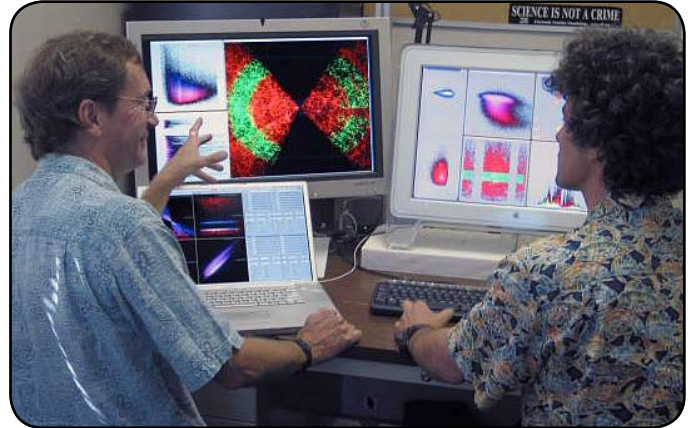


CSC/SETI Institute Special Presentation

Paul Gazis & Creon Levit

Carl Sagan Center &
NASA Ames Research Center

Friday, Feb. 8, 12:00 noon
The SETI Institute, Europa room



Viewpoints: a Fast, Interactive, Multi-platform Visualization Tool for Exploring Large Multivariate Data Sets

Finding effective ways to visualize large multivariate data sets has become a significant challenge as data volumes have grown. Modern astrophysical data sets can easily exceed millions of samples that involve hundreds or thousands of variables. While it may be possible to plot subsets of these data using scripted languages such as MATLAB or IDL, this presupposes that one already knows what one wishes to plot. This is rarely the case during the initial phases of data exploration.

Viewpoints is a fast interactive visualization and analysis tool for large, complex, multidimensional data sets. It runs on most common platforms and operating systems to produce multiple linked scatterplots that can be changed, rescaled, modified, and processed in real time in a variety of powerful and informative ways. It was originally developed for internal use by the informal ARC Cluster Group to examine data from the Sloan Digital Sky Survey, but as requests for the package arrived from a growing number of outside users, we discovered that it had considerable potential as a data exploration tool for applications ranging from aeronautical engineering, quantum chemistry, and computational fluid dynamics to virology, computational finance, and aviation safety. It should also have considerable potential for use by members of the SETI community.

We will present a brief overview of viewpoints, followed by a live hands-on demonstration. We invite you to bring your own data sets (as conventional ASCII flat files) for the latter. Copies of viewpoints are also available from the project WWW site at <http://astrophysics.arc.nasa.gov/~pgazis/viewpoints.htm>.



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