

Technology Transfer Tactics™



The monthly advisor on best practices in technology transfer

University spins out a for-profit TTO to jump-start commercialization activity

Noetic Technologies, Inc., of Hattiesburg, MS, provides the University of Southern Mississippi with all the services an institution would expect from its TTO -- and more. But please don't call it a tech transfer "office."

Noetic, you see, is a fully independent for-profit company, although it was "home-grown" on the campus of Southern Mississippi, born from a need for tech transfer help in a university that had no TTO of its own. And while the university is clearly its major client, Noetic is free to provide services for other clients as well, and has already done some outside consulting.

"We have a contract with the university's research foundation to do work that brings in revenue," explains **Leslie Goff**, PhD, Noetic's President and CEO. "Our goal is to plant as many seeds as we possibly can; we are in the nurturing business."

The company has only been in operation since 2003, so Goff says it's a little too early to see dramatic results. "We have [formed] a couple of companies that are just beginning to be cash-flow positive, and we intend to move them to an innovation and commercialization park," he says. "If we can grow Mississippi companies from within, they will stay in the state."

Noetic has also increased the number of patent applications and is building platform technologies, Goff continues. "We've sold one or two, and done a little bit of licensing," he says. "It's a little early to talk about revenues; a year from now we will have a better handle on what companies have generated and put back into the university."

Cecil Burge, Vice President for Research and Economic Development at the university, is more than pleased with what Noetic has accomplished so far. "We've made significant progress," he asserts. "Our goal is to have a royalty stream of 1% of our research portfolio; we've averaged \$100 million on the research side, and we're about halfway there. This interface has improved our situation considerably."

A shared vision

Noetic was born of a shared vision between Goff and the university. "We started back in 2003 to redesign the way we did tech transfer," Burge recalls. "Prior to that, the Associate Vice President of research did our IP

management and tech transfer, and I was familiar with how that was *not* working. My experience taught me that we really needed someone with knowledge of the industries we were dealing with."

By then, Goff was already an employee of the university. "I had spent 16 years with G.E. Plastics, and had started briefly with the university with the intent of forming a technical entity for the university and breaking it out," he says. "[Tech transfer] had been under Cecil Burge, but he had so much on his plate it was impossible for him to give tech transfer the attention it needed -- especially with no office and no staff."

Goff says he had not seen a similar model before, but would not take all the credit for the Noetic concept. "I worked with the university and we formulated what we thought were the challenges for the university -- capturing and transferring IP, doing business start-ups, and taking the technology and giving it a real opportunity for commercialization," he recalls. "It took a little time to do customer needs sessions at the university among researchers and administrators, defining what their challenges were, and learning what we could do and where we could help."

"We were having a very difficult time closing deals with industry," adds Burge. "I felt like I was always at battle stations with them and did not have a feel for whether the deal I proposed was good, bad, or indifferent. The Noetic people have specific experience in high performance material polymers and plastics, and had some [feel] for getting the value of the technology. I felt we needed a new vehicle for interfacing with corporate research sponsors as well."

The university's research foundation, he explains, owns donated IP. "Initially the Noetic folks were inside the university, but they subsequently moved out to be a stand-alone for-profit company under the research foundation."

Having this for-profit vehicle offers a number of advantages, Burge continues. "They are able to access lots of resources like SBIR grants; we've actually licensed to firms and they've gone behind and gotten SBIRs," he adds. "That world opens up when you operate a for-profit company. Plus, we have 'been there, done that' people at Noetic; they do a good job negotiating and

hopefully save us a lot of money; they save a lot of 'wall-paper' patents we've never licensed, and they help on the front end by reviewing the value of disclosures."

Noetic works under a contract with the research foundation that provides for access to university technology and authority to enter license agreements, as well as assist with start-ups under the Mississippi University Research Act (MURA). The structure removes much of the potential for conflicts of interest, allowing researchers to push for commercialization of the innovations in an outside entity. It also allows the state school to participate in joint ventures and start-ups that would otherwise be prohibited by law.

It also helps with researcher recruitment, since the "best and the brightest" scientists can't be attracted easily without a start-up pathway. "MURA allows faculty members to go across the street and, with monitoring and disclosure, we can license IP," says Burge. "They want their IP spun out and want to be able to start their own company."

Perfecting the model

Noetic handles the TTO role similarly to an in-house office, but uses a somewhat more entrepreneurial approach that involves setting up small corporate entities to get projects moving. Goff and his team determine if an idea is patentable, if it is fundable, and whether there may be a potential partner 'out there.' "We look for a partner who can get involved very early," he explains. "We're not a wealthy university -- if we cannot find a partner to provide pull-through, we might suggest that the researcher just publish." Noetic also handles copy-rights for IP such as new teaching methods.

"We do the whole spectrum -- prototype, scale up, just like any commercial entity would do," says Goff. "Then, we set up a little company to run or license the IP to an entity," with royalty dollars feeding back to the

university. Early indications using the model are promising, he adds. "We've done one or two; they're not big, but one [licensee] just wrote their first check," he says. "To start from zero and generate positive cash flow in a two-year period, I'm pretty pleased with that."

In addition, says Goff, the model creates opportunities for the school's students. "They get real-life experience in their field [by working for the start-ups]," he says. "Mississippi has some brain drain problems because jobs are not here. If these companies grow, they can stay."

Under its contract, Noetic is free to perform services for other universities. "We haven't done much so far, but we've done some work with outside companies that are not affiliated with the university," says Goff. "It's more consulting work, doing marketing plans, helping to build business plans -- typical start-up challenges."

Not for everyone

Goff says that in order for the for-profit TTO spin-out concept to work elsewhere, "the university would have to have a little bit of entrepreneurial spirit." If that spirit is there, the model can work with knowledge-based IP as well as technology, he says. "We're beginning to get our arms around opportunities in software," Goff reports. "Originally I thought we would only be tech-based, but our model can apply to any and every type of IP." (See the sidebar below.)

"I think certain universities could benefit; it all boils down to having the right people, whether inside or outside the university," adds Burge. "In our state there are advantages to having an outside company. . . . We have significantly improved our royalty streams and have done a much better job of attracting and managing relationships with corporate sponsors."

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Commercializing knowledge-based IP a unique challenge

As Noetic Technologies, Inc., the for-profit company that serves as the University of Southern Mississippi's tech transfer arm, has branched out from commercializing technology to knowledge-based IP like courseware and software, its key people have learned that these types of innovations can sometimes be 'different animals.'

"The fundamental concepts are the same regardless of what you're trying to commercialize, but some areas are a little different than science or physical products," says **Kelli Booth**, Noetic's marketing manager. "One difference is the IP protection side," she says. "It's a lot harder to protect and figure out how best to do it, and find a way to sell the IP so that some of the knowledge you have goes with it, but you're not giving everything away."

Booth recalls working on a science curriculum for high schools in Mississippi, where test scores among students are perennially at the bottom of state-by-state rankings. "[University faculty] came up with cost-effective ways to cre-

ate experiments. They wanted to patent one or two devices; we convinced them they'd never get their money back, but if we could protect the process [rather than patenting a product] -- how to do it -- we'd have a better product to sell."

The challenge, she says, is protecting the know-how. And the key, Booth notes, is a combination of copyrights and license agreements.

For example, Noetic markets on-premise training guides for nurses. "At a hospital, if you sell a six-CD set the hospital will buy one and use it for everybody; that's hard to control," Booth explains. "So, we price it and sell it for an entire site, whereas with a software program for image removal or an online program, the user may be paying for each use. You've got to identify what the market is, how [customers] would use the IP, and the way you can get the best return."

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