

**CSE 788 14 K Fundamentals of Visualization  
Final Project**

**Out: Feb. 21<sup>st</sup>, 2007  
Due: March 14<sup>th</sup>, 2007**

In this final project, you are asked to use the IEEE Visualization 2006 Contest data set to create visualization. Specifically, you should try to apply Tufte's design principals as much as you can to effectively communicate ideas and insights obtained from the data set. The data set has been downloaded and stored locally at /raidhome1/data/viscontest/2006 in the machine 'atlas'. If you do not have an account there, let me know and I will create one for you. The information about the data set can be found at:

[http://2006.ieee.vis.sdsc.edu/2006\\_ieee\\_vis\\_data/](http://2006.ieee.vis.sdsc.edu/2006_ieee_vis_data/)

Besides the descriptions about the data format, you should pay special attentions to the following domain-specific questions:

- Do the waves in the Whittier-Narrows area follow a pronounced sediment channel defined in the crustal structure?
- Do waves systematically focus toward the centers of basins, thus providing a physical explanation of the correlation of amplification factors with basin depth?
- At which locations do the largest conversions between wave-types occur?
- Which regions produce wave reflections?
- Do strongly shaken basins act as wave sources?

You can choose to answer all or a subset of these questions. More information about these questions can be found at:

[http://2006.ieee.vis.sdsc.edu/2006\\_ieee\\_vis\\_data/tasks.html](http://2006.ieee.vis.sdsc.edu/2006_ieee_vis_data/tasks.html)

For this project, **you will work in a team of 2-3 persons**. You can use any tools to generate the visualization. For example, I have written a software volume ray caster. If you find that may help, let me know and I can give the code to you.

The grading of this project will be based on the effectiveness of your visualization. Your team needs to create a web page to describe your plan for generating the visualization. Things to be discussed in the web page include the design of visualization, the software you will use, and the questions you attempt to answer. **The web page needs to be created before March 1<sup>st</sup>**. Each team will prepare a final presentation including demos. The presentations will take place on **March 14<sup>th</sup>** from 11:30am to 1:30pm in DL 698. Before the presentation, your web page should be updated with your final results.