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By Rob Terry

College Park startup AnthroTronix has a tricky balancing act ahead: Intersecting the toy, education and medical markets with its product, a robot used by children with developmental disabilities, and launching it in a cautious high-tech funding environment.

But for Corinna Lathan, the entrepreneurial arena sure beats teaching full time.

"I love it," says Lathan, in her company's cramped office at the University of Maryland's Technology Advancement Program incubator. "Academia drove me crazy."

AnthroTronix has designed JesterBot, a therapeutic tool developed in tandem with researchers at the University of Maryland's Human-Computer Interaction Laboratory, for children with speech, learning or physical disabilities such as autism and cerebral palsy. Children control JesterBot's movements by wearing mitts or a helmet equipped with wireless sensors and moving their arms or head.

Called gestural interface, this form of therapy is considered effective because of the way it motivates children to communicate and be creative.

"In order for kids to develop they have to be able to interact with their environment," says Lathan, AnthroTronix's president and CEO and a Massachusetts Institute of Technology-educated scientist who taught at Catholic University and did research at the National Rehabilitation Hospital in Washington. "This tool enables them to explore and manipulate their environment. ... We're giving them other ways to allow their cognitive and physical development to continue."

Lathan's background in biomedical engineering led her to developing tools, with funding from the U.S. Defense Advanced Research Projects Agency, for military personnel using gestural interface technology -- for example, moving a finger in a glove to maneuver a robot in a trench. She worked with robotics technology while at the National Rehabilitation Hospital and began investigating business opportunities.

Six million school-age children in the United States have a learning, speech or physical disability, according to estimates. The toy market for children with disabilities is estimated to be \$2 billion. The market is fragmented -- serviced mostly by "Mom and Pop" operations -- but close knit, so if a good product is introduced, word is sure to spread.

Transferring that technology led her to the Human-Computer Interaction Laboratory on Maryland's College Park campus. Allison Druin, a human development professor, and Catherine Plaisant, associate director of the laboratory, were leading a team developing a robot that told stories to children. The robot could be programmed to display emotions and personal characteristics described in the stories.

In reaching children challenged by some of the most rudimentary forms of human interaction, JesterBot becomes both a fun and furry friend and a therapeutic tool able to monitor a child's progress. Results from exercises will be able to be tracked and monitored via the Internet. New games will be available to be downloaded to the robot through the Web, as well.

"It's more likely to work because it has that creativity aspect to it," says Plaisant. "You can come back the next day and do something completely different."

"And it's not a great market to be looking for funding. Our timing is impeccable," she notes dryly.

Another challenge is explaining to potential investors how the product will be marketed. Many view it as a medical device and anticipate an asking price of upwards of \$2,500. Lathan wants to sell JesterBot for closer to \$200. Other revenues are projected to come from Web subscription fees -- \$50 for parents, more for developmental professionals -- for new games and data tracking.

Investors see the subscription model "as being key," Lathan says of the business model. "The price point, people are dubious. I'm taking my cue from the toy industry. I'm going to design to that price point."

With that, Lathan brandishes a Furby from a desk drawer. To the uninitiated, the Furby -- blinking its eyes, talking its peculiar gibberish in that sing-song animatron voice, then falling asleep -- has an appeal that's entirely hidden, catching on the way it has with children.

But, in a way, it has become a template for a high-technology startup. The Furby -- by this point singing a lullaby and saying "night, night" as Lathan puts back in its drawer -- sells for about \$25, she notes.

Some of that toy's designers are working with AnthroTronix. They're continuing to hone the design while ramping up sales and marketing and looking for funding. The company is bootstrapping itself on about \$800,000 in research-and-development contracts.

AnthroTronix is partnering with Savage, Md.-based ToyTech Creations to manufacture a store version of the robot. And Carl Pompei, a founder of three Silicon Valley companies, has been brought on as a consultant.

He thinks Lathan's entrepreneurial bent could put AnthroTronix over the hump. "Not too many people that come out of academia have the orientation to be a CEO," he says. "But she does."

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