

## Education & Research - Buchanan High School kids Are Learning Everywhere and at Any Time

Chuck Philips, Clovis Unified School District Technology Director, is a firm believer in the "Anytime, Anywhere" concept of learning. He believes students should have access to the Internet and learning materials at all times, whether they are in school as well as in their homes. To that end, the Clovis School District has implemented wireless data networking program at Buchanan High School, a sprawling spread out campus with 3000 students.

### GETTING ONLINE

Beginning in the fall of 1999, nearly 400 Buchanan High School students will be using portable laptop computers connected via ORiNOCO wireless networking. From anywhere on the campus, in classrooms, study halls and even outside on the lawn, students will be able to electronically access materials in the library and media center, as well as send and receive email. In addition, they will be able to access the Internet to do research and review the news. The students will purchase their own laptops while the District is purchasing ORiNOCO Turbo cards for them to use. Most of the students were able to purchase their own laptops, However, Buchanan High was able to come up funds from the community to help defray costs for about fifty laptops and ORiNOCO PC Cards. Chuck anticipates that about 300 students will be working wirelessly this fall with another 100 or so coming online later in the year.



### ORINOCO TURBO: HIGH-SPEED



A network of 48 Access Points, connected by 100BaseT Ethernet, blanket the entire campus with each access point able to cover two classrooms. Currently, Buchanan High School is implementing the high-speed Turbo ORiNOCO radios operating close to 10BaseT Ethernet performance levels. He will phase in the new 802.11b radios as they become available.

### FUNDS

The Clovis Unified schools are part of California's "Goldmine - Digital High School" program that provides matching funds for installing computers, networks and Internet access in schools. Other Clovis schools were networked with 12 switched Ethernet connections to provide networked access in each classroom. However, teachers were not happy with that arrangement as they did not have enough network connections for each student and the teachers were locked into a specific classroom architectures.

### COST SAVINGS

Chuck Philips investigated going wireless and discovered by using only wired Ethernet connections and wireless Access Points, he could get the coverage that the teachers needed while saving about

\$150,000 per school. These savings resulted from a variety of factors including reduced installation costs of both the network Category 5 cable and needing fewer switches.

### TEST PROGRAM

Chuck Phillips and the Technology Department at Clovis did an in-depth study prior to deciding on ORiNOCO. They set up a test program that compared ORiNOCO technology to Breezecom. Not only did ORiNOCO provide better performance and faster downloads, the ORiNOCO PC Cards and the Access Points were easier to install.

### ELEMENTARY AND MIDDLE SCHOOL TO FOLLOW

Currently only the Buchanan high school segment of the campus is wireless. However, if the teachers and students fully accept the advantages of wireless and the financial advantages continue, Chuck expects to see the elementary and middle schools to go wireless sometime in year 2000.



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