Assignment Flash 2

Due Date: March 12 at noon

Purpose

This is a more involved Flash project in which you will use more of the OOP features of the language, as well as reading data from an XML file. You will also design a complete Web page that will work with the Flash movie. Perhaps most importantly, you will implement a method of visualizing multiple variables that is currently very popular.

Problem

We will be looking at many different methods for visualizing multivariate data. A good, basic way of comparing a set of single-variable data is through the use of a bar chart. Two variables can be compared using a scatter plot. How about three? It now gets more difficult.

Suppose I am a baseball scout. I want to compare players' weight, speed, batting average, on-base percentage, and slugging percentage. I want a way to look at all of these variables at one time.

Your job is to implement your own version of parallel coordinates that allows a user to view some multivariate statistics in whatever area (like baseball players and their stats, above). In such a system, each variable is depicted by a vertical bar, or "axis". Lines representing each player span from one "axis" to another, connecting all the variables. Colors or other methods are used to indicate the player. See the course Web page for more information on parallel coordinates, or do your own search. The user should also have the option of adding at least one additional data point (one more baseball player) interactively. The Flash movie should be part of a Web page that clearly defines what the visualization does and gives instructions on how to use any interactive portions.

Input

You should have a reasonable number of data points to show the efficacy of your visualization. The data should be stored in an XML file with a default name. The movie/Web page should include some easy-to-use mechanism for the user to input at least one additional data point. The easiest might be using a simple text box, but this is up to you.

Output

The output should be a version of a parallel coordinates display, where each vertical bar represents a different statistic. The visualization should have some modes of interaction built in, such as the option to move an axis from one position to another to allow for different direct comparisons. Any additional data input should be stored in the XML file.

All output/buttons/etc.should be adequately labeled or otherwise explained on the Web page/Flash movie.

Specifics

- Incorporate good visualization practices in your application.
- Use ActionScript 3 for all of your Flash code.
- Create a complete Web page that contains your Flash movie. This should be linked to your gateway page created in the previous project.
- This is more involved than the first project. You will have to learn how to use XML, which is fairly easy, but is also hard in that consistency with tags can be annoying.
- Properly comment all of your ActionScript code.

Notes

You should check different browsers to make sure your applet is robust. Be sure to upload all relevant files in the proper folders before **noon** on due date. Print out and hand in the ActionScript code to me or under my door sometime on the due date.

Above all else show the data.
– Edward Tufte