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Wireless improves learning for local schools

By Sarah Watson
Lynchburg News & Advance
Monday, February 26, 2007

It used to take almost 30 minutes for Clay Ellington's AP Calculus class materials to download.

"By the time you got to watch it, your class was over," he said.

But Ellington, along with other students taking online distance-learning classes at William Campbell High School, can now take classes on schedule because of Campbell County's new wireless broadband system for schools.

Since the system went online Jan. 11, students and teachers throughout the county have Internet connections that are now up to 21st century speed.

Originally, each school connected to the county's broadband network through the school administration building in Rustburg. But shared resources were often slow or unavailable because the network couldn't handle the traffic, Jim Hawley, Campbell County schools technology director, said. "It was like putting a tractor-trailer in a one-car garage."

The network would be so jammed during Standards of Learning exams that county technicians would have to shut down connections to schools where there wasn't testing, Hawley said.

Now the network capacity has increased by more than 150 times and the only outage has come from downed power lines.

The new wireless broadband system works by sending radio signals from a mountaintop transmitter in Rustburg to towers throughout the county near schools. The signals are then sent to a server, which connects to the school's network.

The county is leasing the equipment for about \$43,000 per month - more than seven times the monthly bill for the slower network, Hawley said.

Officials decided against purchasing the equipment because technology changes every few years, Hawley said. By leasing, the company, Charlotte N.C.-based Conterra Ultra Broadband, will routinely update the equipment.

"For a rural area, it's a great solution because you don't have to run (a cable) out to the building," Hawley said.

In addition to serving the county's schools, the system is also hooked up to all county libraries, which used to have dial-up connections.

DeeDee Cox, William Campbell's librarian, said the new system has dramatically improved how students work online.

Before the upgrade, Cox said teachers or administrators in Rustburg would often have to download videos and other lesson materials for students taking online classes, burn the files to CD and then drive the materials out to Naruna the next day.

When there was a connection, students would often spend the entire class period trying to download the lesson, only for the bell to ring just as they started working, Cox said.

Now, the videos download almost instantly, she said. "The class just moves so much faster for (students)."

William Campbell principal Rob Arnold said the online classes are important because they allow students access to advanced classes that couldn't be offered because of low enrollment. The slow network caused many problems for students with those classes. But the new network has really helped in other ways, he said.

"It's really reduced the staff's workload and it's less frustrating for the students."

For Ellington, that means calculus is now simpler.

"Math is a hard thing to learn unless you have someone showing you," he said. "It's a lot easier to watch (a video) online" than to learn from a textbook.

This story can be found at: http://www.wsls.com/servlet/Satellite?pagename=WSLs%2FMGArticle%2FSLs_BasicArticle&c=MGArticle&cid=1149193397740&path=!news!localnews

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