

# Telecom Education is Paramount

By Lorrie Delk Walker

It's always good news to hear when the number of job offerings outnumbers those in need of a job. In these tough economic times, this is the case with telecom industry careers, and the outlook continues to appear favorable into the foreseeable future, according to representatives at the Southern Alberta Institute of Technology in Calgary, Canada.

When students graduate from SAIT's Information Technology Telecom Systems program, they typically have two or three job offers each, says Darwin Risdon, Academic Chair of the Telecom Systems and Networking Systems majors. Still, the problem facing SAIT is convincing potential students that the telecom industry is a viable career.

The battle is in combating the image young adults have of the telecom industry, says Eugene Blanchard, a SAIT instructor. "They see it as old, obsolete technology," Blanchard says. "When you talk about telecom to someone out of high school they think of it as an old analog phone. The problem is that telecom is a business to business industry. Most prospective

students aren't aware that it even exists."

If not for the telecom industry, there would be no platform for the Internet worldwide. Mobile phones and text messaging also are provided by the global telecom network. With that said, it still is easier to get students interested in the networking program at SAIT than the telecom program. "We do a great deal of talking about the problem, but no one is offering many solutions," Risdon says. "We can have world class instructors, but if students don't connect and see this as a viable career choice, they won't enter the program."

If not addressed soon, this problem will have serious effects in the next five to six years when an estimated half of the North American workforce is poised to retire. "If (the telecom industry) doesn't sell the jobs, I think they could be making ridiculous offers and begging 60-year-old employees to stay on until age 70," Risdon says. "Another possibility is resorting to taking anyone off the street, even if they're not adequately prepared to do the job."

## The Land of Opportunity

A simple Internet search reveals worldwide opportunities in all sectors of the telecom industry. With big changes in the direction of the industry such as looking at system-level integration and the challenges of finding ways to integrate legacy equipment into the Voice-over-Internet protocol world, these are exciting times to be in the industry, Blanchard says.

VOIP may be the answer when it comes to luring young professionals back to into the telecom industry because it eventually will combine the networking and telecom worlds. "What's really nice with VOIP is that we have been working with the Asterisk PBX distribution of open source software," Blanchard says. We can easily put a VOIP front end onto our DMS-100 Supernode central office switch and other legacy equipment. We can expand their useful lifetime and provide modern features not currently available through traditional processes."

Risdon believes that within a decade or so, legacy equipment will not be used anymore. "The telecom parent gave





birth to the networking child," Risdon says. "Now the networking child is growing up and threatening to take over the family business."

### Training to Meet Future Demands

SAIT is better positioned to train students for careers in the telecom industry since it recently launched a newly redesigned program and boasts an \$8 million investment in training infrastructure.

One of its key features is hands-on training on real world equipment, Blanchard says. SAIT has the only captive DMS 100 central office switch of any publically-funded post-secondary school in North America. The school also has its own captive cell site - a Mobile Telephone Exchange switch - for training purposes. "Because ours is captive, we can within limits do anything we want to it and not affect service," Risdon says. "Students can experiment on the real world equipment without fear of losing phone calls."

The school also has labs on Meridian private branch exchange (PBX); VOIP that deals with Asterisk PBX; Call Manager Express; structured cabling dealing with copper and fiber; outside plant curriculum, SONET, ATM and Frame Relay networks and wireless labs for dealing with microwave and wireless networks.

In addition, SAIT also is a Cisco academy and where the students train for the Cisco Certified Network Administrator and the Cisco Certified Internetwork Professional certifications, which cover service provider to service provider inter-networking such as QoS, BGP and MPLS - a first for the telecom industry, Blanchard says.

The redesigned telecom program has been realigned into a credential framework more in line with colleges, Risdon says. "This will better facilitate the process for our program to articulate students into a four-year university transfer program," he says.

The school also hosts a four-year apprenticeship training program and provides extensive inclusion of state-of-the-practice IP telephony protocols including IP Television, QoS, BGP, MPLS and VoIP.

The program's redesign came as a result of polling and meeting with industry representatives to learn how they

found SAIT's graduates and what needed to change in the way of training them to address future demands. Overwhelmingly, business representatives said they wanted increased professionalism.

"Before, we were graduating people with component-level technological expertise," Risdon says. "We taught technology ad nauseum, as if they would be designing stuff from scratch. At today's operations level, that's just not needed anymore. Knowledge of the network hierarchy, provisioning protocols and IP-routed traffic with troubleshooting skills to the node, shelf or card level serve them much more appropriately."

Telecom professionals today tend to communicate directly with upper management and customers. Businesses said they wanted students with more of these interpersonal skills. SAIT responded by replacing some technology skills training with instruction on topics such as project management and presenting cases to the executive suite. "A lot of good IT initiatives and ideas get derailed because the people at the technical level who can conceive the solutions are unable to communicate to the executives who make the decisions and provide the funding for them," Risdon says.

Now that the program has been redesigned, the key to attracting students to it and similar programs in the United States is partnership, Risdon says.

"Training institutions such as SAIT can have great programs, a great training infrastructure and great instructors, but to attract the future workforce, young people must have an awareness of the potential career opportunities," he says. "Strong promotional assistance is needed from industry partners not just to sell their product or service, but to sell their company and promote the telecom sector as a viable career choice." |TF|

