

Remote Online Visualization Environment for Researchers

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Proposal No: S6.05-9732



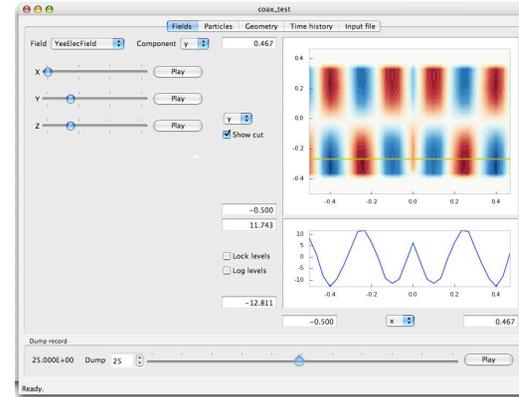
Identification and Significance of Innovation

Identification:

- Web-based application allowing for the visualization of widely distributed data
- Multiple users can collaborate interactively, sharing the same visualizations

Significance:

- Modern work paradigms have large amounts of data stored in a distributed manner
- User-friendly access to this data represents an immediate increase in productivity



The proposed innovation combines remote data visualization with a modern web application architecture.

Technical Objectives

- Demonstrate the feasibility of creating a remote scientific visualization environment using web applications
- Demonstrate the feasibility of using a scalable centralized rendering server
- Demonstrate the ability to support collaborative interaction in a web application

Work Plan

- Task 1: Control visualization rendering on a view server via a web service interface.
- Task 2: Create a web application to interact with a view server and to plot the resulting visualizations.
- Task 3: Implement example interactive, collaborative functionality between multiple web applications.
- Task 4: Write a final report.

NASA Applications

- NASA maintains large amounts of data distributed across a wide area network
- Visualization of these data by NASA scientists and outside collaborators is critical

Non-NASA Applications

- Medical industry, with doctors collaborating using imagery
- Aerospace industry, with engineers visualizing simulation results on remote supercomputers
- Climate modeling industry, with many distributed data sets

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