Summary of January & February 2008 Key Activities

During January and February 2008, RENCI@NCSU focused on two visualization development projects and supported many NC State University groups as well as RENCI units in outreach activities. Both our Partners I Suite 1500 and Engineering Building II Room 1235 facilities are currently under heavy usage.

RENCI 3D Slicer: supporting a geotechnical visualization need

The Micromechanical Structure of Soils for Foundation Failures Visualization effort for Dr. Matt Evans and his research team in the Department of Civil Engineering, College of Engineering resulted in the development of a new interactive tool entitled RENCI 3D Slicer. This collaboration also resulted in a technical paper: “The Visualization and Analysis of Microstructure in Three-Dimensional Discrete Numerical Models” by T. Matthew Evans, Steve Chall, Xueliang Zhao, and Theresa-Marie Rhyne. The paper was officially submitted to the American Society for Civil Engineers' Journal of Computing in Civil Engineering on Friday, Feb. 8th, 2008.

Atmospheric Model Visualization: supporting global climate change exploration

At the request of Ken Galluppi, RENCI Manager for Emergency Management and Dr. Gary Lackmann, Assistant Professor in NCSU’s Department of Marine Earth and Atmospheric Sciences, (College of Physical and Mathematical Sciences), RENCI@NCSU began working with Dr. Lackmann’s team to visualize large atmospheric model data sets that are executed on RENCI IBM Blue Gene computer. A series of working sessions began on January 11, 2008. An example of the collaborative visualization produced on February 15, 2008 is shown below.
RENCI@NCSU Outreach Activities: Supporting NCSU & RENCI Activities

The RENCI@NCSU Partners I Suite 1500 facility hosted several high profile outreach activities in January and February 2008. Theses include:

(1) Four NCSU College of Textiles focus group sessions pertaining to textile market sectors in North Carolina (research funded by the NC Department of Commerce) held on February 18 & 19, 2008. This was under the direction of Dr. Nancy Cassill, Professor and Acting Dept. Head in the Department of Textile & Apparel Technology & Management, NCSU College of Textiles.

(2) A NCSU College of Engineering orchestrated interview by CNN of students in Dr. Alan Tharp class in the NCSU Department of Computer Science on February 20, 2008. These students developed the Manus Glove, a new way of interfacing with cellphone, mobile and desktop computer systems.

(3) February 1, 2008 NCSU Department of Computer Science Graduate Student Association and NCSU Student Association for Computer Machinery (an Undergraduate Student Association) event at RENCI@NCSU with a student driven presentation of the Virtual NCSU Traditional Campus in Google Earth.

(4) February 5, 2008 meeting of the Institute of Transportation Research & Education Institute (ITRE), the NCSU College of Design and RENCI@NCSU to discuss future collaborations in Transportation Visualization. (Dr. Ron Hughes of ITRE and Asst. Dean Jay Tomlinson of the College of Design are leading this collaboration.)

(5) February 4, 2008 meeting of meteorologists involved with RENCI’s NC-First Project hosted by Jessica Proud of RENCI at the RENCI@NCSU Partners I Suite 1500 facility.

The RENCI@NCSU Engineering Building II Room 1235 facility hosted several outreach activities in conjunction with specific faculty and staff in the NCSU Department of Computer Science and Department of Electrical and Computer Engineering. These include:

(1) February 1, 2008 demonstration of the Croquet Software environment by Julian Lombardi of Duke University for faculty in the NCSU Department of Computer Science (CSC) and the Department of Electrical and Computer Engineering (ECE). Potential collaborations between Dr. Laurie Williams in NCSU CSC, Dr. Michael Devetsikiotis in NCSU ECE and Dr. Julian Lombardi of Duke were discussed.

(2) January 25, February 4, February 18 & February 25, 2008 demonstrations of RENCI@NCSU visualization and access grid capabilities for parents of prospective students done in collaboration with Dr. Barbara Jasmine Adams, Director of Advising (Undergraduate) for NCSU Department of Computer Science.

(3) Ongoing usage of the Access Grid for the RENCI & NCSU Department of Computer Science collaboration on the Services Integration, control and Optimization for the Future Internet (SILO) Project lead by Dr. George Rouskas and Dr. Rudra Dutta of NCSU CSC and Dr. Ilia Baldine (RENCI Network Research & Infrastructure Manager).

The RENCI@NCSU Team:

The RENCI@NCSU team is currently composed of Steve Chall, Senior Research Visualization Software Developer, and Theresa-Marie Rhyne, Director. In January and February 2008, interviews were conducted for the vacant Software Developer position with a finalist selected. The offer to the finalist was made on February 19, 2008. The acceptance letter was received in RENCI’s Human Resources Dept on February 29, 2008. Expected start date is May 1, 2008.