

Engarde: The Wireless Project

A Nomination for the Innovation of the Year Program, 2005

An Executive Summary of the Innovation

Engarde: The Wireless Project bolsters learning and student success by carrying access to the Internet, files on the campus network, and other online student services away from the confines of the lab and into a variety of new “unplugged” environments in the heart of the college campus.

A Description of the Innovation

Glendale Community College has long been a leader in providing computer network services to students, with innovations such as the High Tech Centers and the Instructional Palette gaining national recognition. In fact, *Yahoo! Internet Life* ranked GCC among the “most wired” colleges in the country a few years ago.

Ironically, shaking off those famous wires is the next major breakthrough in expanding the benefits of technology within the campus community.

Connecting to the World Wide Web or to online course materials used to mean working where computer equipment could be plugged into a wall. Imagine, instead, finding a shady spot in the green grass of the beautiful Glendale campus to settle down and look up articles in the library database, deliver an assignment directly to an instructor, or use Maricopa Online to register for a class.

That is what GCC students are already doing with their portable computers, as these devices have become common and affordable. The Wireless Project extends the power of the campus network from the computer labs to their own free hands.

The Information Services departments at GCC pioneered wireless networking for instructional purposes with the success of cordless, traveling laptop computer labs in the Physical Sciences building, where the freedom from excess cables is a necessity. In Fall 2003, the “zones” of wireless access were expanded to include areas surrounding nine buildings in the central corridor of the campus, including the Student Union. Now any registered student or employee with compatible equipment can log on to the wireless network – named “Engarde” -- to share in campus Internet access and the files on the Academic Network.

The term “wireless” is common at other colleges too, but the unique and innovative aspects of GCC’s wireless network are in the implementation. Engarde utilizes the same synchronized, password protected, registration-dependent student accounts that are used for GCC’s Instructional Palette. The project team built upon GCC’s strong wired network infrastructure by utilizing existing Ethernet ports, and further decreased installation costs by using Power over Ethernet (POE) so that only Ethernet cables needed to be attached to the ports. The system utilizes “dumb” access ports regulated from a central, web-accessible switch to minimize maintenance costs and greatly enhance the flexibility of the system. Access to the system is gained through an automatic browser redirection to the login page. And within the last year, Engarde also provided an innovative solution

for instructors who needed to log on to projector systems without logging onto GCC's usual Palette system.

The Wireless Project has a positive impact on the education of students according to the following criteria, relating to the Values, Mission, Vision, and Goals of Maricopa Community Colleges as follows:

- **Quality** (*Value Education*): Engarde has brought the value of computer labs to students in classes outside of the typical computer lab environment, and to many more students using a variety of online applications.
- **Efficiency** (*Value Responsibility*): The Wireless Project ushers in a highly efficient era of campus networking, with fewer space and infrastructure concerns restricting the environments (formerly just computer labs) in which students and employees can use on-line campus resources.
- **Cost Effectiveness** (*Value Responsibility*): Engarde adds value to the institution in a way that compares to the installation of the High Tech Centers; yet the wireless network largely involves allowing students to tap into the network using their *own* laptop and notebook computers.
- **Replication** (*Value Excellence*): The methods used to make Engarde work can be shared with any campus interested in replicating the system.
- **Creativity** (*Value Excellence*): For the success of the Wireless Project, Information Services personnel devised a way to make equipment from the modern computer marketplace work out of scope in an original manner. Technology from different vendors is made to work together in order to control the costs of this resource, and to provide a relatively secure access that takes no special setup on the student's wireless device.
- **Timeliness** (*Value Excellence*): The Wireless labs at GCC have been a proven success since Spring of 2001. The expansion of the wireless network to include students' own equipment on campus was developed just as the compatible equipment was becoming more common, available and affordable to college students who appreciate the cutting edge of technology.
- **Learning** (*Value Students*): The Wireless Project impacted numbers of students in Applied Sciences labs early on, while the expanded wireless access continues to catch on and expand. The web site at <http://www.gc.maricopa.edu/wireless> explains how the system works, who can access it, and the standard equipment users need for this access.
- **Collaboration** (*Value Excellence*): The success of Engarde is the result of collaboration and cooperation between faculty, Information Services personnel, and the students who have helped create the demand for this exciting new service. The continuous improvement of this resource will continue to depend on constant communication between these areas of the campus community.

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