Matthew J. DeReno
Technical Writing Samples

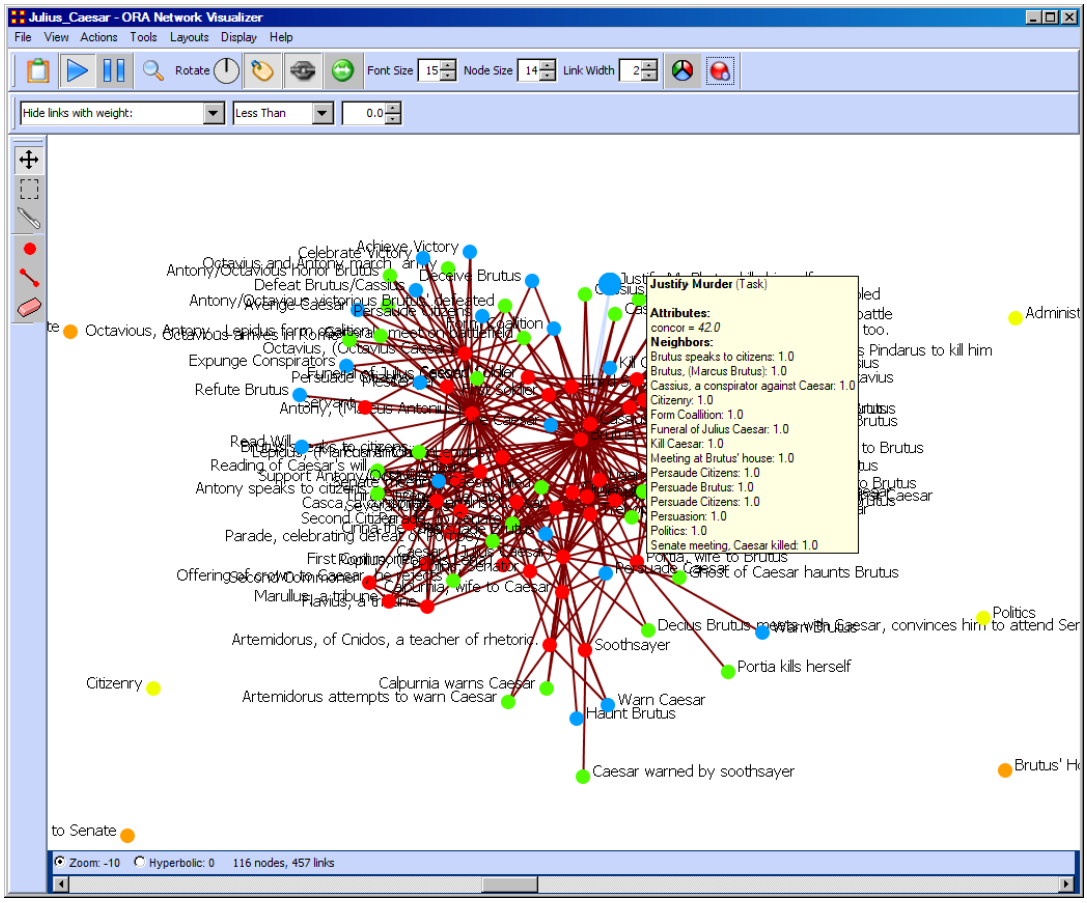

Figure 1: A visualization of the Tragedy of Julius Caesar network. Based on my interpretation of the famous play, I modeled the *people*, *places*, *events*, *tasks* and *knowledge* entities in ORA, a software tool for dynamic network analysis. ORA produced the visualization in this screen image.

Overview

At Carnegie Mellon University's Center for Computational Analysis of Social and Organizational Systems (CASOS), I write about ORA (Organizational Risk Analyzer). ORA is a software tool to model and analyze complex networks of many sorts. However, ORA mostly deals with social networks.

ORA can detect underlying structure in massive amounts of complex social network data pinpointing potential weaknesses, highlighting strengths, and revealing many critical network relationships hidden to the computer-unassisted analyst.

In 2005, I was tasked to develop a help system for this tool. In doing so, I have worked with software developers, faculty, researchers and PhD students in producing, maintaining and managing a comprehensive help file repository available as part of ORA's built-in Java-based help system. I have also used the tool to model the results of creative "mind-mapping" sessions, which I have led as an independent contractor, and to build various network models for training purposes at CMU.

ORA works in conjunction with a suite of other dynamic network analysis tools developed by CASOS. It is funded by various U.S. Government agencies including The Office of Naval Research, DARPA, The Army Research Lab and NASA. Various government agencies are interested in ORA's application as a tool to analyze terror networks.

From time to time, I cull out material for quick start guides, brochures and software release notices relating to new versions of ORA. Each year a full printout of the help file is published as a Carnegie Mellon technical report, which doubles as a user's manual. As of the last version, the full printout is over 500 pages. Each year, CASOS hosts a Summer Institute where ORA and many of the other tools that work with it, are taught and discussed. I am involved in preparation of many of the conference materials for this event.

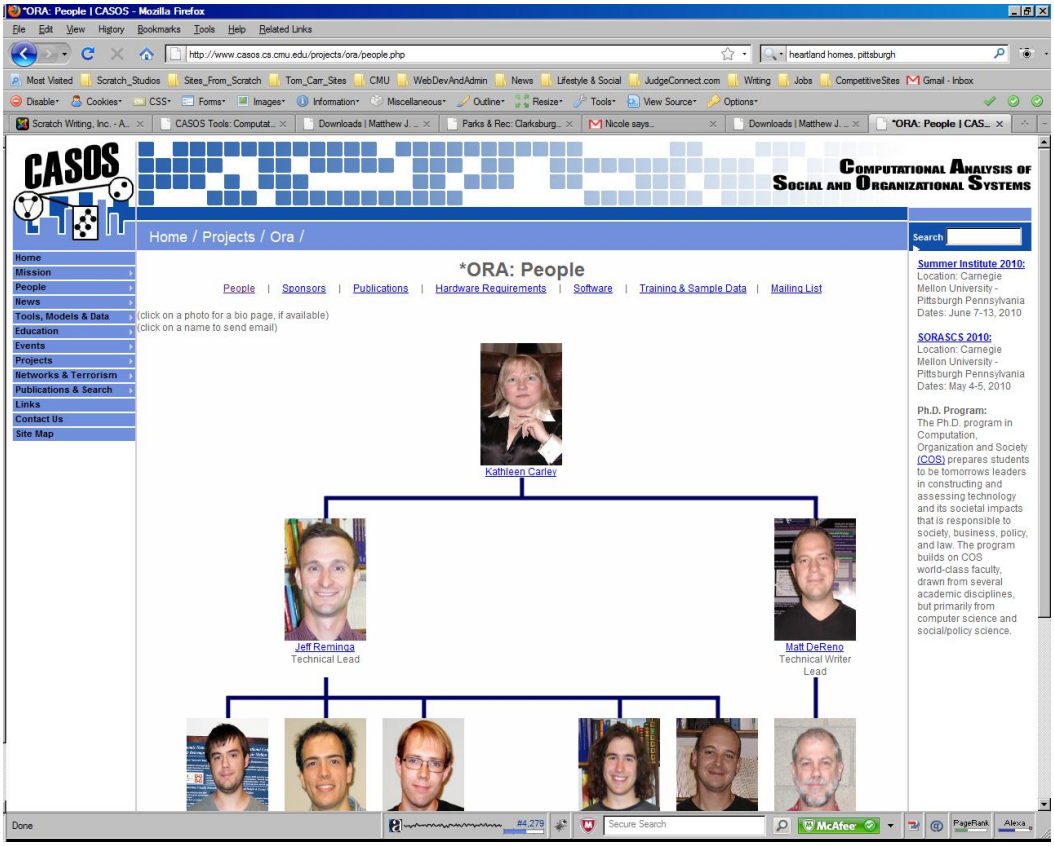

Figure 2: Screen image of ORA Project Team. I am the lead technical writer. Page available at the following URL: http://www.casos.cs.cmu.edu/projects/ora/people.php

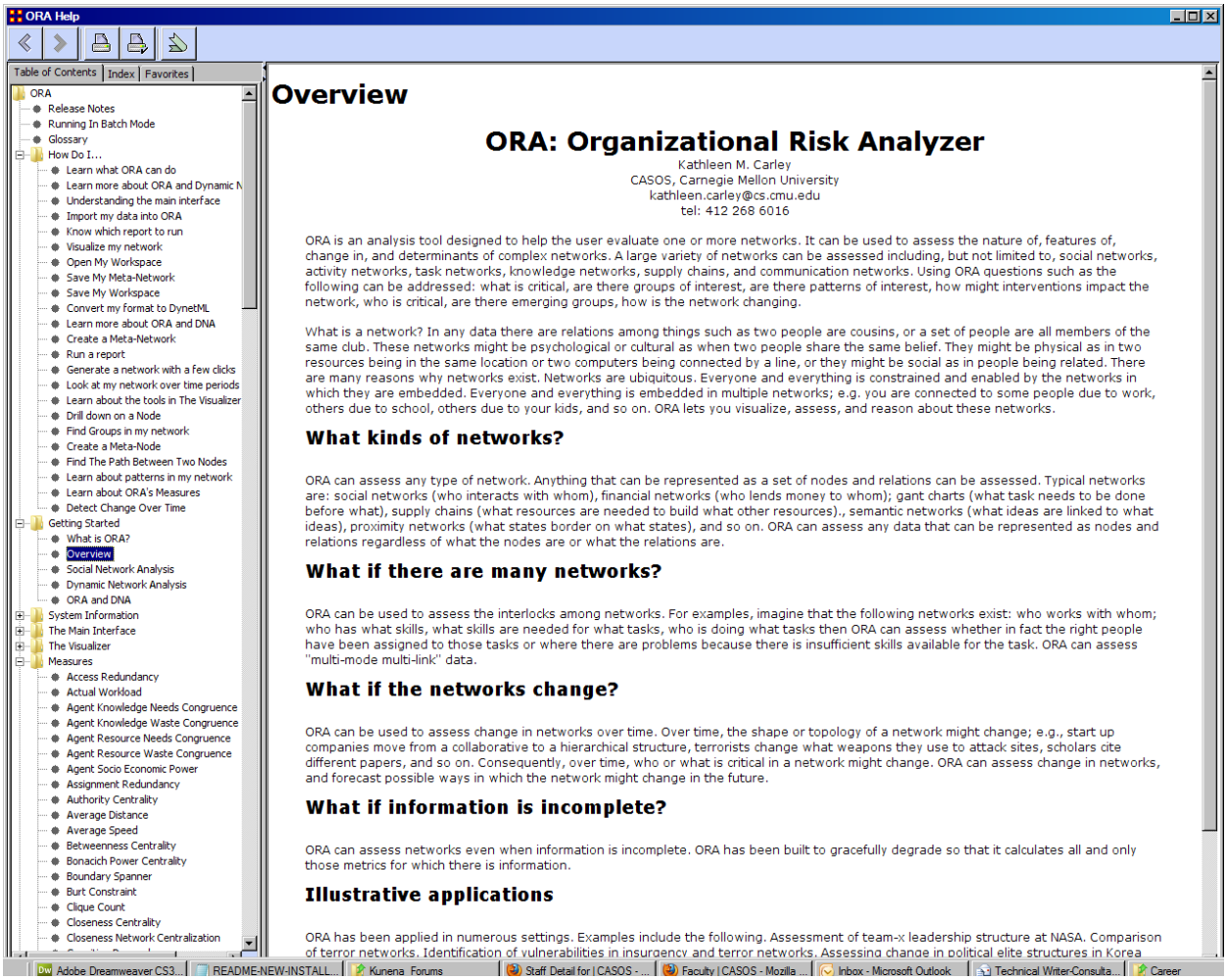

Figure 3: Screen image of overview text available in the ORA help file.

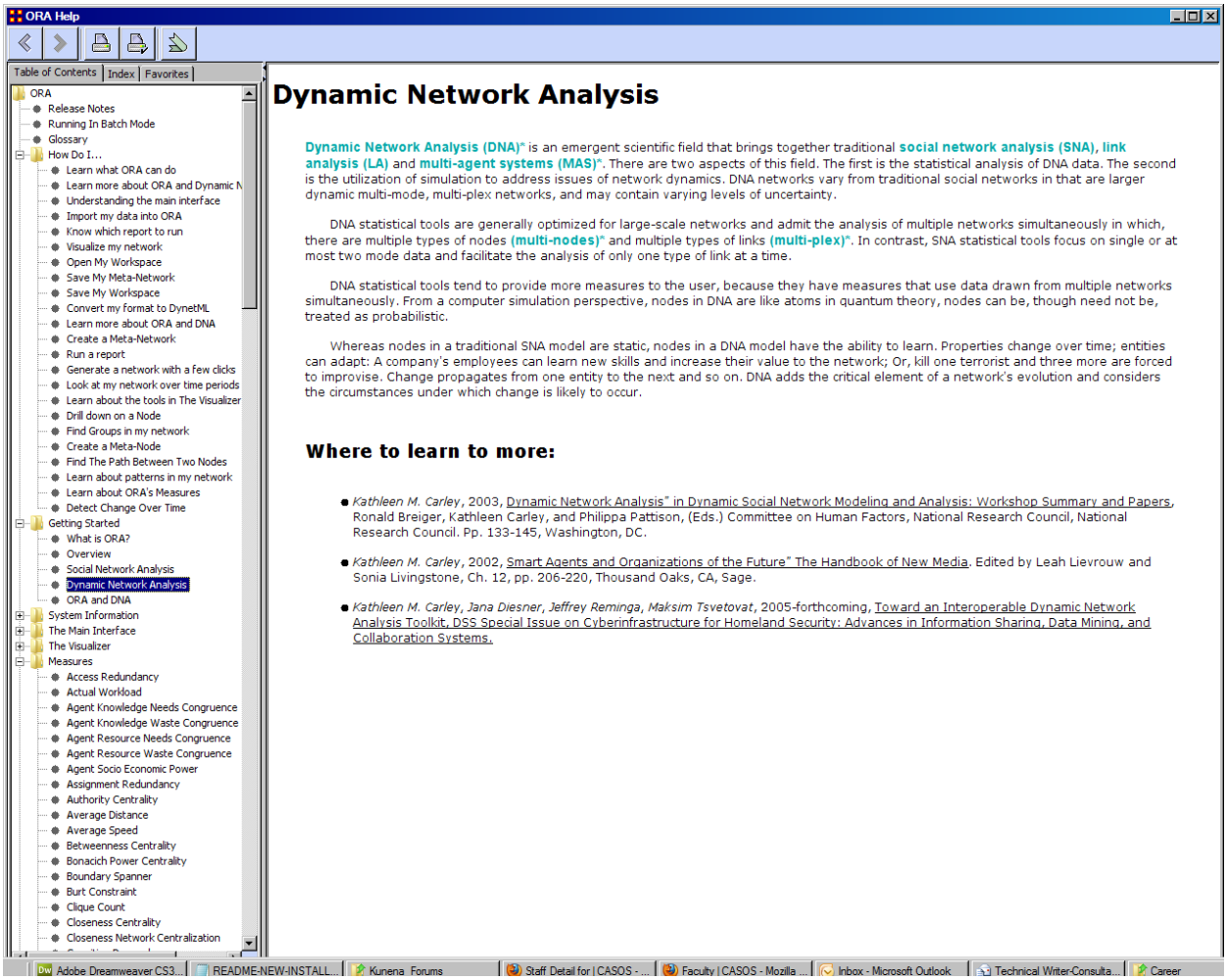

Figure 4: Screen image of Dynamic Network Analysis page available in ORA's help system.

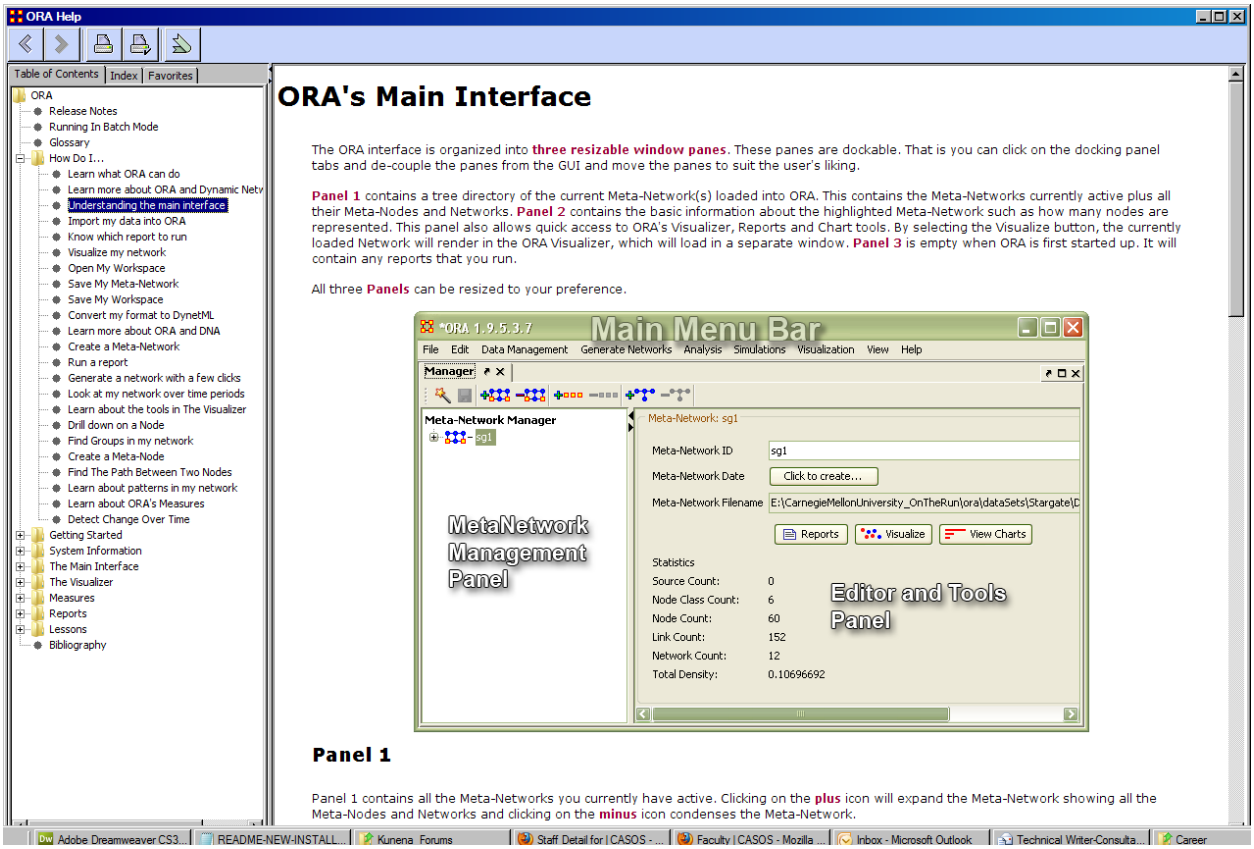

Figure 5: Screen images displaying ORA's primary function areas.

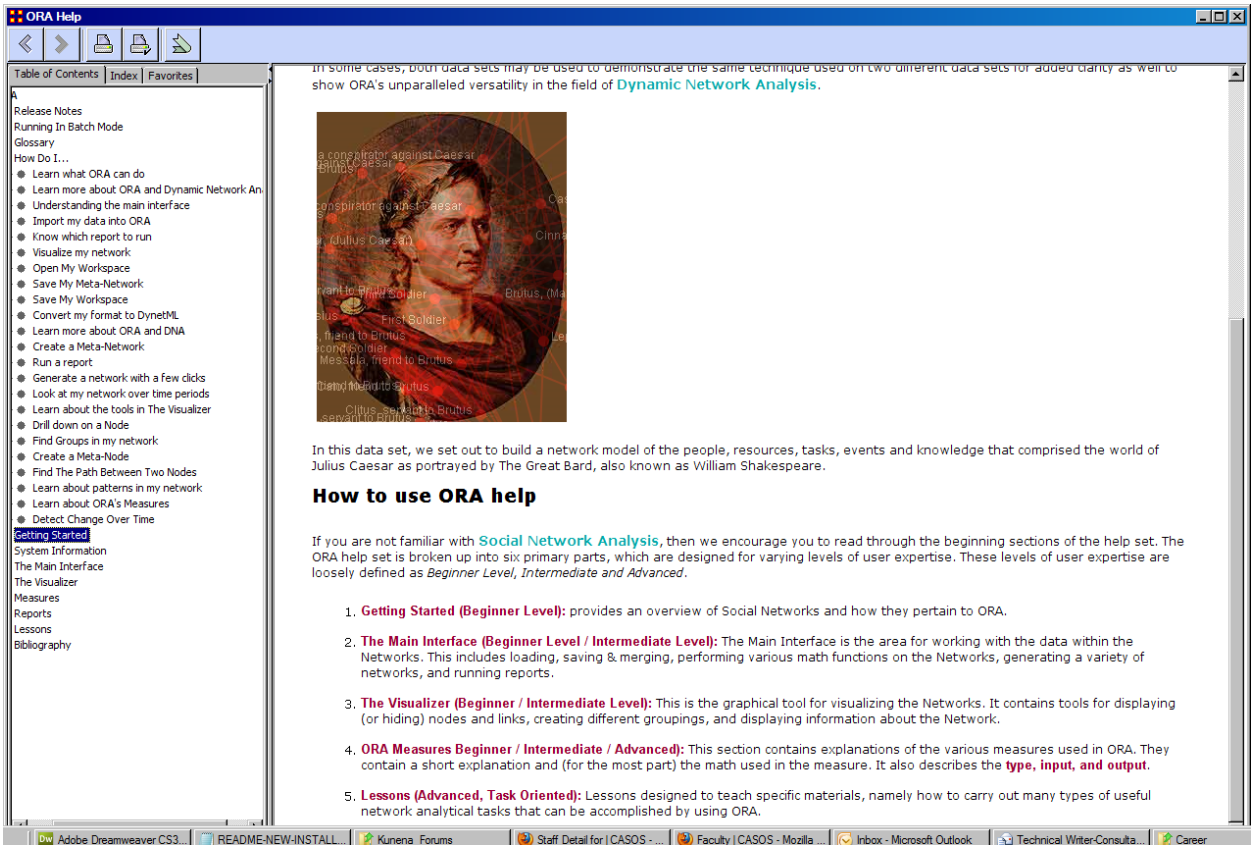

Figure 6: A dataset I created—based on The Tragedy of Julius Caesar—is used throughout the ORA help system to illustrate how to use many of ORA's tools.

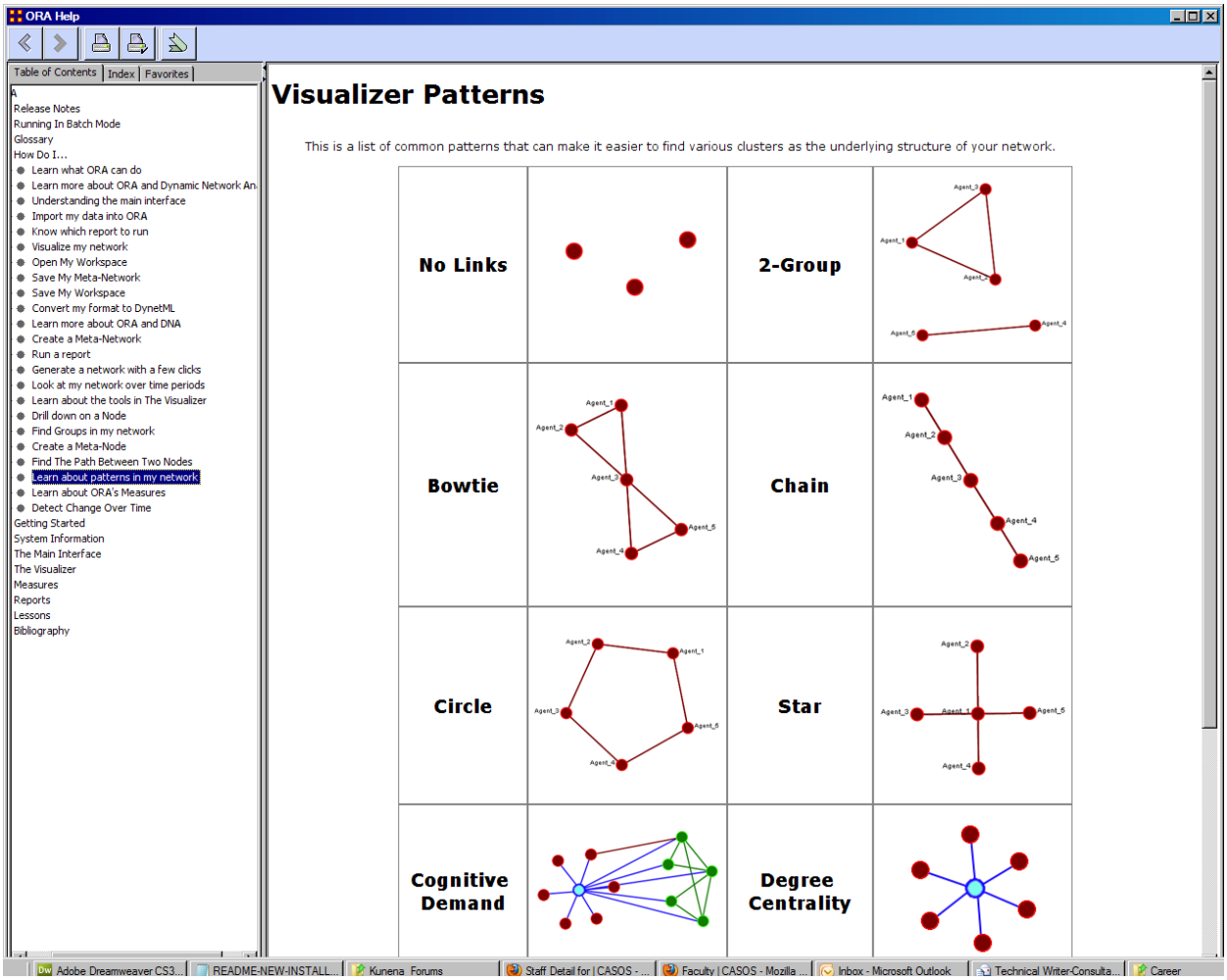

Figure 7: Screen image displaying common network patterns.

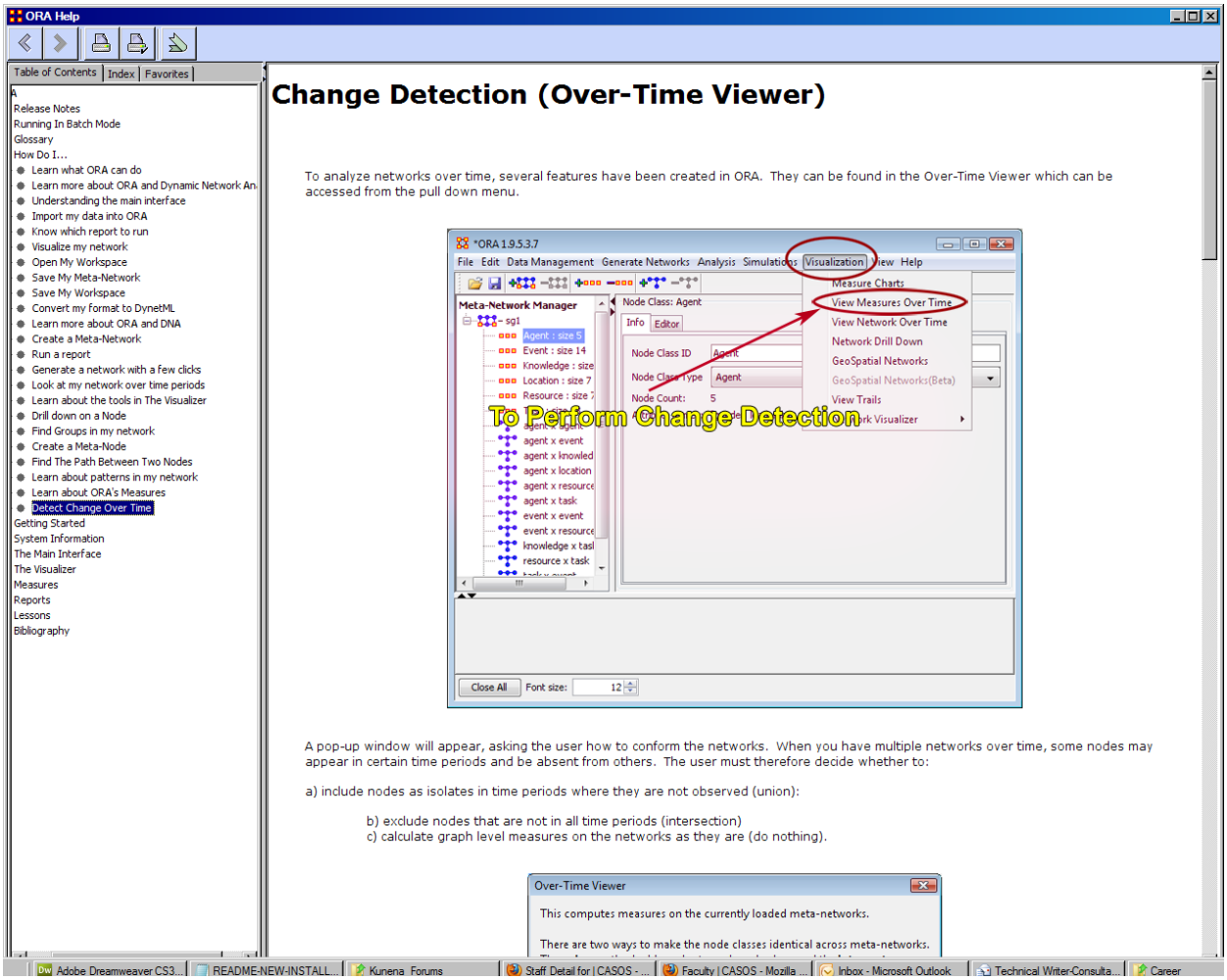

Figure 8: Screen image of change detection help available in ORA.

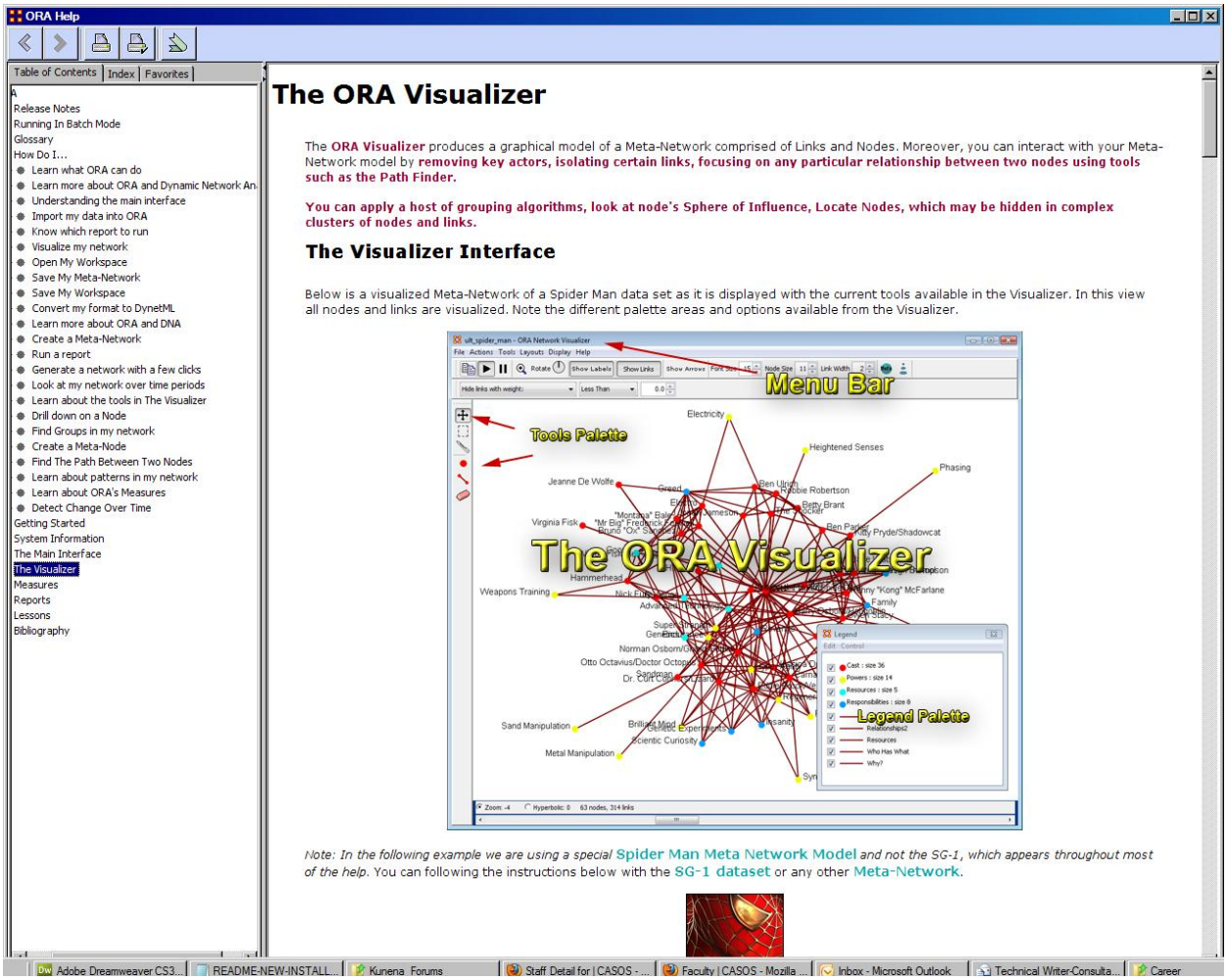

Figure 9: Screen image of help identifying and explaining the primary tools within ORA's Visualizer.

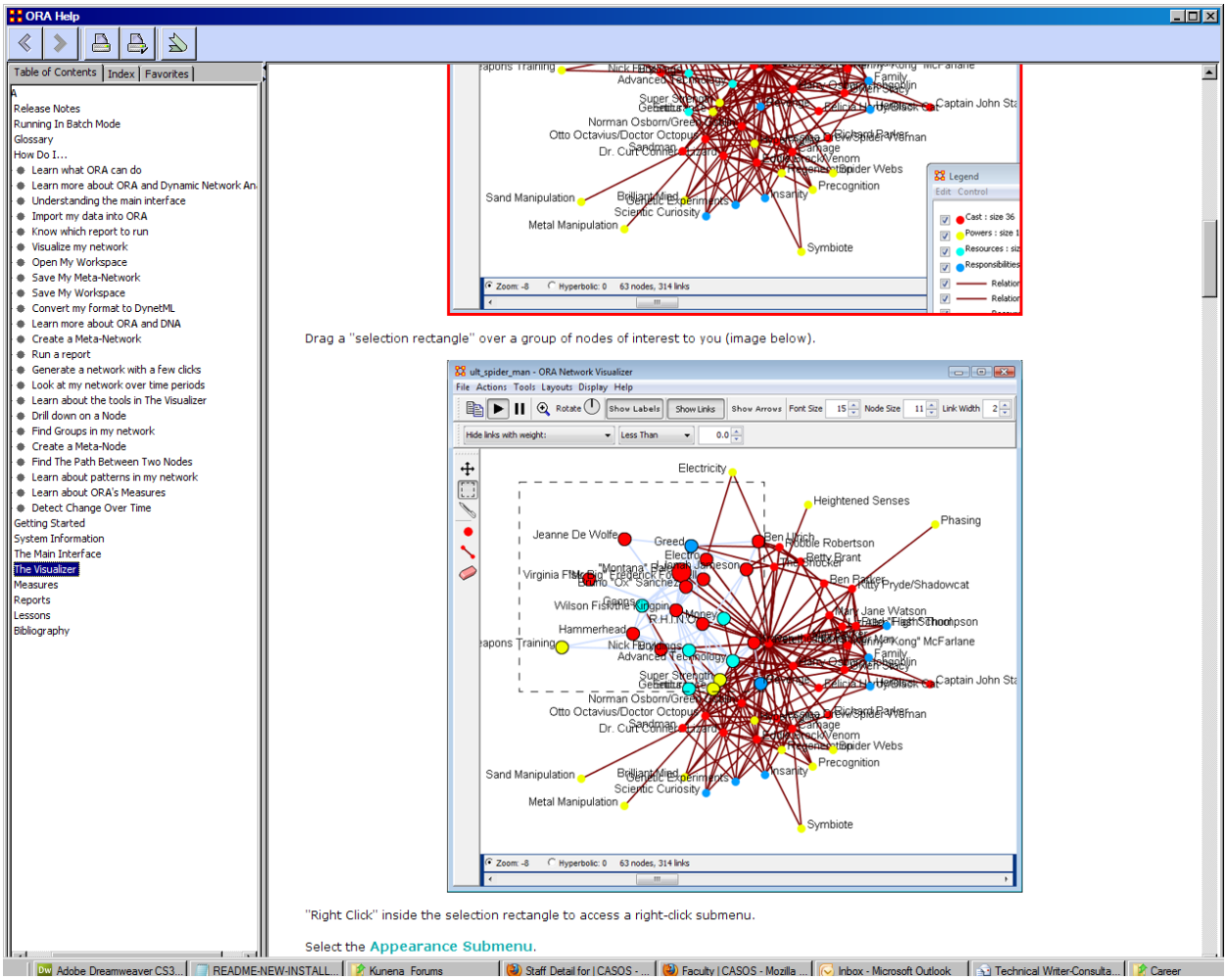

Figure 10: Tutorial on how to accomplish basic tasks in the ORA Visualizer component.

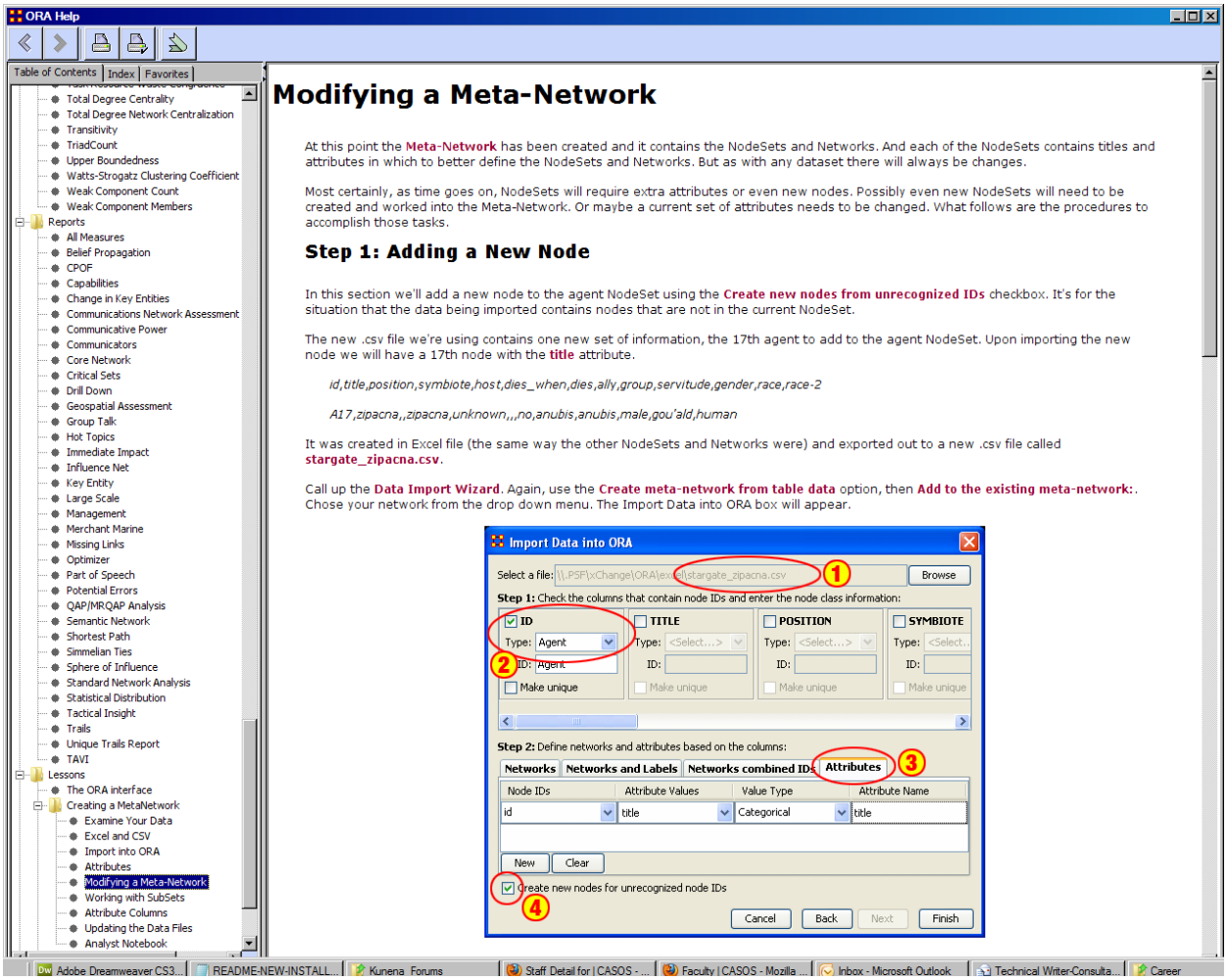

Figure 11: Screen image of help explaining how to modify a dataset in ORA.

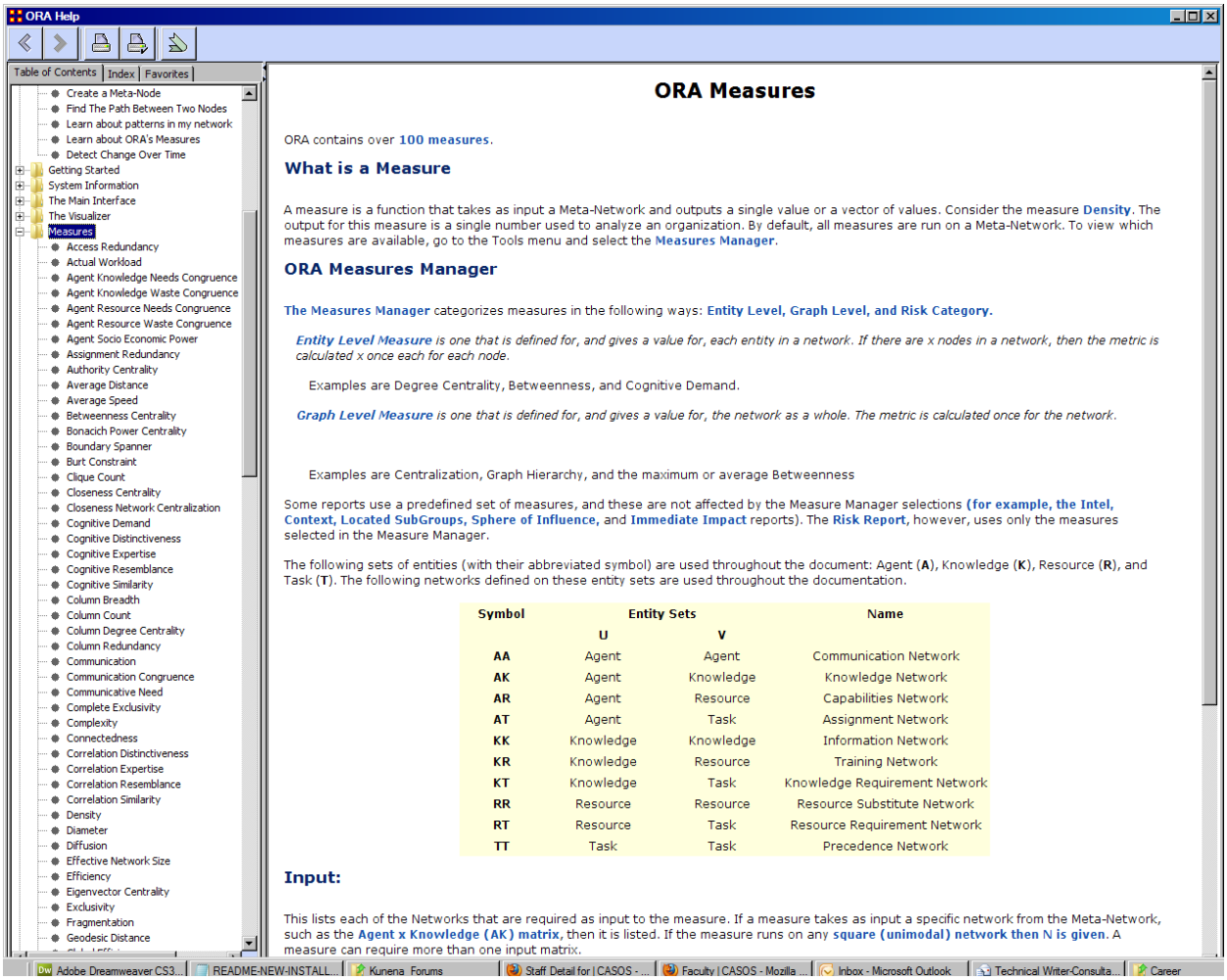

Figure 12: One of ORA's most powerful features is its capability to apply "scientific measures" to datasets. In a sense, the Measures are what power ORA. I was tasked with documenting and explaining what each of these measures can do and how they can be applied to network models.

Where to Learn more…

- CASOS: http://www.casos.cs.cmu.edu/index.php
- My Personal Work Portfolio: http://www.scratchwriting.com/index.php/portfolio/writing-samples/matthew-j-dereno
- My CMU staff profile page: http://www.casos.cs.cmu.edu/people/staff.php?detail=DeReno,%20Matt&ID=152