Sparking a Business and Information Technology (BIT) initiative

In the 1990s Oregon Sea Grant successfully pioneered efforts to build electronic communication capabilities on the Oregon coast, with local governments, state agencies, and organizations such as West Coast ports—through the Congress of West Coast Harbormasters and Port Managers. This work accelerated their adoption of on-line tools to enhance enterprise communications, streamline reservation systems, and expand coastal interpretation resources for tourists.

About the same time, a comprehensive educational-needs assessment conducted by the OSU Extension Service revealed that changing economics and jobs were Oregonians' most frequently cited issues of concern. Where many once relied on natural resources alone, the survey revealed that new economic opportunities required additional infrastructure, such as fiber optic cables. Family-wage jobs are becoming scarce, and throughout Oregon these well-paying jobs increasingly require in-depth training and skills in contemporary business and information technology.

In response to this growing need, the OSU Extension Service, with help from Oregon Sea Grant, launched the Business and Information Technology (BIT) Extension Initiative. This effort is led by Bruce DeYoung, an Oregon Sea Grant Extension specialist known for his previous work in advancing electronic communications along the coast.

Top: the BIT Mobile. Bottom: inside the BIT Mobile.

While electronic technology offers hope for economically disadvantaged communities, youth, businesses, and others to participate in the new economy, these groups are in danger of being left behind for lack of necessary technical training and business skills. Because of its statewide presence and credibility with both adult and youth audiences, Extension has the opportunity to leverage existing programs to build interest and skills in business and information technology.

Collaborative sponsorship

The BIT Extension Initiative was designed to help Oregonians in pilot areas adopt leading-edge technology as an integral part of their community, business, and personal lives. In addition to the OSU Extension Service and Oregon Sea Grant, other organizations are supporting this novel effort.

For example, the Engineering Technology Industry Council (ETIC) is providing grant funding to support BIT Extension's outreach to bolster precollege youth skills in engineering and technology through informal education. To accomplish this outcome, ETIC is providing funding support for a pair of 4-H BIT agent positions in underserved, rural regions. These outreach faculty conduct educational programs that are helping over 5,000 youth and their families gain BIT skills and awareness of emerging career opportunities. ETIC hopes the result of this effort is an expanded pipeline of K–12 students interested in studying engineering and technology in college.

Outreach activities

The BIT Extension Initiative also collaborates with the OSU 4-H Extension Program each summer

to offer technology workshops at its week-long camp. These workshops reach hundreds of youth with technology training who are not otherwise gaining this exposure in their home regions.

In 2005, BIT Extension arranged for the entire 4-H Summer Conference to be based in Weatherford Hall, the recently renovated dormitory housing OSU's residential program for innovation and entrepreneurship. The experience of being in this $30 million learning center, with its high-tech meeting rooms and wireless Internet café, should be inspirational for 4-H youth and adult mentors alike.

To reach out to youth and their teachers statewide with technology training, BIT Extension is also creating a new tool for use by formal and nonformal educators lacking a technology background. Called Kids @ Komputers,™ it is an all-in-one CD-ROM educational package of PowerPoint slides that introduces students in grades 4–6 to computers and the Internet. Set up for delivery in seven sessions, the visually attractive presentations and field-tested content will hold students' attention as they build their understanding and skills.

Specially designed for presenters who are not computer experts, the Kids @ Komputers™ package contains complete instructions for presenters, including detailed "how to" guides for computer operations to prepare for and present the lessons.

The seven Kids @ Komputers™ lessons cover the basics of word processing, file management, Internet and e-mail safety, and Internet searches. Kids @ Komputers™ has been tested successfully in school classrooms, after-school programs, and home-school classes. It was first marketed in Oregon in 2005 with distribution nationwide planned for 2006.

Outreach innovations

Oregon's remote areas typically lack technology classrooms, contemporary equipment, and trained instructors. Addressing this challenge required the creation of a special new tool—the BIT Mobile.

This novel partnership of Oregon Sea Grant and the OSU Extension Service has sparked an exciting initiative that is helping communities throughout the state.

The BIT Mobile is a self-contained mobile technology classroom inside a 26-foot lightweight trailer that

- is towed onsite by a one-ton university pick-up truck
- comfortably houses 15 notebook computers, two printers, and a file server, and has multimedia instructional capability
- uses cables for electrical power or its own generator, as needed, and has a furnace, air conditioning, and interior and exterior lighting
- uses mobile satellite Internet technology to provide on-line access for learners
- includes a variety of technology equipment for hands-on training in GPS, GIS, digital photography, etc.
- has inspired the University of Nebraska Cooperative Extension to implement similar programs using a similar truck-trailer rig (painted red instead of white)

This prototype tool has attracted diverse sponsorship, including valuable donations from the technology industry. The BIT Mobile reaches out to various audiences by using bookmobile strategies to overcome transportation and other participation barriers, provide a comfortable learning environment, and appeal to people's innate curiosity.

During the 1990s, Oregon Sea Grant collaborated with various agencies and organizations to introduce Low Power AM Radio (LPR) to coastal Oregon. This broadcast technology enables localized AM radio broadcasting of prerecorded audio messages. It has proven an effective medium for distributing outreach information to visitors at scenic overlooks such as Boiler Bay State Park.

Lessons learned from the coastal experience are being applied to the BIT Extension Initiative. For example, BIT is teaming up with Extension offices in several counties to launch a broadcasting network of localized AM radio stations. The stations will be located near OSU Extension Service offices and will automatically broadcast educational messages 24 hours a day.

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