Colleges in N.Y. to link computer resources

November 26, 2006

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Colleges across the state, including some in the Rochester region, are establishing a computerized network that allows them to act collectively like a statewide supercomputer ready to tackle elaborate computational problems.

University of Rochester, Rochester Institute of Technology, State University College at Geneseo and Alfred University are among nearly two dozen higher education institutions behind NYSGrid.

The computerized network will link the schools' computer resources in a type of intranet.

"If you look at Hurricane Katrina and say, 'I have an idea of how we could have better predicted how the hurricane was going to travel' ... the math is so complicated that you need massive computing power and data storage," said Russ Miller, a professor at State University of New York at Buffalo and director of NYSGrid.

Miller said "it doesn't pay for an individual institution" to buy a system it only occasionally needs.

"We're better off ... saying let's pool our resources, both capital and personnel, and share our intellectual capital and some of our resources."

NYSGrid could also tie together various schools' equipment, allowing researchers at one school to use something based at another campus via the network, Miller said.

That grid approach, with schools separated by miles linking their computational and data storage capabilities, as well as other equipment and faculty expertise, is becoming increasingly common in higher education.

The National Science Foundation in 2005 awarded $800,000 to UB, Geneseo, Niagara University and Buffalo's Hauptman-Woodward Medical Research Institute to create the Western New York Computational and Data Science Grid.

It will in turn serve as a backbone for NYSGrid, said Homma Farian, a computer science lecturer at SUNY Geneseo. That network should be up and running in a month or two, she said.

NYSGrid could take a year or more, Miller said. Some schools will have to upgrade their computer hardware or Internet connections, he said.

And the software that will divvy up the computational work and data storage among colleges' computer mainframes needs to be written, he said.

The number of colleges belonging to NYSGrid will likely grow sizably.

"There's a huge amount of activity behind the scenes right now," Miller said.