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Martin schools get computers

Kentucky Dataseam makes donation to local district

by Lilly Adkins

INEZ — Computers donated to the Martin County School District will not only benefit the students but will also aid in the battle to find a cure for cancer.

Kentucky Dataseam CEO/Executive Director Brian Gupton explained that Eastern Kentucky had a 220 percent higher cancer rate. Thousands of computers being used to find new treatments for cancer have already been placed in schools throughout 46 districts statewide.

"The computers are always on, always doing research," Gupton said. "During the day, the students use the computers while our research is being done in the background, using minimal CPU. But then at the end of the day, when the student logs out, the research picks back up. We are making a lot of progress."

"You can't put a price on research," Martin County School Superintendent Mark Blackburn said.

Gupton said he was impressed with the aggressiveness of the Martin County School District.

"Last year, your participation in PD was more than any other county," Gupton said.

The University of Louisville/Dataseam collaboration began in 2004, with Gupton and Dr. John Trent, Director of Molecular Modeling at the Brown Cancer Center. They explored the possibility of harnessing unused CPU power for cancer research and drug discovery.

Their first experiment with grid computing began with a small computer cluster in Gupton's hometown of Princeton, Ky.

The computers are used to collect data to help develop new drugs to treat cancer patients and to further cancer research.

With the help of the computer grid, 14 new cancer-targeting compounds have been identified, Trent said in a previous interview with the BSN, "Small models are used to let the computers see how they fit," Trent added. "We have millions and millions of these molecules we want to test."

State Representative Hubert Collins was also present for the event.

Collins said he had to fight to make sure that this money didn't get taken away from other monies the district would receive.

Dr. Michael Kessinger and Blackburn presented Gupton and Collins with certificates of appreciation.

Gupton presented Blackburn with a larger version of the same computer for his office. Students are receiving 17" monitor computers, while Blackburn received a 24" inch screen computer.

Only eMac and iMac computers are being placed throughout the grid coverage area, but all the applications are UNIX based, and Apple's grid management software is built into Mac OS X and Mac OS X Server.

"It's very important that we have students from Martin County to help with the research," Gupton said. "This type of infrastructure is in the 21st century. We will also have scientists coming out to visit and hopefully they can encourage some of the students to pursue science based careers."

The computers also offer the possibility of video conferencing and has a built-in web cam with audio.

"Something like that could be beneficial in saving fuel with prices over \$3 per gallon," Gupton said. "You could see and talk with someone without having to spend hours on the road. We awarded 10 scholarships and we want to do 10 more."

A pamphlet presented by Gupton explains that some software programs will do quick screens and some won't. When it takes 30 seconds to two minutes per compound, you're talking about CPU time of 50-70 years to do one screen.

By using the school computers, the results come in much faster. By using 1,000 computers, the results come in more than 1,000 times faster. Data processing jobs that would have taken 50 years of CPU time would be reduced to 20 days, the pamphlet said.

Kentucky Dataseam Initiative is supported by more than \$2 million in grants.

Gupton said he has been invited to present Dataseam before the United Nations and that he was looking forward to it.