Ted Rappaport with the Wave spy radio receiver, which can scan 200 radio frequencies a second while collecting signal strength statistics for cellular and other wireless networks.

We need one success

Wireless dreamer still sees a bright future for valley

Ted Rappaport has learned that translating high-tech research into regional growth is no small undertaking.

By MICHAEL SWISS
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BLACKSBURG - A decade has passed since a young, enterprising Virginia Tech professor named Ted Rappaport began outfitting his engineering students with sweatshirts that read: "Building the Wireless Valley." Rappaport envisioned a region where telecommunications research would spin off high-tech companies on a scale similar to what happened with computers in California's "Silicon Valley." He thought Tech, with its "brilliant students and brilliant faculty" could engineer that kind of growth.

"My dream was to make a Silicon Valley in Blacksburg," Rappaport said recently.

"Of course, I was young and naive and didn't know how hard that would be.

Rappaport eventually realized the success he sought would not happen overnight. He learned that no amount of intellectual capital or cutting-edge technology could guarantee prosperity. But he remained convinced that Southwest Virginia could become a lucrative "wireless valley" where talented Tech graduates could enjoy success - if only someone would show the way.

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TED RAPPAPORT
FOUNDER OF WIRELESS VALLEY COMMUNICATIONS INC.

As I've become more acquainted with what it takes to build a high-tech company, I realize that just having the raw, intellectual talent is not enough," he said. "The thing I keep realizing is there are not a lot of examples of high-growth success stories in this part of the state."
Ted Rappaport says his real passion is to create something that doesn’t exist so that other people can benefit. He creates and develops businesses that have Wireless Valley Communications on the brink of significant growth. He expects the business to expand from seven to 20 employees in the next nine months.

Rappaport believes other start-up communications businesses can enjoy similar success in this region.

"Venture capitalists are always looking for the next untapped market, the next place where there's high growth that no one else has discovered, and I think we can be at that place," said Rappaport, who lives in Salem with his wife and three children.

Rappaport makes no attempt to hide his enthusiasm when he talks about the region's economic development potential. He displays similar zeal when he discusses his love of teaching and his passion for developing new wireless communications technologies.

"It's real easy to be enthusiastic when you're doing something surrounded by good people," he said.

Roanoke lawyer John Rocovich, a member of Tech's Board of Visitors, said Rappaport is one of many university professors with successful businesses that can "accelerate the rate with which we can convert science into commercially marketable products."

"Bright guys with creative juices can look at what Ted's done and say, 'My gosh, I can do that, too,' " said Rocovich, who has served as a mentor to Rappaport.

Rappaport's company began commercial operations in 1999 and found immediate success with a product called SitePlanner. The computerized design program allows engineers to install and maintain indoor wireless telephone systems without having to guess where to put infrastructure such as antennas, cables and base stations.

"We're starting to make believers of the wireless design engineers who, heretofore, were just using intuition or experience," Rappaport said.

Wireless Valley Communications' clients include cellular phone giants Sprint PCS, AT&T Wireless and Ericsson. Two Korean cell phone companies also are learning how to use SitePlanner, Rappaport said.

"Our customer response has been phenomenal," he said.

The company's latest innovation is a product called Wave Spy, a receiver that scans up to 200 radio channels per second while collecting signal strength statistics for cellular, personal communications services (PCS) and other wireless networks.

"Isn't this cool?" said Rappaport as he cradled the device.

Rappaport declined to discuss Wireless Valley Communications' profits. But, he said, many are sharing in the company's good fortune.

"All of the students at Virginia Tech who have invented parts of our present product share in a royalty stream and salary stream throughout the company," he said. "Even if they graduated seven or eight years ago, they are in the upside."

Rappaport has taken a one-year sabbatical from teaching to get his company "off the ground." But the fledgling business doesn't consume all of his time. He sometimes slips away from media interviews "because what comes across is a very monolithic viewpoint that I'm a business, that I'm driven by the dollar."

He said his real passion is to create something that doesn't exist that can benefit a lot of people.

Rappaport remains a sought-after expert in the communications field. He recently performed an engineering analysis on the feasibility of low power FM radio for the Washington-based Media Access Project. Rappaport's analysis countered industry claims that low power programming in small communities would interfere with existing FM signals. He also testified last month before a congressional subcommittee overseeing the issue.

"His reputation was sterling among engineers and policymakers at the FCC (Federal Communications Commission)," said Cheryl Leanza, the deputy director of the Media Access Project, explaining why the organization sought out Rappaport.

Rocovich said Rappaport easily could pull down big dollars as a full-time consultant and "expert witness." Rocovich considers Tech fortunate that Rappaport's "love of teaching" keeps him at the university.

And Rappaport has no plans to leave. He looks forward to returning to the classroom and building his business. He also hopes his success can encourage others to engineer a dramatic change in the region's economy.

"I'd like to be, in some way, involved as a tiny player in something that grows to be much bigger than I could ever dream," he said. "I realize that I certainly can't do it alone ... I think we need a drastic culture change. We need one success."