

helping schools excel | helping children learn

Technology: It's all about connections.

There was a time when a computer would do what you needed it to do without connecting it to anything more than an electrical outlet for power and a printer so you could output your work onto paper. Today, however, people transmit reports and documents without needing a printout but doing so requires being connected to other people who also have computers. In today's world, where technology is so pervasive, connecting computers and other types of digital devices is absolutely necessary for communicating and conducting business quickly and efficiently. Operating in this fast-paced arena is the Network and Computing Services Department of the Berks County Intermediate Unit, whose constant goal is to keep things connected.

INFRASTRUCTURE

To connect computers to each other, a system of cables and network equipment, such as switches, routers, and firewalls, is needed. Staff at the BCIU work closely with vendors to provide assistance to Berks County schools in running fiber-optic cables, installing modems or transmitters, and providing access



From left, Jan Dietrich, BCIU electronics technical specialist, reviews plans with Hamburg Area School District partners Stanley Shawn Gravish, principal, Perry Elementary School; Than Wright, technology coordinator; and Matt Bertschy, IT support specialist.

to the Internet. In addition to overseeing BCIU's internal network, they are responsible for maintaining a regional wide-area network (WAN). This network currently connects 15 districts and two vocational schools and provides a fast Ethernet connection that enables the BCIU to distribute instructional materials, host applications such as eSchoolPLUS and Excent Tera, and provide high-quality video conferencing to those within the network. Actions are currently being taken that will connect this regional WAN to other intermediate unit WANs to form a state network with the ability to provide even more private bandwidth to connect schools all across Pennsylvania. The statewide network is known as PAIUnet.

Wide area networks, both regional and statewide, represent expanded learning opportunities for students in Berks County schools, including the new Tilden Elementary School in Hamburg.



CONNECTING THE COMPUTING DEVICES

Once the networking infrastructure is in place, computers, printers, and other devices can be connected to it. To support the work that is done by BCIU employees, the Network and Computing Services Department manages and maintains nearly 700 laptop and desktop computers, many of which are connected to wireless network access points. Maintaining all of these devices is needed to keep BCIU operating smoothly and to enable it to effectively serve its clients and partners.

The repair center within the Information Technology Division provides repair services, not only for the BCIU, but for school districts and other clients as well. Serving as authorized service centers for Dell and Apple computers allows the BCIU to perform warranty work on those brands. BCIU is investigating its options related to becoming a repair source for Lenovo computers, which are being deployed in schools in connection with the Classrooms for the Future project.

CONNECTING PEOPLE THROUGH APPLICATIONS

A computer system has little use unless a software application is installed. The BCIU hosts applications for managing student and financial records, preparing tax bills, and for providing information through websites. Specifically, the Network and Computing Services Department is responsible for applications that provide e-mail service, filtered access to the Internet, anti-virus protection, and desktop applications, such as Microsoft Office. All of these applications connect people so that they can work together and communicate with each other. Most organizations today couldn't even fathom doing business without e-mail technology. The BCIU, for example, received 39,789 e-mails from customers during the month of November 2007. What other means could have been used to efficiently handle that amount of communication?

CONNECTING PEOPLE THROUGH VOICE COMMUNICATIONS

The BCIU is currently implementing phones with Voice Over IP (VOIP) technology when new phones are added to its facilities. These phones rely on a robust network to provide quality phone service. The PBX system handles a large volume of calls each month. In the month of November 2007, for instance, 51,327 in-bound/out-bound calls were processed. Cell phones have become very important tools for keeping people connected. In addition to the cell phones utilized by BCIU employees to stay in close contact with their offices and



BCIU provides a wide range of technology repair and support services to local educational institutions. Chuck Braunsberg, microcomputer field repair specialist, is seen here on a service call to Reading Area Community College.

co-workers, 235 cell phones are used to provide BCIU's school bus fleet with instant two-way communication and global positioning system (GPS) functionality. The GPS feature gives the BCIU Transportation Department the ability to track vehicle location minute by minute with an accuracy of +/- 200 feet.

CONNECTING IN THE FUTURE

In the coming year, the BCIU Information Technology Division plans to review its processes and make improvements, where necessary, to provide its customers with the services they most need. A service desk software application was recently purchased and will be implemented in time for the next school year. Another major project will involve moving to Microsoft Active Directory and replacing the existing e-mail system with Microsoft Exchange. The BCIU website (www.berksiu.org) will be overhauled and will use Microsoft SharePoint behind the scenes to update and manage documents and content more efficiently. The BCIU will continue to be involved with the statewide network project to ensure that consortium members have access to the latest in digital educational materials and student management software and are able to connect to each other through the use of video-conferencing technology.

For more information about the services offered by the Network and Computing Services Department, contact Terry Davidson at terdav@berksiu.org or 610-987-8265.