

Visualising social networks

Prepared and developed by Aneesha Bakharia

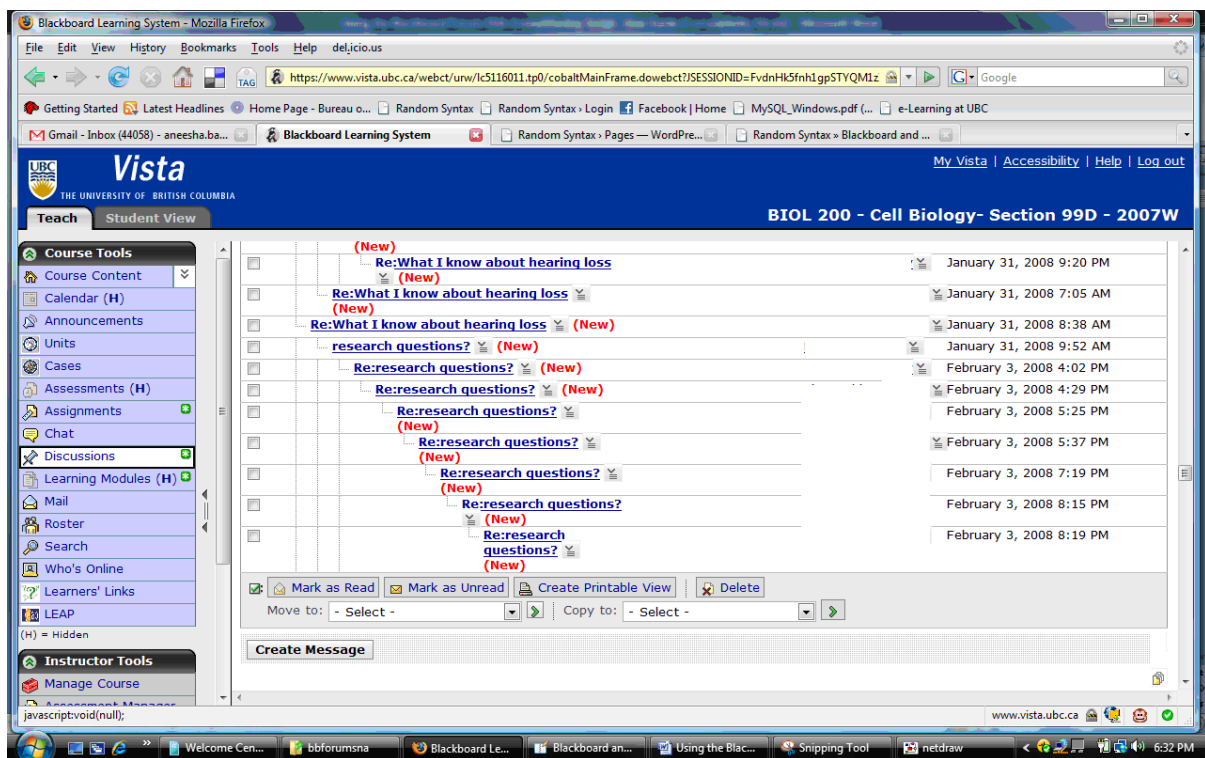
Installation Instructions can be found at:

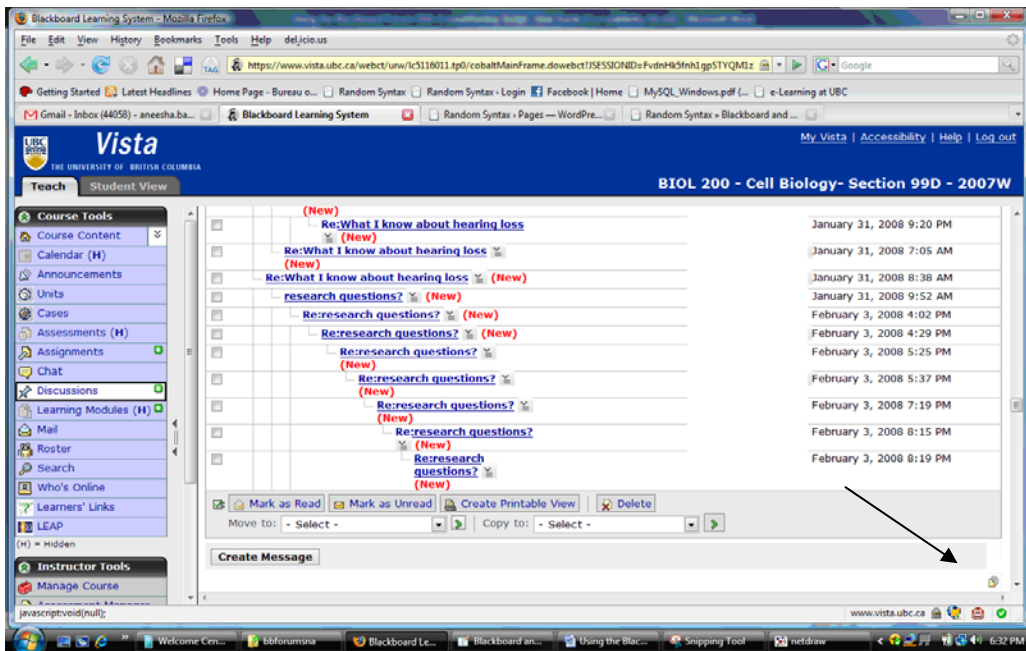
http://olt.ubc.ca/learning_tools/research_1/research/

This document provides some brief instructions on setting up social network visualisations. The document covers both BlackBoard Vista (formerly WebCT) and BlackBoard 8.0.

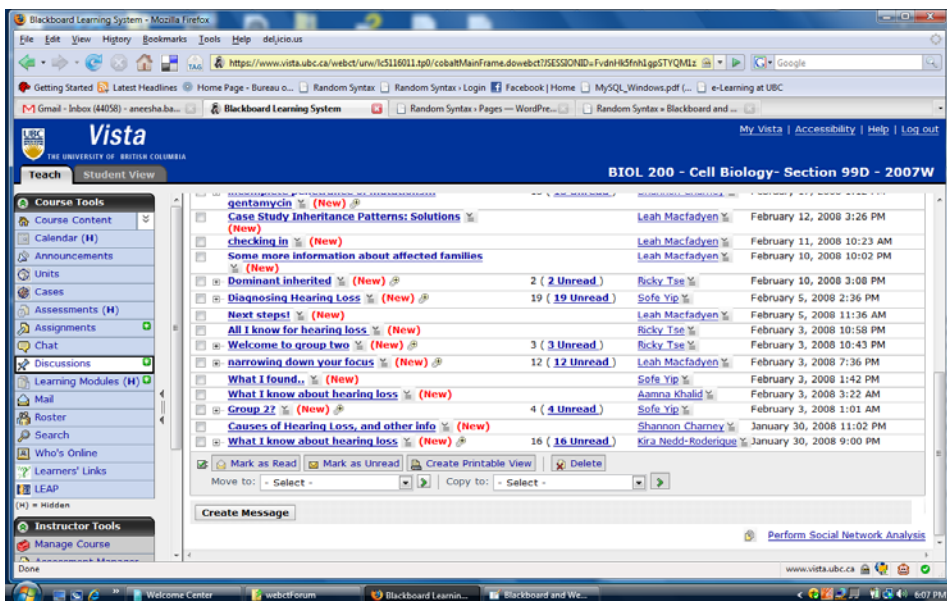
BlackBoard Vista (WebCT)

WebCT, by default limits the number of posts displayed per page. The SNA tool is only able to analyse data on that is displayed on a single page. In order to analyse a large forum, change the Paging Preferences to an appropriate number eg 200 posts per page. The Paging Preferences icon is displayed at the bottom of the forum page.



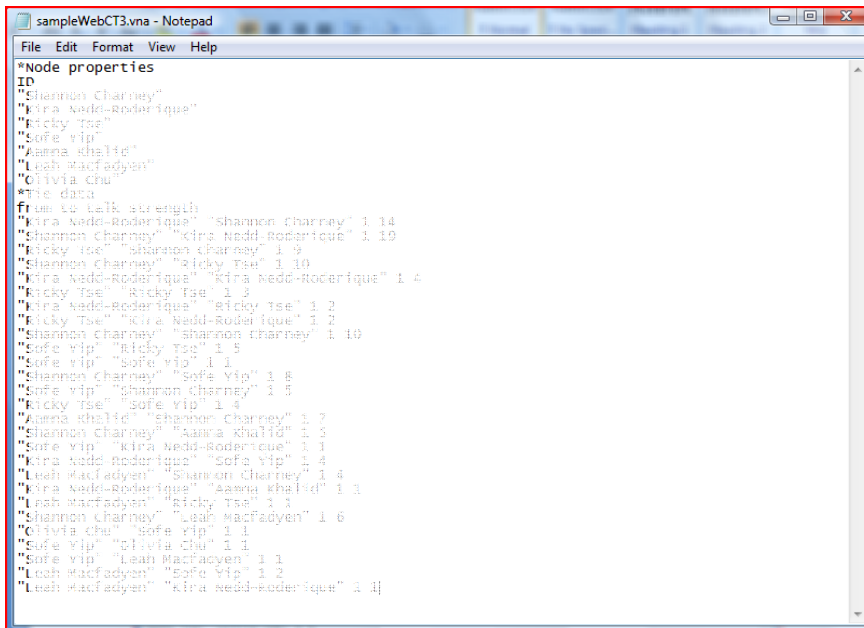


When a Forum is displayed in WebCT, a “Perform Social Network Analysis” link is added at the bottom on the page. Click on this link.



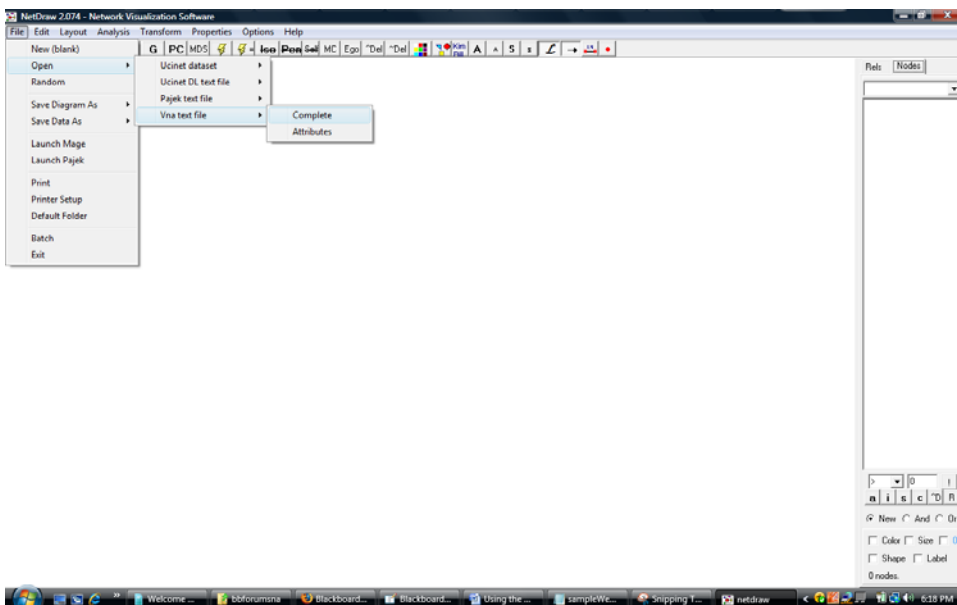
The forum is analysed and summary information is displayed.

Copy the VNA data from the textbox, paste into Notepad and save with a .vna extension. It is important that file has a .vna extension(e.g. socialnetworkexample.vna).

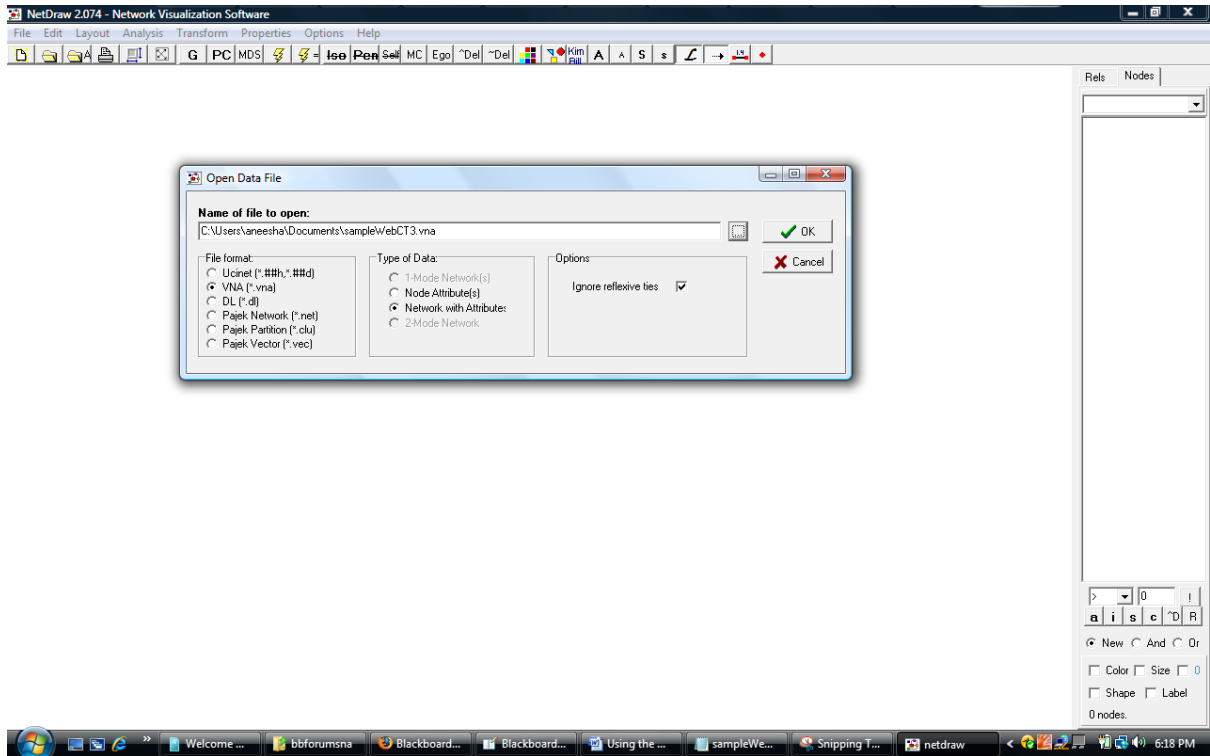


```
sampleWebCT3.vna - Notepad
File Edit Format View Help
*Node properties
ID
"Shannon Charney"
"Kira Nadei-Roderique"
"Ricky Tse"
"Safe Vip"
"Amna Khalid"
"Leah MacFadyen"
"Clivia Chu"
*The data
From to talk strength
"Kira Nadei-Roderique" "Shannon Charney" 1 14
"Shannon Charney" "Kira Nadei-Roderique" 1 10
"Ricky Tse" "Shannon Charney" 1 9
"Shannon Charney" "Ricky Tse" 1 10
"Kira Nadei-Roderique" "Kira Nadei-Roderique" 1 4
"Ricky Tse" "Ricky Tse" 1 3
"Kira Nadei-Roderique" "Ricky Tse" 1 2
"Ricky Tse" "Kira Nadei-Roderique" 1 2
"Shannon Charney" "Shannon Charney" 1 10
"Safe Vip" "Ricky Tse" 1 5
"Safe Vip" "Safe Vip" 1 1
"Shannon Charney" "Safe Vip" 1 8
"Safe Vip" "Shannon Charney" 1 5
"Ricky Tse" "Safe Vip" 1 4
"Amna Khalid" "Shannon Charney" 1 7
"Shannon Charney" "Amna Khalid" 1 3
"Safe Vip" "Kira Nadei-Roderique" 1 1
"Kira Nadei-Roderique" "Safe Vip" 1 4
"Leah MacFadyen" "Shannon Charney" 1 4
"Kira Nadei-Roderique" "Amna Khalid" 1 1
"Leah MacFadyen" "Ricky Tse" 1 3
"Shannon Charney" "Leah MacFadyen" 1 6
"Clivia Chu" "Safe Vip" 1 1
"Safe Vip" "Clivia Chu" 1 1
"Safe Vip" "Leah MacFadyen" 1 1
"Leah MacFadyen" "Safe Vip" 1 2
"Leah MacFadyen" "Kira Nadei-Roderique" 1 1]
```

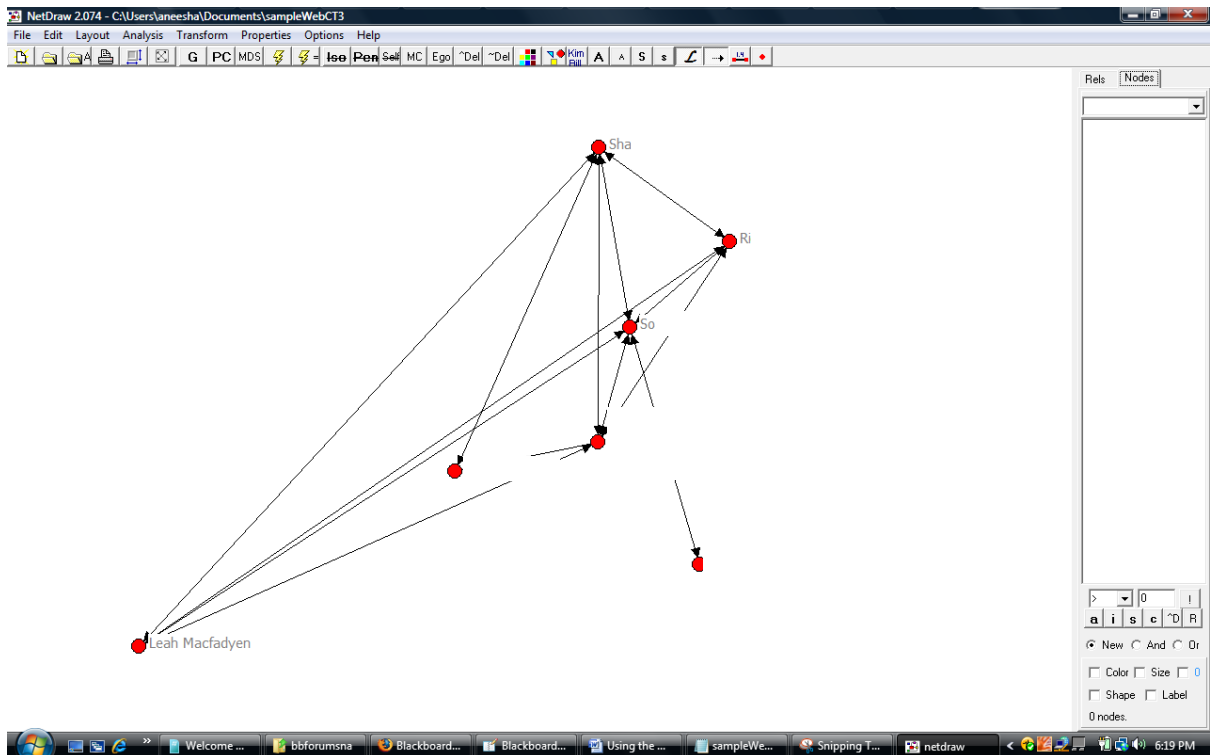
Open the file in NetDraw.



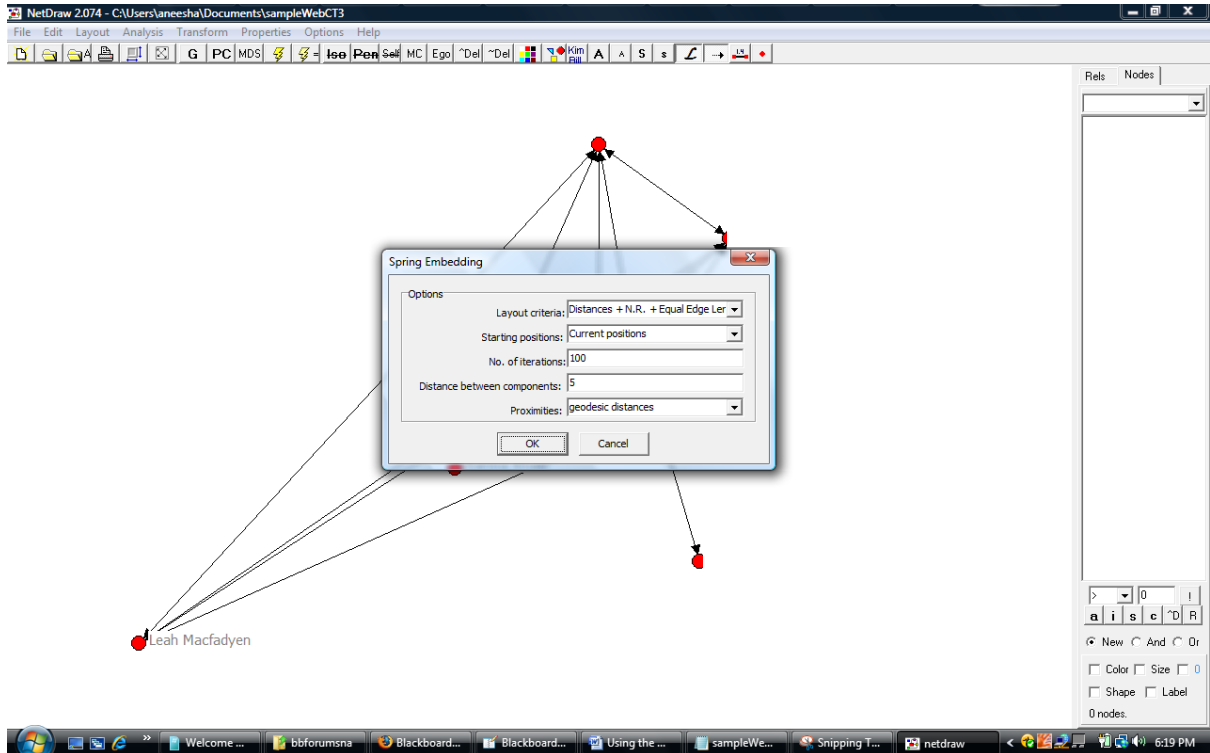
Ensure that VNA is selected. Browse for the .vna file and click the Ok button.



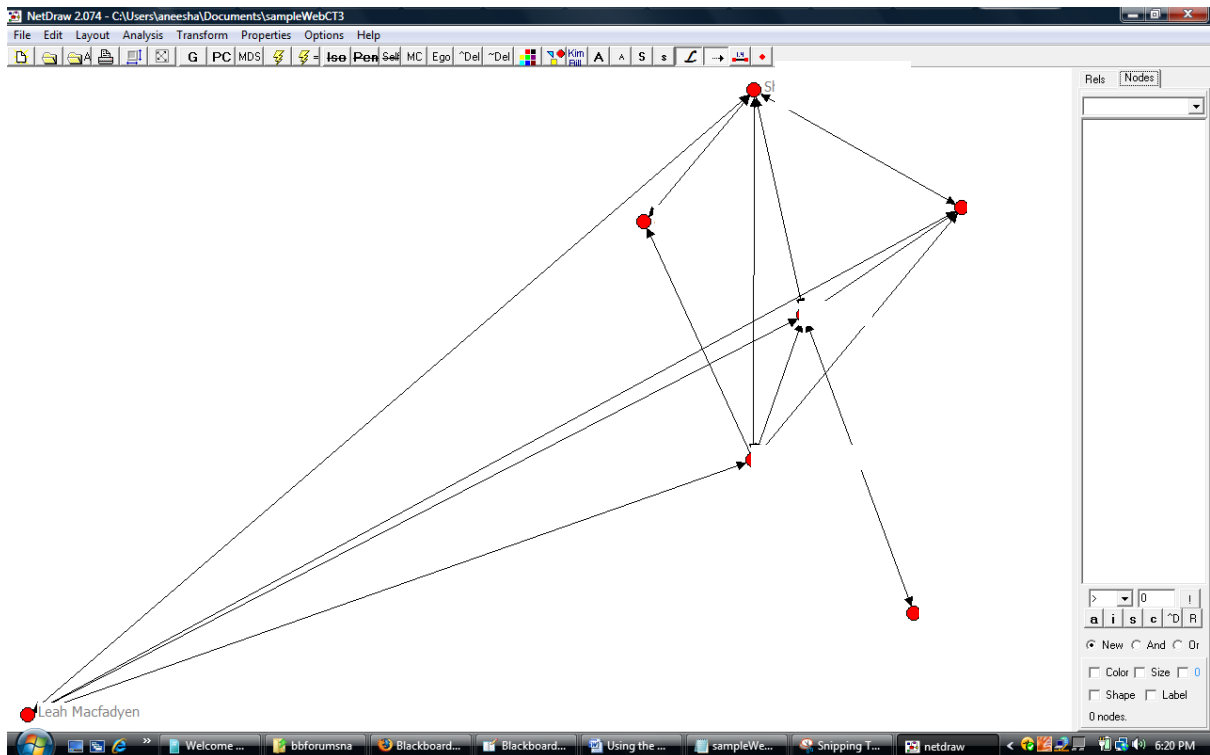
A graph of the social network is displayed.



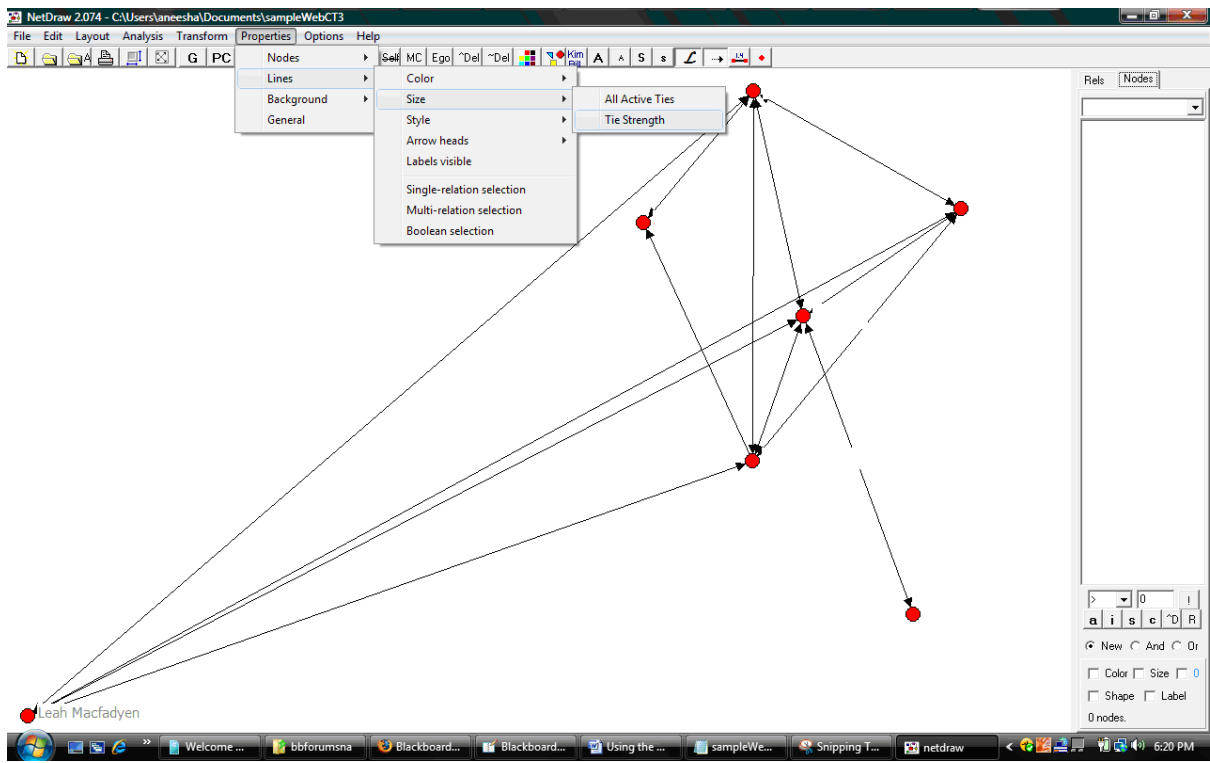
A graph layout algorithm can be applied to assist with network visualisation. Select Layout, Graph-Theoretic Layout, Spring embedded from the menu. The Spring –Embedded dialog is displayed. Use the default values and click Ok.



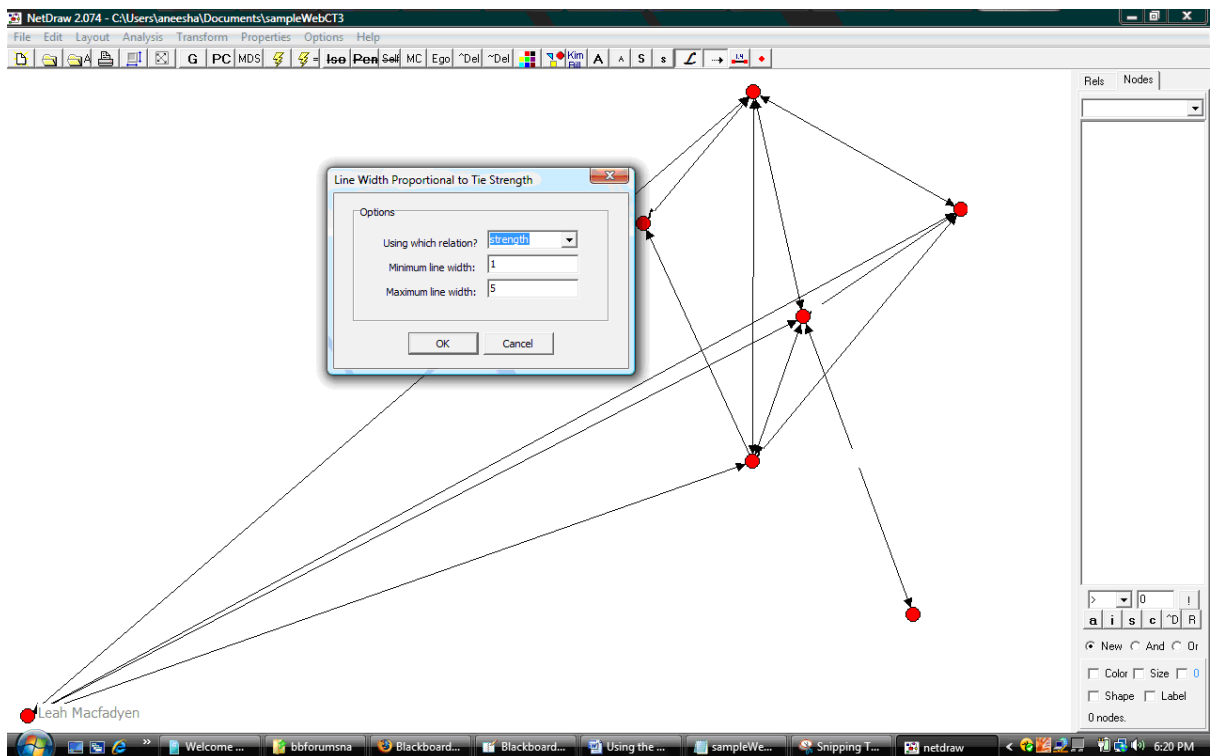
The social network/graph is rearranged.



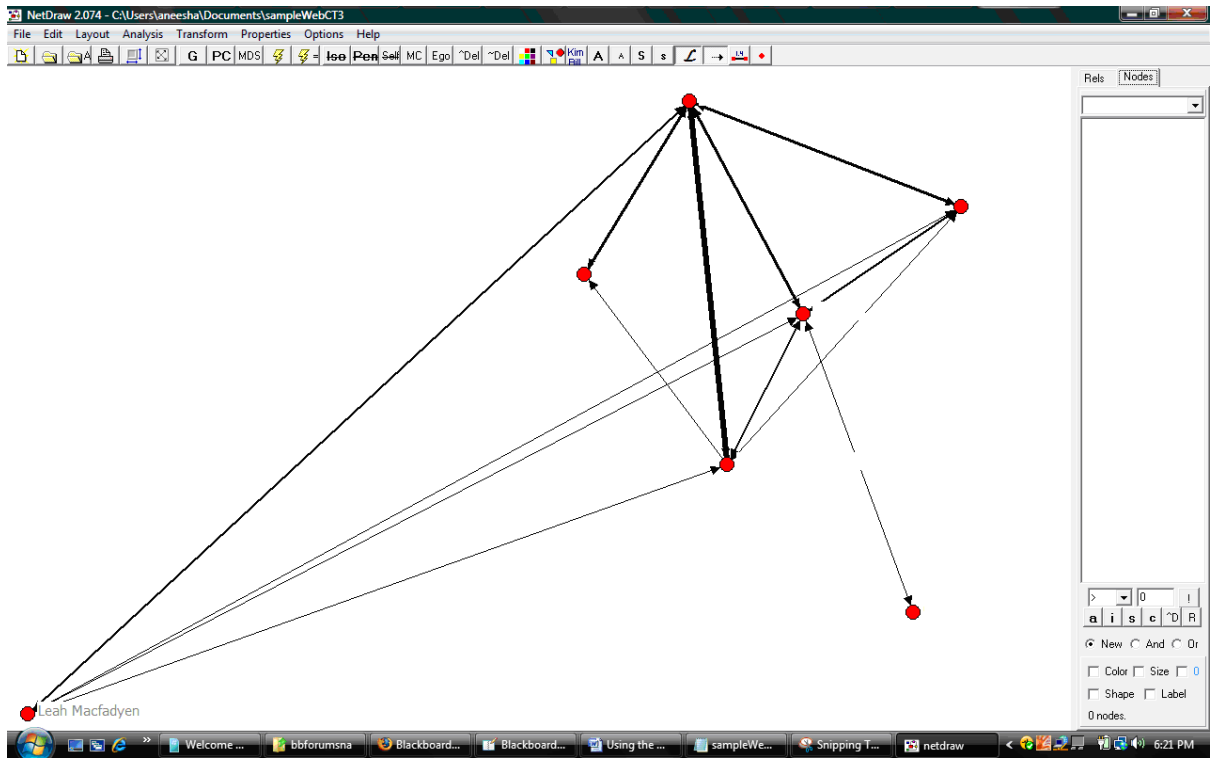
The number of posts between each person was also exported. This data can be displayed to help identify weak and strong relationships. Select Lines, Size, Tie Strength from the menu.



Select Strength and click OK.

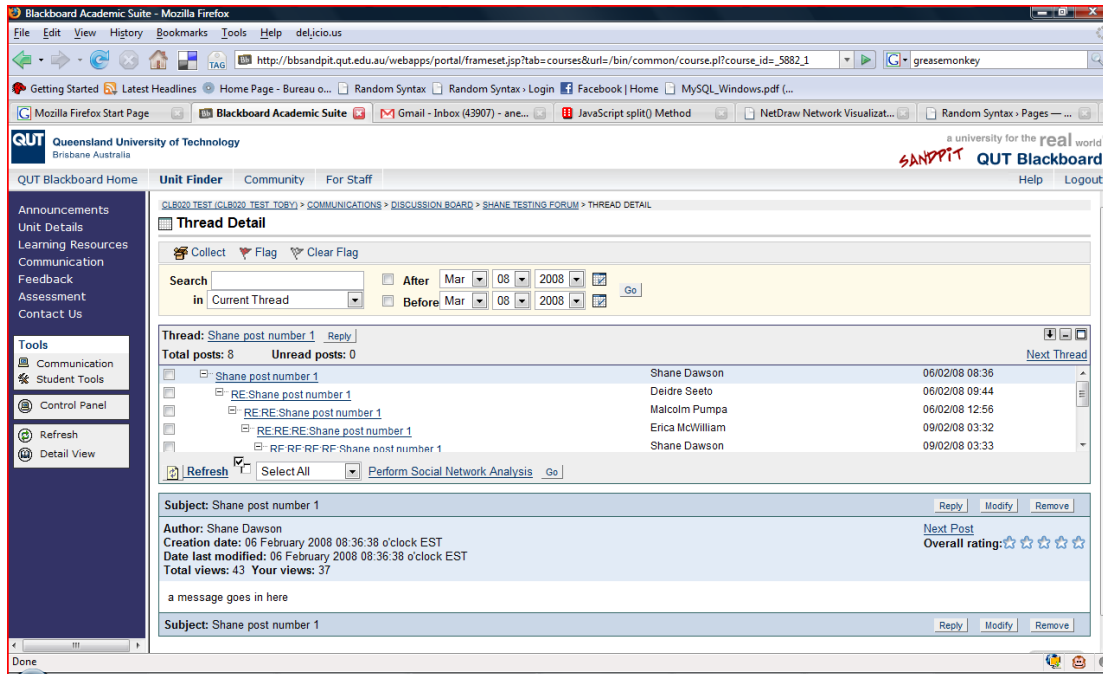


The line width reflects the strength of the relationship.

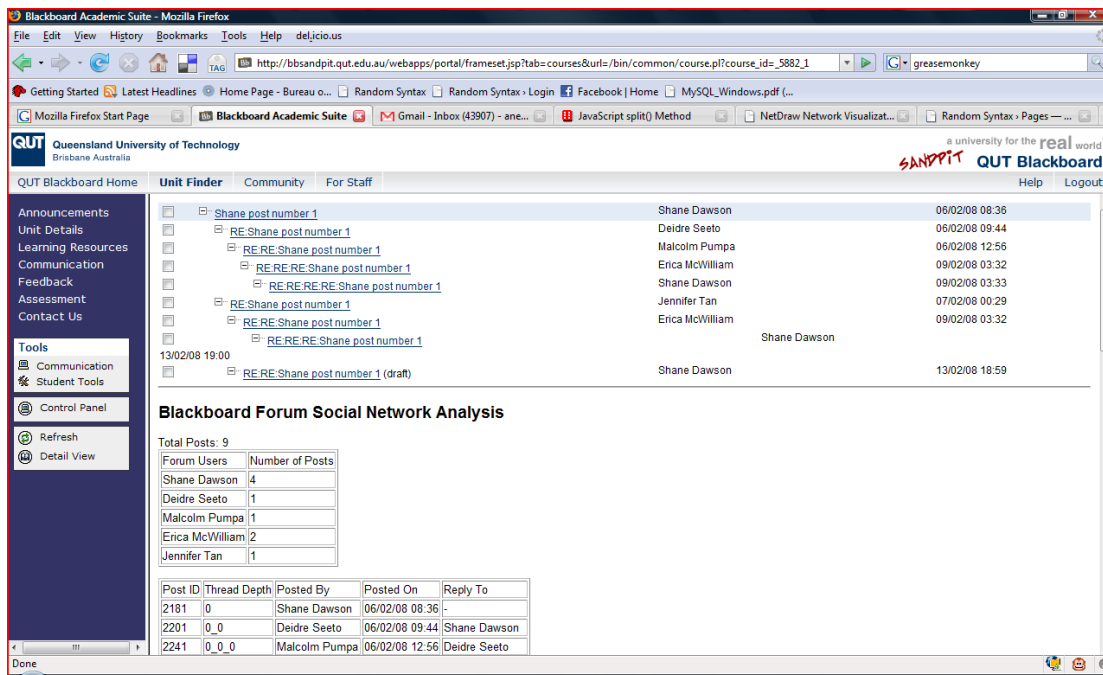


Blackboard

When you visit a Blackboard forum, a “Perform Social Network Analysis” link will be injected. Click on the link.



The Analysis page is displayed. This includes a Post summary.



The Post-Reply Frequency Table and GraphML output.

The screenshot shows the Blackboard Academic Suite interface. On the left is a navigation menu with options like Announcements, Unit Details, Learning Resources, Communication, Feedback, Assessment, and Contact Us. The main content area is titled "Post-Reply Frequency Table" and contains a table with the following data:

Poster	Replied To	Frequency
Deidre Seeto	Shane Dawson	1
Malcolm Pumpa	Deidre Seeto	1
Erica McWilliam	Malcolm Pumpa	1
Shane Dawson	Erica McWilliam	2
Jennifer Tan	Shane Dawson	1
Erica McWilliam	Jennifer Tan	1
Shane Dawson	Jennifer Tan	1

Below the table is a section titled "GraphML Output" containing XML code:

```
<?xml version="1.0" encoding="UTF-8"?>
<graphml xmlns="http://graphml.graphdrawing.org/xmlns"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://graphml.graphdrawing.org/xmlns
http://graphml.graphdrawing.org/xmlns/1.0/graphml.xsd">
<graph id="G" edgedefault="directed">
<node id="Shane Dawson"/>
<node id="Deidre Seeto"/>
<node id="Malcolm Pumpa"/>
<node id="Erica McWilliam"/>
<node id="Jennifer Tan"/>
<edge source="Deidre Seeto" target="Shane Dawson"/>1
<edge source="Malcolm Pumpa" target="Deidre Seeto"/>1
<edge source="Erica McWilliam" target="Malcolm Pumpa"/>1
<edge source="Shane Dawson" target="Erica McWilliam"/>2
<edge source="Jennifer Tan" target="Shane Dawson"/>1
</graph>
```

The Social Network is also exported to the VNA format for analysis in NetDraw (<http://www.analytictech.com/Netdraw/netdraw.htm>).

The screenshot shows the Blackboard Academic Suite interface with the "VNA File Format" section expanded. It displays XML code for a graphml file and a corresponding VNA file format output. The VNA file format output is as follows:

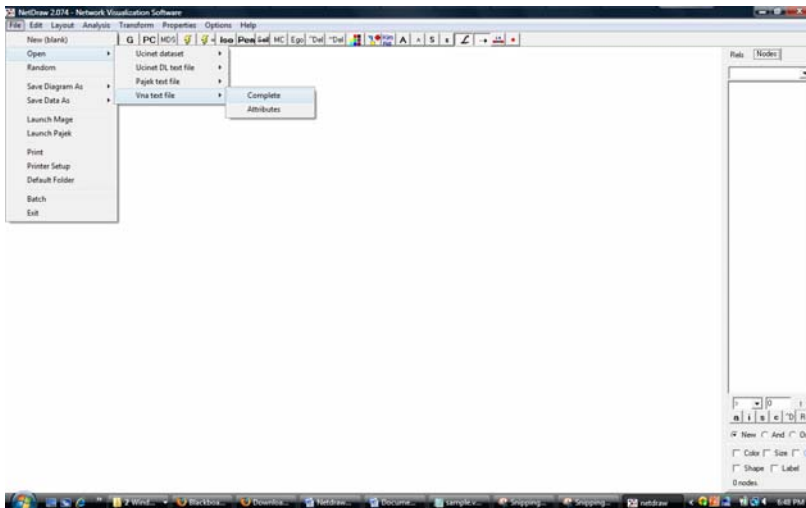
```
ID
"Shane Dawson"
"Deidre Seeto"
"Malcolm Pumpa"
"Erica McWilliam"
"Jennifer Tan"
*Tie data
from to talk strength
"Deidre Seeto" "Shane Dawson" 1 1
"Malcolm Pumpa" "Deidre Seeto" 1 1
"Erica McWilliam" "Malcolm Pumpa" 1 1
"Shane Dawson" "Erica McWilliam" 1 2
"Jennifer Tan" "Shane Dawson" 1 1
"Erica McWilliam" "Jennifer Tan" 1 1
"Shane Dawson" "Jennifer Tan" 1 1
```

At the bottom, a note states: "Note: VNA Format is used by NetDraw".

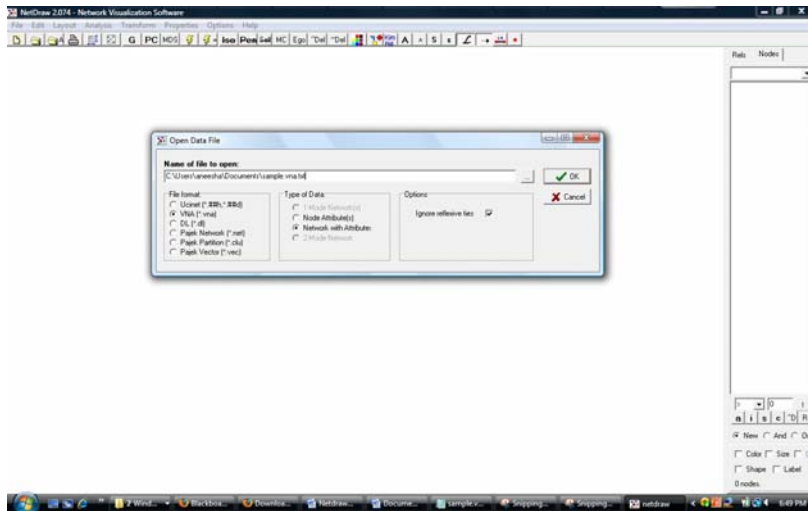
Copy the text from the textbox and save to a file with a vna extension (ie .vna)

```
sample.vna - Notepad
File Edit Format View Help
*Node properties
ID
"Shane Dawson"
"Deidre Seeto"
"Malcolm Pampa"
"Erica McWilliam"
"Jennifer Tan"
*Tie data
from to talk strength
"Deidre Seeto" "Shane Dawson" 1 1
"Malcolm Pampa" "Deidre Seeto" 1 1
"Erica McWilliam" "Malcolm Pampa" 1 1
"Shane Dawson" "Erica McWilliam" 1 2
"Jennifer Tan" "Shane Dawson" 1 1
"Erica McWilliam" "Jennifer Tan" 1 1
"Shane Dawson" "Jennifer Tan" 1 1
```

Open the file in NetDraw.



Make sure the VNA file type is selected and click OK.



The SNA diagram (graph) is displayed.

