October 2015

Data Analysis Services Group - *October 2015*

News and Accomplishments

**VAPOR Project**

Project information is available at: [http://www.vapor.ucar.edu](http://www.vapor.ucar.edu)

**WASP Award:**

The WASP project is on hold until work on the VAPOR 2.5.0 release is completed.

**KISTI Award:**

Work continued toward a version 2.5.0 release candidate. A code feature freeze took place in the middle of October, and the team began to work on several bugs.

- The entire team worked on fixing open bugs from the previous release.
- John prepared a WBS for the release
- John worked on development of support for high resolution cartographic maps via the OSGeo Tile Mapping Service specification.
- John worked with our visitor, Hoseung Lee, to complete integration of Hoseung's RAMSES model data reader.
- Scott had previously applied transparency to a map product called Natural Earth, and while this map had a high resolution, it had a different color map than the old Blue Marble product that came with our installers. We still needed a replacement for that, so Scott programmatically applied transparency to NASA's 'Next Generation' version of Blue Marble using a GEBCO bathymetry data set.
- Scott modified his quadratic interpolator to use linear interpolation in the horizontal plane instead of nearest neighbor. He also gathered performance information to compare the old linear interpolation method to the new quadratic one. The linear interpolation performed ~38% faster than quadratic. Scott also made the necessary gui changes in the User Preferences menu, as well as the necessary changes to the EventRouter, Params, and DataStatus classes.
- Scott worked with Alan to scale the stereo convergence controls to have a range between -1 and 1. Once this final requirement was completed, updates to the GUI were made for final testing.

John prepared a progress report on the KISTI contract, and then met with KISTI staff while attending the Korean Supercomputing Conference. KISTI has indicated their intent to fund VAPOR development again next year.

**2.x Development:**

Alan made improvements to the key-framing code so that users will not see keyframes that are automatically inserted for them (this was causing confusion).

**3.x Development:**

On hold pending 2.5 release.

**Administrative:**

John authored several sections of the 2015 CISLAR and POPPR reports.

John submitted an ASP Graduate Visitor Program application to have Samuel Li return for a three month visit starting in January. Samuel would continue his scientific data compression work.

**Education and Outreach:**

John and Alan attended IEEE VisWeek in Chicago.

Scott has been in touch with Jeff Smith from the UCAR President’s Office, who has been asking for information on the visualization of Peter Sullivan’s LES model that was done last year. Peter and Scott met with Jeff for an interview which will be used in an AtmosNews article in the coming weeks.

**Software Research Projects**

**Feature Tracking:**

Climate data compression:

**Production Visualization Services & Consulting**
Two of CGD’s oceanographers are working with Scott to create a new visualization based on their ROMS data. So far, Scott has held two meetings with
them where he first demonstrated flow visualization in a region of high interest. He then elicited more requirements that Vapor could fulfill in order to
produce publishable research. Helping them with publication is Scott’s first goal. Secondary to that is to create a visualization that can showcase Vapor
and at the same time engage a more general audience. Scott is also acquiring resources from VETS so he can add supplementary visuals into the final
production that are created outside of Vapor. Lastly, Scott has implemented a tool for his own personal use (will not be checked- in unless asked to) that
will fade a single renderer into or out -from the scene. In his last visualization he had to fade the renderers manually which was very precarious and time
consuming.

• Alan helped Janice Coen use vapor to visualize a new simulation of the King fire

Publications, Papers & Presentations
• John presented a talk on VAPOR at the 2015 Korean Supercomputing Conference in Seoul.

Systems Projects

Data Services
• xxx

Accounting & Statistics
• xxx

Security & Administration
• xxx

System Monitoring
• xxx

System Support

ML - Data Analysis & Visualization Clusters
• xxx

GLADE Storage Cluster
• xxx

Data Transfer Cluster
• xxx

Experimental Clusters
• xxx

Test Clusters

Storage Usage Statistics
NWSC+GLADE+Usage+Report

Other
• xxx