with A3 and going down (Hint: if you select A3 and then click SHIFT + CTRL + down arrow, this will select all the text in the column) do not select the "Vertex 1" header. On the Data tab, click the Text to Columns button.

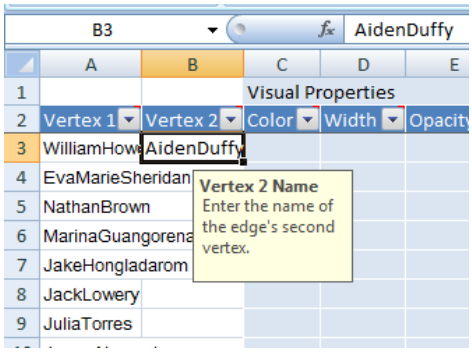
Select "Delimited" + Next



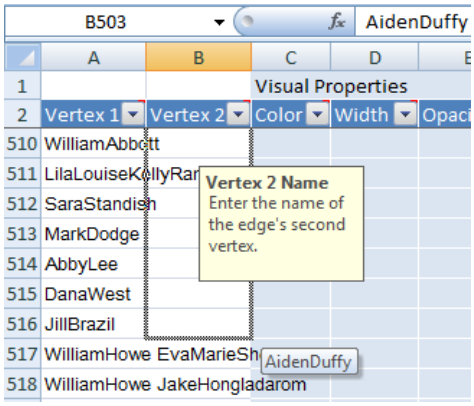
Check the "Space" box + Finish

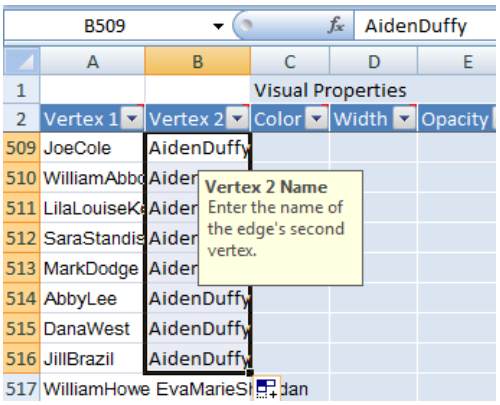


You'll notice that this doesn't affect the first portion of the list that is just your friends, but when you scroll down mutual friend connections are in two columns. Now that the data are in two columns, the map can create an edge between those two people in the final network map.



Because the first portion of data are your friends (as we talked about earlier), you need to add your name into the column next to each of those people so that when the map is generated there will be a line from the node that represents you to the node that represents each of them. The fastest way to do this in Excel is to type your name in the B3 cell. Make sure that there are no spaces just like the names of your friends (FirstLast). Now if you highlight the cell and click in the lower right hand corner your cursor will turn into a crosshair and you can drag this down the column so that all of those cells are now populated.

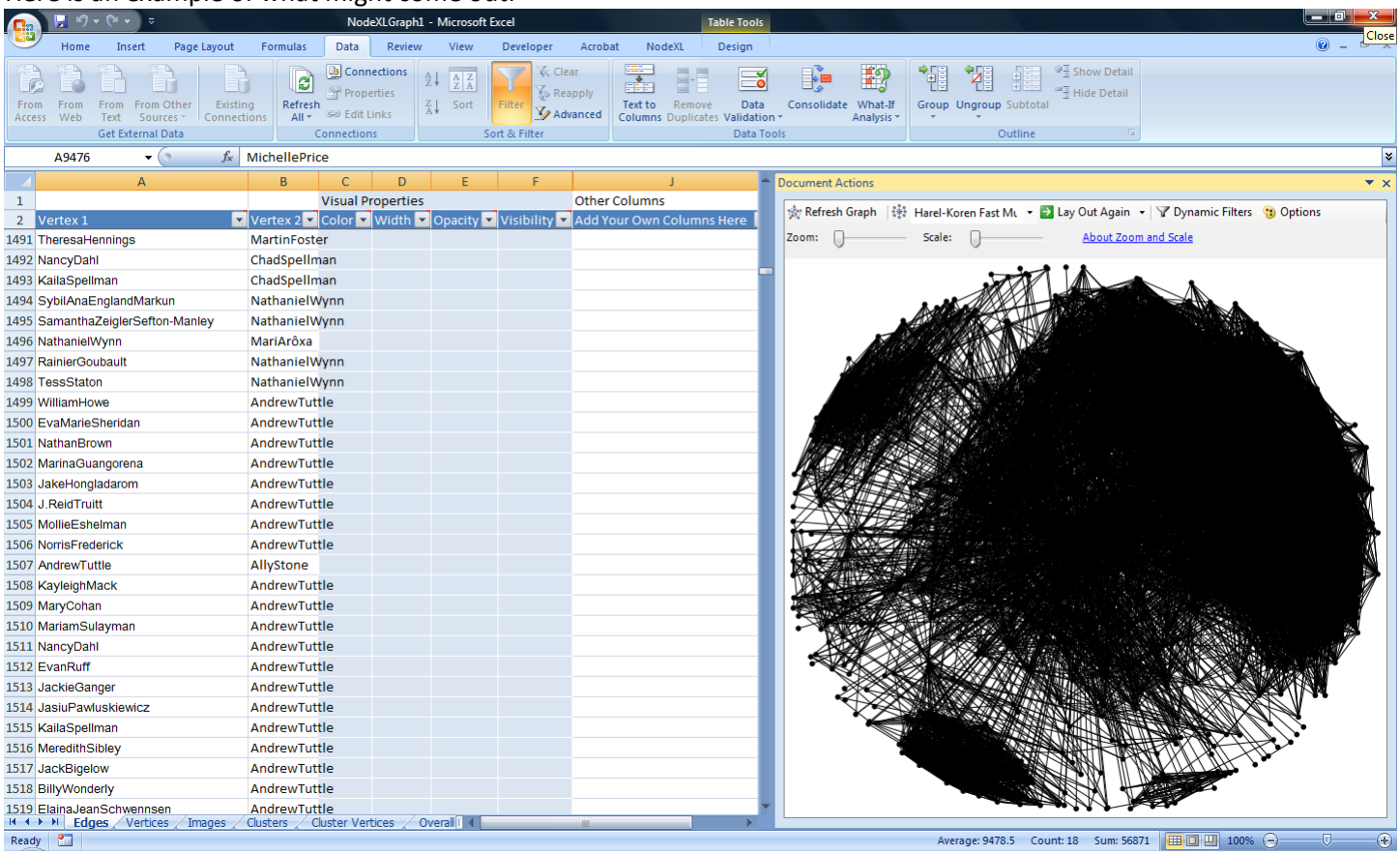




4. Generating your Network Map

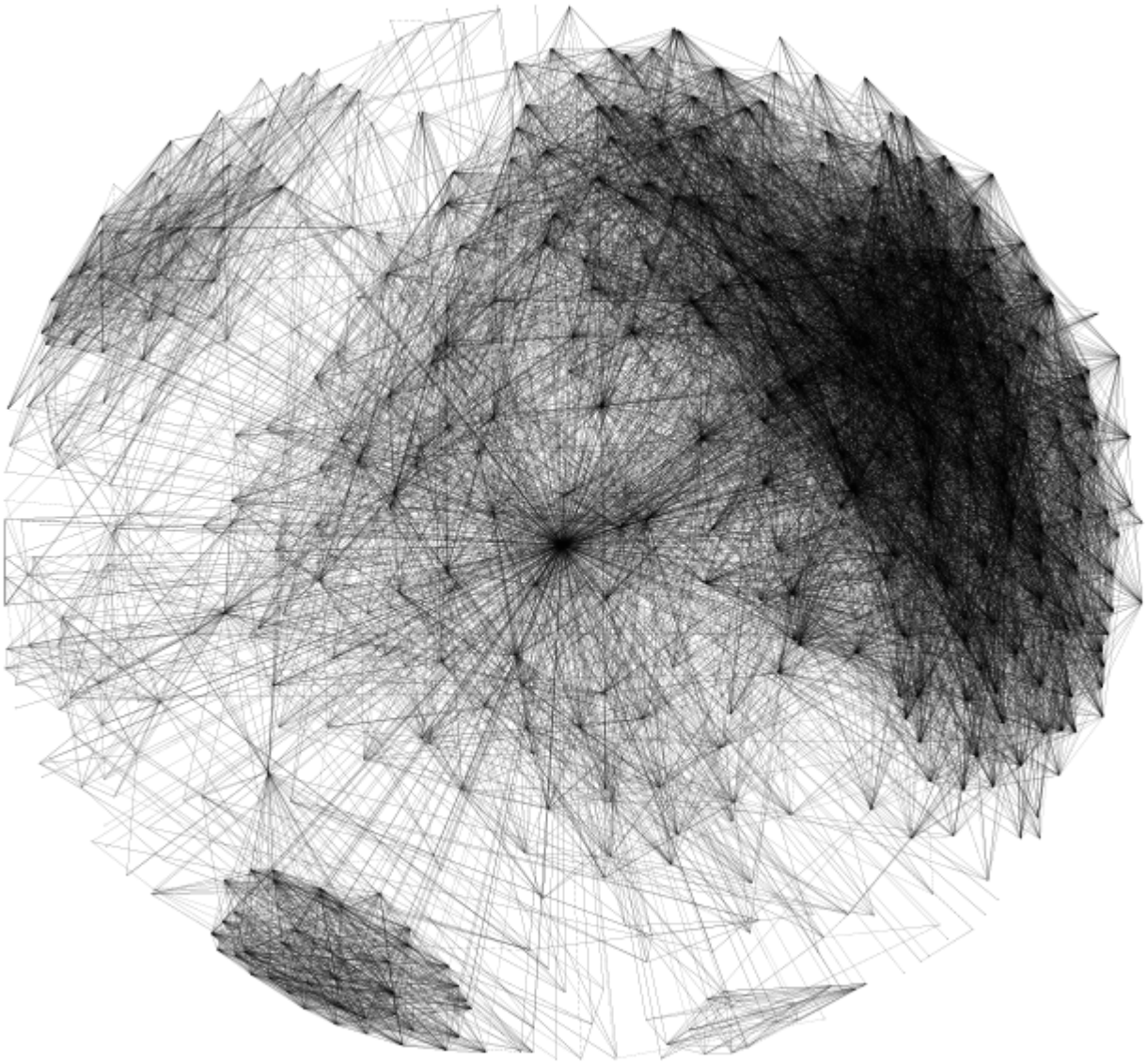
Now you get to generate a map of all of your Facebook friends using the other half of the template that we haven't done anything with yet. Find the button that says "Refresh Graph" and click it.

Here is an example of what might come out:



Now you can mess around with the graph's attributes to accentuate certain parts and bring out details. Small adjustments can change a lot.

For example if I adjust the “Scale” on the network map, we can see the individual lines much better:



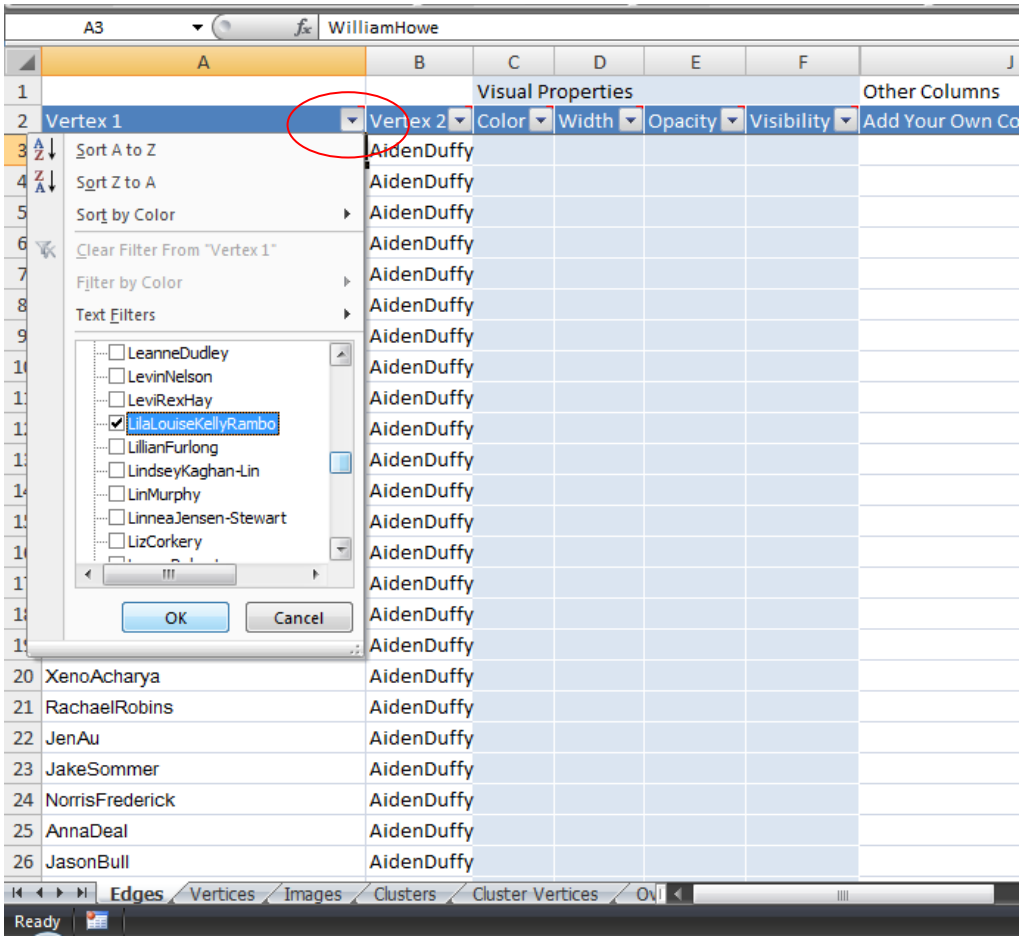
Once you have tailored your graph to your liking, save the image individually: If you right-click on the image, you can “Copy Image to Clipboard” and paste it into or a word document for printing. If you’d like to have a higher resolution version, you can select “Save Image to File” → “Save Image” and save in the XPS file format.

5. Adding your unique Attribute(s)

One way to highlight a unique portion of your network map is to highlight a single friend or a group of friends.

Example: In my graph, I noticed that my there were clusters based on different times in my life and different places I've spent time. My dad lives in upstate New York, so my upstate New York friends are clustered together. Also, my Seattle friends are clustered together, but there are sub groups from middle school, high school, and college. One of my best friends is Lila, we went to middle school together, she knows several of my friends from high school and college and she has visited upstate New York with me, collecting Facebook friends all along. So I want to highlight her links to show this:

In the "Vertex 1" column I click the down arrow , uncheck the first box "(Select All)" which unchecks all the boxes, then I scroll down to find Lila's name and check that.

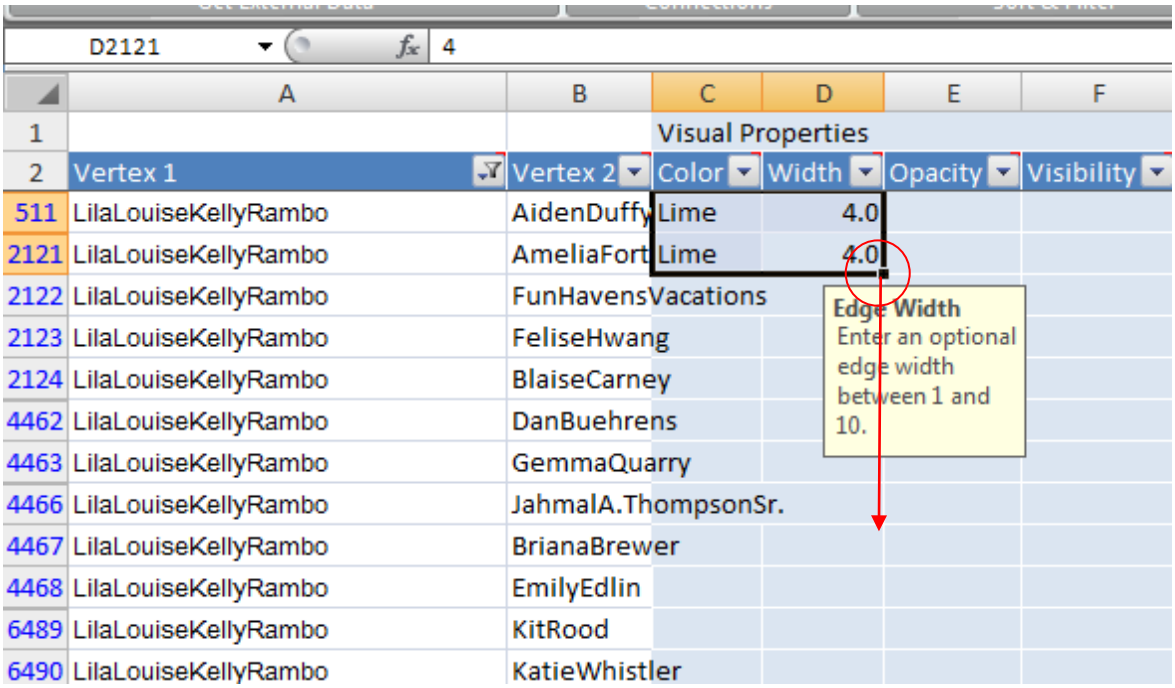


When I change the contents of the cells next to her name, every edge (link) between her and any other person will change. I decided to highlight her with a slightly thicker green line.

Color: select the cell next to the person's name in the "Color" column and right-click, "Select Color".

Size: enter a number between 1 and 10 to control the thickness of the edges (links).

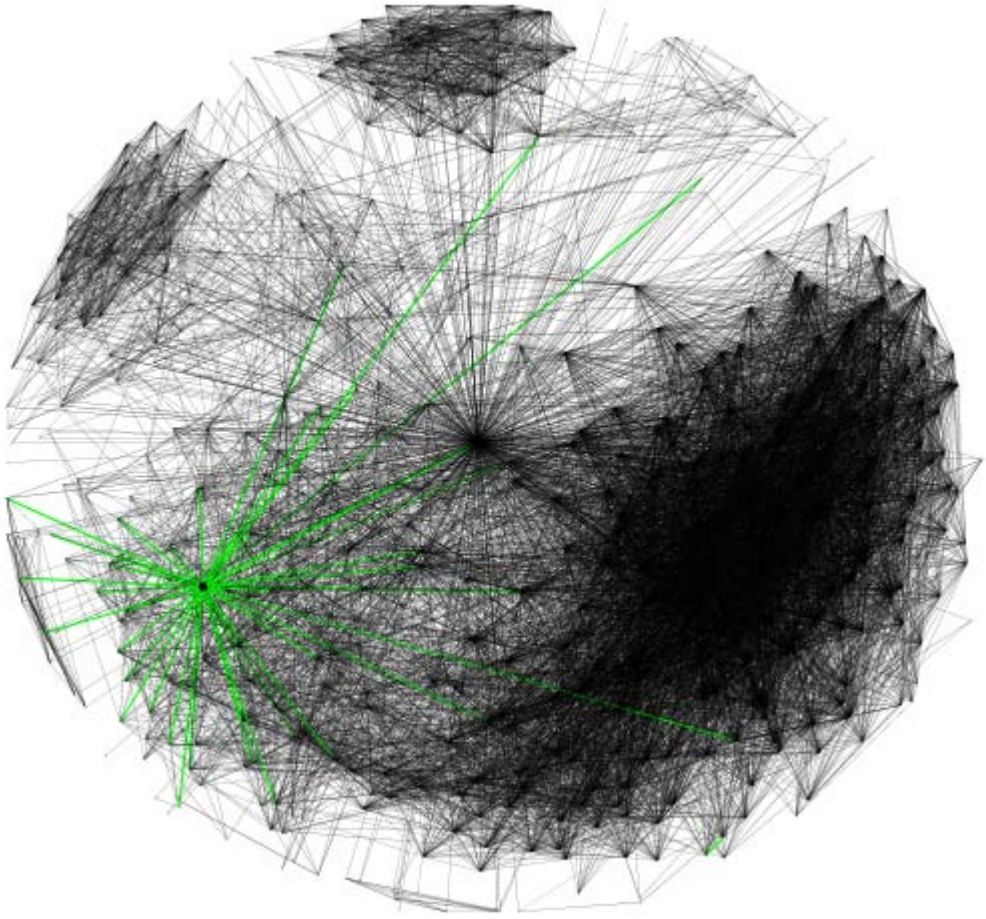
Copy the new values into the first two rows, highlight both rows and drag down from the lower right-hand corner (just like we did earlier to populate your name in the first cells). See example:



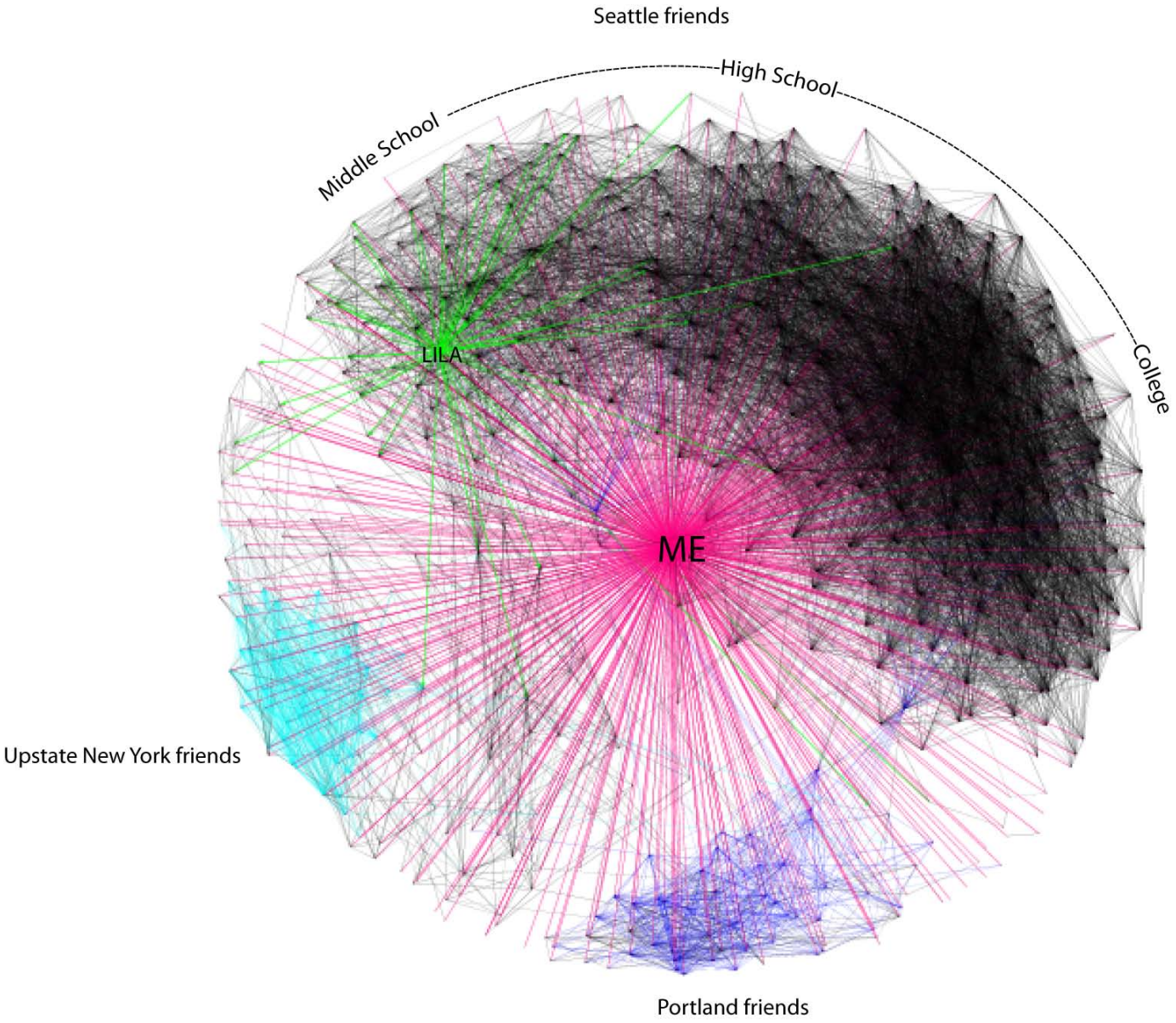
	A	B	C	D	E	F
1			Visual Properties			
2	Vertex 1	Vertex 2	Color	Width	Opacity	Visibility
511	LilaLouiseKellyRambo	AidenDuffy	Lime	4.0		
2121	LilaLouiseKellyRambo	AmeliaFort	Lime	4.0		
2122	LilaLouiseKellyRambo	FunHavensVacations				
2123	LilaLouiseKellyRambo	FeliseHwang				
2124	LilaLouiseKellyRambo	BlaiseCarney				
4462	LilaLouiseKellyRambo	DanBuehrens				
4463	LilaLouiseKellyRambo	GemmaQuarry				
4466	LilaLouiseKellyRambo	JahmalA.ThompsonSr.				
4467	LilaLouiseKellyRambo	BrianaBrewer				
4468	LilaLouiseKellyRambo	EmilyEdlin				
6489	LilaLouiseKellyRambo	KitRood				
6490	LilaLouiseKellyRambo	KatieWhistler				

Go to the Data tab Repeat this action in the “Vertex 2” column.

Once I have changed Lila’s links o green (or Lime) and the size to four, my network map looks like this.



Here is my Network Map once I highlighted different groups and a friend that crosses many of the groups:



(Note: to add text to the graphic, you could copy the image in Illustrator, Photoshop, or even Paint!)