



# PATENTS / When It Comes to Owning Ideas, the Options Are Endless

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the military to do DNA typing," Murray said. "One reason I'm so excited about Vandalia is they are building a company that could locate anywhere, but they will locate it here."

## Chew on This

**Nathalie Henchey** hopes her pending patent brings jobs to West Virginia, but she also hopes the product she developed will help autistic children like her 4-year-old son, Olivier.



Henchey

Olivier, like many autistic children chewed on things long after he developed teeth. Henchey gave him baby teething rings, but he quickly mouthed right through them. She bought him tougher toys, but he chewed through them too. Finally, an occupational therapist told her to give her son non-toxic dog toys.

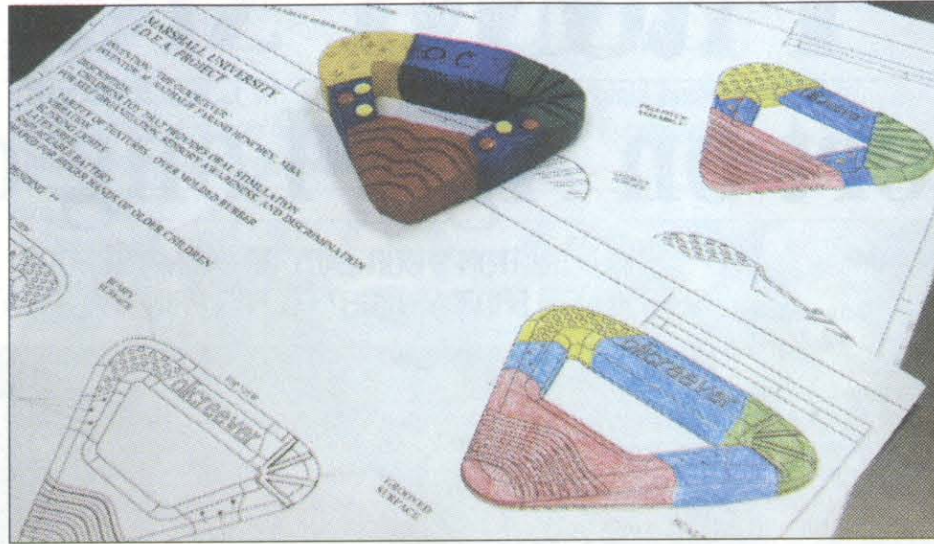
"For two years, he mouthed on everything from non-edible objects to dog toys. So I started putting down ideas on what he needed," said Henchey, a former nurse who now works as a research associate with IDEA.

What she came up with was the **OliCreever**, a multi-colored, multi-textured mouthing device that will vibrate and light up when bit.

She gave her idea to students in the university's MFG manufacturing engineering technology program who drew up plans and developed a multi-colored wax prototype for the OliCreever as their final project. The **Robert C. Byrd Institute for Applied Flexible Manufacturing** is working in conjunction with the students to develop a working prototype within the next few weeks.

As she held the red, blue and green triangle in her hand, Henchey pointed out different ways the device would help children with special needs. Vibrations, sounds, colors and textures will all appeal to an autistic child searching for sensory inputs.

Henchey hopes a working version of the OliCreever will be done by mid-March. Once that happens she plans to hand out about 20 prototypes to families



BETH GORCZYCA / The State Journal

**The OliCreever will be a rubber or plastic mouthing device for children with autism and other special needs who chew and mouth things. The device was developed by Nathalie Henchey, a research associate with Marshall University's IDEA center.**

with autistic children. Working with Marshall's **Autistic Training Center**, she hopes to learn what different children like and dislike about the OliCreever, and whether the device fulfills their needs.

Once she gets that information back, she will finalize the OliCreever's design. Hopefully, by then, her business plan will be ready and she can start manufacturing and selling the device.

Henchey said her biggest goal is to make sure children like her son have something other than dog toys to mouth.

"I designed this for my son, but then I realized it could have a lot of uses," she said. "Since it's for kids with autism, the market size is limited. But since there is nothing like it on the market, I think it makes sense."

## Tracking the Source

The two other patents linked to Marshall have less obvious job potential, but it is still there, Kent said.

One patent, applied for by professors **Terry Fenger** and **Pam Staton** and two researchers, is for a database that lists DNA fingerprints of E.coli bacteria from feces of more than 4,000 species. It took five years for the professors and students to

collect the samples, separate out the DNA and analyze it, but the end result gives the university has the only such database in the country.

Kent said the database is important because it can help identify the source of tainted water and help authorities prevent E.coli breakouts.

"Say they analyze some water from the Potomac River and find that the source is human, well then the authorities have to look at the septic system and water treatment facilities. But if it's from chickens or cows, maybe they need to look at local farms instead," Kent said. "In order to have appropriate policy, you have to know the source."

But how can a database create jobs? Simple, Kent said. The scientists and students at Marshall can start a company that analyzes and evaluates water. Or they can sell access to the database. Or they can do dozens of other things.

Options are endless.

"You can patent a process, or a database or software," he said. "Anything can be patented as long as it's unique and not obvious."

Kent believes there is also tremendous job potential in technology developed by professors **Richard Begley** and **Tony Szwilski**. The two developed new tech-

niques to use ground penetrating radar (GPR) and global positioning satellites to evaluate railroad bed conditions and give employees instant information about the tracks they are riding on, including whether the tracks have shifted or if the foundation is unstable.

Ground penetrating radar shoots electromagnetic waves into the ground to get an image of the rocks and soil underneath and their characteristics. That information is then fed into a computer where it is combined with track location information from global positioning satellites. The information is then sent to a computer on the train for the railroad engineer to evaluate.

In the end, precise information on the condition of an entire set of railroad tracks can be almost instantly available to either the railroad or its engineers without ever having to dig in the ground.

"GPR has been used for decades, but we are using it in a different way so engineers can identify anomalies in the track in real time," Szwilski said.

Kent said the business side of that project should be up and running by the summer, supplying railroad companies with information about the condition of their tracks. But the uses are far greater than just that.

"You can use it to evaluate a road bed or a mountain cutaway so you can find areas susceptible to landslides," he said. The technology could even be used to find buried hazardous waste.

Henchey, Swick and Gregg said the whole process has been educational for them. They've learned about documenting the birth of an idea and tracking it like a baby as it develops and changes over time. They've learned about patent laws and marketing basics and all of the essentials to build a business.

"Not everyone has a business mind to think about how to develop something for a market and then take it into the market," Henchey said. "But IDEA tries to assist people and help them do that."

And if Kent and the university are right, a few successes, a few patents and a few upstart businesses will spur more people to patent their own products, inventions or processes.

The synergy will create excitement, and the single bud of one idea will bloom into a field of possibilities.