CSE5910 : Multimedia Programming in Java

Laboratory Session Worksheet. Week 3, Semester 2, 2007

Individual Exercises.

1.   Point your web browser at images.google.com and type "graph" or something similar into a search. Hunt through the graphs and locate three very different ones. Save these graphs on your hard drive along with information recording the website, date and time from which you downloaded them.

Write a list of good and bad points about the skill with which each graph was produced. Rank the graphs from best to worst. Things to consider:

1.   Is the data clearly visualised?
2.   Are the scales, data points, lines, curves and axes clearly labelled?
3.   Can you learn something useful about the data by viewing the graph?
4.   Why and for whom was it produced?
5.   How is the graph improved (or cluttered) with text, markings and colour?
6.   How efficiently has the data been represented?

Neatly redraw one of the worst graphs by hand, improving it as best you can. Don't worry about the accuracy of your reproduction of the data. Simplify the graph and represent only the most important information.

2.   Repeat exercise 1 above, this time search for three very different maps as follows.

1.   At least one of the maps should be a historical map produced more than 100 years ago.
2.   At least one of the maps should include data apart from just the locations of buildings and landscape features. For instance it might be a map showing the distribution of crime scenes, a map showing annual rainfall, a map showing the spread of disease etc.
3.   At least one of the maps should not employ any colour.

3.   Consider the production of one of the maps you chose for task 2 above. Write a list of features that a piece of interactive *software* would require in order to be able to produce such a map. Consider:

1.   What interaction tasks would the user perform most often?
2.   What interaction devices would be most effective for these tasks?
3.   If forced to use a standard mouse and keyboard how could the software's interface work for the user to make their task simple and assist in making the maps clear and concise?
4.   What features and functions would the software need?