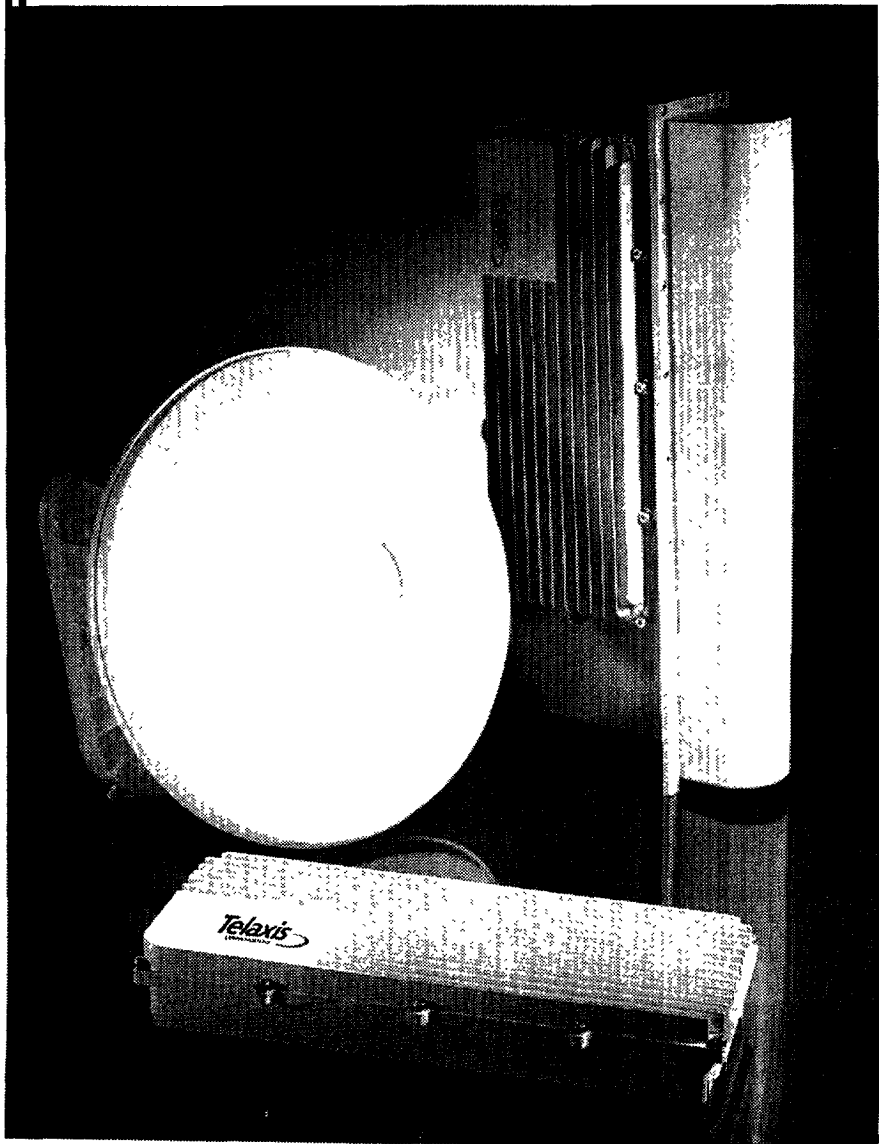


Riding The **WAVE**

Telecommunications & Computers

Telaxis Dials In Strong Growth in Wireless Access Market



Telaxis Communications, the region's newest public company, is satisfying the world's hunger for broadband access with products designed to take voice, video, and Internet capabilities that so-called "last mile" from the Internet source to the customer. Given the nation's huge appetite for speed and power, and the company's ability to satisfy it, the prospects for Telaxis are exceedingly bright.

By George O'Brien

ohn Youngblood said it's taken a while, but Deerfield-based Telaxis Communications, formerly Millitech, has "figured out what it wants to be when it grows up."

That's how Youngblood, president and CEO of the company, chose to describe the course of evolution that has taken place in the past several years. The company that started out making high-capacity secure radios for the government; moved into product development for the FBI, CIA, and other so-called three-letter agencies; and then developed radar systems for Ford, Mercedes Benz, and even Caterpillar, has divested those product lines to focus entirely on broadband wireless access products.

This new industry, one with phenomenal growth potential,

features products that bring broadband capabilities to one's home or office via what amounts to highly-evolved versions of radio transmitters and receivers.

As David Renaud, vice president of legal and corporate affairs for Telaxis puts it, the technology brings broadband that pivotal "last mile" to the consumer.

This could be a multi-billion dollar industry, says Renaud, who points to America's seemingly insatiable appetite for broadband speed as the obvious reason. This hunger for what he calls "bandwidth-sucking applications" — voice, video, and Internet toys — should fuel the new industry for years, if not decades, to come.

And Telaxis, now with 292 employees, intends to be properly positioned to grab a large slice of that pie — "we're not greedy, we just want it all," said Renaud — by mastering the three pieces to the intriguing puzzle of bringing this technology to market ... product development, manufacturing processes, and reliable testing.

The company went public in February, netting \$71 million in an IPO that sold 4.6 million shares. The stock, which opened at \$17, quickly went through the roof, closing at \$120 in early March. It has since come back down to earth (\$15 at press time), as have a lot of other technology stocks.

But according to Youngblood, the outlook for Telaxis is for steady, continued growth because the company has done its homework and has the critical ingredients

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in place: capital; cutting-edge products; and strategic relations with network systems integrators world wide.

This is a company that had \$2.4 million in sales in 1998 and \$9.7 million in 1999. Wall Street analysts project it will reach \$38 million to \$40 million by the end of this year, and \$80 million for 2001! You can do the math.

No wonder people like Renaud and company CFO Dennis Stempel say they like the fact that speed — as in the speed of Internet access — is addictive.

Banding Together

Before getting serious in his talk about where Telaxis is and where it's going, the detail-oriented Youngblood said it was necessary to look at where it's been, because the company's future is inexorably linked to its past.

As Youngblood joked to *BusinessWest*, Telaxis has been spending the past 18 years or so deciding what to do when it reached maturity. Such decisions are usually reached through trial and error, he said, and they usually center around putting one's full energies into a product or service that will have long-term growth potential.

The company now known as Telaxis was born under the name Millitech. Spun off from the radio-astronomy department at UMass, the company set out to be the clear leader in what was then a small

niche market — millimeter wave technology. It's first products were high-capacity secure radios, built mostly for the government.

The company went on to develop more products, such as high-capacity secure wireless data links for government agencies, and was one of the first to produce radar devices that could be fitted into the grills of automobiles to warn motorists of impending dangers. But ultimately, the company sold off these endeavors to focus on something exponentially more lucrative, said Youngblood.

By this, he meant broadband wireless access products, specifically what are known as ODU's (outdoor units) which the company devoted all its resources and en-

ergies into developing in mid and late 1990s.

The basic premise behind the equipment is simple: use specific designated frequencies to broadcast broadband signals. Using what is known in the industry as "point-to-multipoint" technology, hubs made by Telaxis are mounted on top of buildings or to antennas to send broadband to those hungry for it. Each pair of hubs can reach customers two to three miles out and cover a radius of 90 degrees.

These hubs, connected to an Internet backbone, send a signal to end users — businesses, residential consumers, colleges, and others, who receive it through a Telaxis receiver which currently runs about \$1,000 to \$2,500 depending on the model.

Telaxis technology essentially brings broadband to your home or office, said Renaud, referring again to the 'last-mile' concept, and the technology has a number of advantages over T-1 lines, cable modems, or DSL. For example, the symmetrical capabilities of the Telaxis equipment allow it to carry up to a whopping 35 megabits a second, compared to maybe 8 for traditional DSL.

Catching A Wave

While simple in concept, the technology is, of course, exceedingly complex, and as Youngblood stressed to *BusinessWest*, developing the products, while a critical step, is only the first step in taking the concept to the market. ■



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Fred LeBlanc

Technicians at the Telaxis Communications plant in South Deerfield work on components for broadband wireless access products. The company, which went public in February, has recorded five consecutive quarters with at least 35% growth.

"We knew we couldn't exploit this technology unless we could figure out how to manufacture it inexpensively," he explained.

Steps taken to reach that goal included development of low-cost production techniques, and reliable testing procedures, and the building of relationships with companies that will market their products.

The company produced 4,000 broadband transmitters and receivers in the first

quarter, and has 15 different models in the process known as "prove-out." In this stage, the company determines conclusively that the design and manufacturing processes are solid, or what Renauld calls "bulletproof," before that production is outsourced.

The next several years will be dominated, said Younglood, by taking basic technologies and rolling out new products, making them bulletproof, and moving them out the door.

"When things get easy," said Young-

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blood, referring to completion of the prove-out stage, "Then we move it out the door."

Perhaps the biggest challenge facing Telaxis is to continually bring down the price of production, he said, allowing the company to consistently compete with foreign competitors using cheaper labor.

"We've established a beach-head with our customers ... the next hill is price reduction," he told *BusinessWest*.

The key isn't cheap labor, he stressed, but automated manufacturing processes.

Telaxis' products were expensive to develop and the company needed financial help. But lending institutions needed assurances that the company could produce the products before they would loan money for new equipment, and the company couldn't show it could produce as advertised without that equipment — your typical Catch 22 situation.

Two state agencies, the Mass. Capital Resources Corp. and the Mass. Technology Development Corp. came to the rescue, providing nearly \$2 million in low-interest loans that enabled the company to purchase sophisticated production and testing equipment. "If it wasn't for them, we would still be in that Catch 22 and we wouldn't be talking today," he said.

The new equipment and processes were put to the test in the first quarter of this year when the company, which had been producing just under 2,000 total units a quarter suddenly had to up the ante to about 4,000.

All hands were brought on deck, and three shifts worked seven days a week to meet the orders.

"That was our first quarter as a public company and it was important to do what we did," said Renault. "We had to show that we could serve the customer and we did. In the process, we made life in the second quarter much easier for ourselves."

The company has received steady support from venture capitalists through the years, said Youngblood, describing the core investors as loyal to the company and its stated mission. However, by early last year it became evident that the company would need a bigger bullet.

Public Speaking

Talk of taking Telaxis public began in earnest last fall, said Youngblood, who told *BusinessWest* that while those at Telaxis thought they needed a few more quarters to show the world they were capable of supplying product, experts on Wall Street said the company was ready.

The original plans were to take the show on the road around Thanksgiving, but those plans were delayed until Feb. 1 to let the market recover from an end-of-the-year slide.

Telaxis' meteoric rise and fall in stock price has led to some glum faces in Deerfield and on Wall Street, but the consensus seems to be that it is the tech sector, not Telaxis, that is struggling to earn investors' confidence.

"The entire sector is getting beaten down and we're being painted with the same brush," said Renault. He added that the theory being floated is that summer is not a good time for technology stocks in general because investors need time to research such companies and they can't do that while on vacation. Things are expected to pick up in the fall.

While the malaise on Wall Street isn't

helping matters, and may even be causing uneasiness among the many employees holding stock options, confidence abounds at the Deerfield facility.

Stempel attributes this to widespread belief in the company's business plan — at all levels of the company and among stockholders as well.

"Actions speak louder than words," said Stempel, referring to the investors who have remained loyal to the company, before and after it went public. "The question everyone's asking is, 'when are we going to be profitable.' The truth is that we could have become profitable more quickly, but because the industry is new we wanted to do it right."

If things go according to schedule, the company should turn a profit in the second quarter of 2002, said Stempel.

For the record, the company has now logged five consecutive quarters of sales growth exceeding 35%. Revenue for the second quarter of 2000 was \$8.7 million, compared to \$1.6 million for the same quarter in 1999, and \$6.3 million for the first quarter of 2000. At the same time, the loss from continuing operations for the second quarter was \$4.6 million, or 28 cents per share, compared to losses of \$1.7 million, or \$3.44 per share in the second quarter a year ago.

What do all these numbers mean? They show the company is seeing soaring growth

while it continues on a steady path to profitability.

Analysts project that as the country's hunger for bandwidth grows, Telaxis profits will follow close behind.

There are, and will continue to be competitors in this new industry, says Youngblood, but for the most part these competitors must still confront the tough stretch that Telaxis has already put in its rear-view mirror.

When asked how large a market share Telaxis could grab, Youngblood turned to his colleagues and shrugged, as if to ask, "how big a share do you want?"

And as Renault said, this company isn't greedy — it just wants it all. *EW*



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