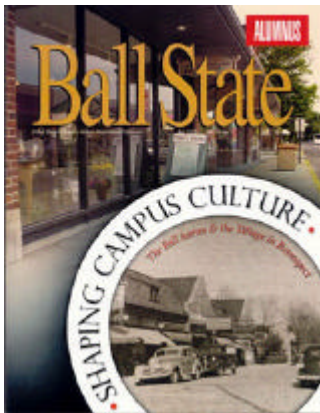


Alumnus Magazine

Ball State University's Alumni Publication

Across Campus



Business Class Reclaims Old PCs To Build Supercomputer

Discarded personal computers are being used to develop the first supercomputer at Ball State.

The Cluster Computer Research Project, a network created from unwanted PCs, is located in a former lab in the College of Business. It is designed to process complex mathematical problems for faculty research.

Students built the supercomputer at a fraction of the cost of a new one. A new system would cost about \$8 million and a lease costs about \$1 million annually. The price tag for the Cluster Computer Research Project is about \$500.

The newly created system is based on the Beowulf class of supercomputers, named for the Scandinavian hero in the Old English epic. It was selected because the design accepts any computer, no matter what its speed, configuration, or manufacturer. The world's fastest computers are actually clusters of computers rather than single units.

NASA created the first Beowulf system in 1994. They are used around the world for weather predictions, nuclear simulations, astronomical calculations, genetic algorithms, economic forecasts, and data storage techniques.

The project is an example of how reconditioning old personal computers can help reduce a growing environmental problem. About 80 percent of used computers are sent to Asia where people frequently apply acid to the used parts to extract small amounts of silver and gold. The acid and other hazardous materials such as lead, cadmium, and mercury make their way into rivers and streams. Old computers also are burned, releasing toxic chemicals into the air.