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Intellectual Property: Keeping Your Company's IP on the QT

In some industries, patent protection can be a matter of life and death

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Imagine being the only person in the country who holds the patent for a product that can save lives by stopping uncontrolled bleeding in just seconds. This product is carried by the U.S. military here and abroad and has already been credited for saving hundreds of lives of soldiers overseas.

Raymond Huey, CEO of Z-Medica, the Wallingford-based firm that holds the patent for this hemostatic (blood clotting) agent called QuikClot, knows that without patent protection, Z-Medica would itself have bled to death financially.

"We're patenting everything we can," Huey explains. "We're a late-stage startup and patents are absolutely critical to the success of the business."

Huey recalls: "We were out trying to raise venture capital a year and a half ago, and we got into a discussion with a potential investor. He said to us, 'If you don't have a patent, all you have is a nice idea that somebody else is going to knock off.' You've got to have patents to protect your intellectual property."

QuikClot stops severe external traumatic bleeding and works by absorbing water from the blood and concentrating the clotting factors, forming a very quick and tenacious clot. The active ingredient is a granulated mineral substance that is biologically and botanically inert and leaves little chance of an allergic reaction.

QuikClot is made of organic crystals and some of the same chemicals that are found in detergents and in toothpaste. In addition to the crystal substance, Z-Medica also

introduced a "sponge" - a beaded product in a surgical gauze bag, similar in appearance to a bean bag, that is placed into the wound. That sponge has also been patented.

Typically, a claim on a patent can be quite broad. But the U.S. Patent & Trademark Office doesn't grant broad patents.

"If you could get a real broad claim like 'Using Any Inorganic Material as a Hemostatic Agent,' it would be ideal - but that won't happen," explains Huey. This is most often where the interests of inventors and patent officials collide.

There is a fine line, though, and inventors (especially those at start-up companies looking for funding) should go for as broad a claim as possible to begin with, Huey asserts.
"The narrower you are," he says, "the easier it is for somebody to look at your invention and figure a way to engineer it so it is just a little bit different. People who have a novel feature in a product - if you look at their claim and see what they've patented, people think that if they do it slightly differently, they're not infringing on any patent and they can take the idea and run with it."

Z-Medic's persistence resulted in a first-time opportunity for this product to save lives of trauma victims around the world who would otherwise have bled to death before they could be moved to an operating room.

In February, the federal Department of Homeland Security (DHS) added "hemostatic agent" to its Authorized Equipment List. This authorization means states can use DHS grant dollars for the purchase of QuikClot brand hemostatic agent and the QuikClot Advanced Clotting Sponge. This list is posted on the Responder Knowledge Base, an organization sponsored by the DHS' Office for Domestic Preparedness that provides emergency responders with a single source for information on current responder equipment.

QuikClot products are deployed with all U.S. military services in Iraq and Afghanistan, as well as with a growing number of first-responder units - fire, law enforcement and EMS - across the United States.

Z-Medica is continuing to enhance its intellectual-property portfolio, according to Middletown patent attorney Richard Michaud: "They need to do this because they want to continue raising funding."

Michaud, partner at the firm Duffy-Michaud, stresses that business owners are encouraged to look at intellectual property not simply as a legal asset, but also as a financial instrument.

"An attorney like Rich [Michaud] is a great resource," says Huey. "We have brainstorming sessions and generate ideas that we think are patentable, novel and relevant to our business. We've submitted quite a few provisional patents on our hemostats and technologies and gone global as well."

In general, patents can have a profound effect on the amount of money an emerging company can raise, but the importance does vary widely by industry.
"If you're going to raise money by going to a venture capitalist, an angel investor or even a bank, one thing they're going to look at is what you have that's going to make your company unique, and if you can protect it from being knocked off by

other companies," Michaud explains.

In many cases, the only way to protect intellectual property is through the patent system. Intellectual property includes patents, trademarks, copyrights and trade secrets - anything that comes from the creative mind and can give its holder a competitive edge.

A company can have trade secrets (information that employees must keep secret to seize or maintain an advantage over competitors - the formula for Coca-Cola is probably the world's most famous trade secret), but securing a patent means not having to worry about your trade secret inadvertently getting out and losing your competitive edge.

For a smaller company such as Articulated Technologies in Higganum, patents can be at the core of competitive advantage.

According to John Daniels, the company's president and CEO: "Our bread and butter is the technology we're developing. Owning that technology is the key. There's nothing as important from the perspective of trading value in the company. It's our major asset. We don't own a lot of machinery, we don't own a lot of buildings, but what we do own is the intellectual property covering a potentially breakthrough technology."

Articulated Technologies has one patent issued and 30 pending in the U.S. and internationally.

Typically tech firms are populated by a bunch of creative and talented scientific minds - ten at Articulated Tech. One thing leads to another and technology breeds. Ideas branch off and Daniels winds up with some very strong patentable ideas, covering everything from electronics and circuits to solar panels, displays and lights.

To obtain patent protection these ideas must be new, useful and novel. Once those hurdles to patentability are met, the product also needs to be marketable.

"There are patents issued all of the time that don't have any market value," Daniels explains. "They're good pieces of paper and good concepts, and even some are ideas that never should have seen the light of day. But the hardest thing isn't necessarily the creation of the technology; it's building a business around it."

Articulated Technologies has created a new form of light that comes in a thin, flexible sheet called the Light-Sheet. AT's intellectual property is applicable to light, signage, displays, backlighting and other applications. The company also holds intellectual property on new methods of packaging micro-electronics and semiconductors. The Light-Sheet is credit-card thin and is suitable for use in commercial, military, marine, medical and domestic markets.

And without a strong business plan and marketing insight, Daniels' business never would've found its way out of a dark room.

Daniels knows that obtaining a patent doesn't mean his work is through and he can sit back and wait for investors to take a liking to his fine product.

As Michaud notes, "Not only do investors look at whether you have patents or not,

but then they look at whether the patents are strong from an enforcement standpoint.

The fact that you have one speaks very loudly, but it doesn't end there. You're going to do some due diligence and you're going to look and say, 'Okay, what else is around your patent? Is it very narrowly drawn? Or do I have a broader scope of coverage that might allow me to venture into other markets?'"

"There have been companies who have lost their ability to get funding once they've gotten past the first year because they don't have any intellectual property," he adds. He knows that a strong patent is a good start, but not the sole ingredient for building a successful commercial enterprise.

If the company has done an effective job of branding its product or itself, whether the product is patented or not, the brand also speaks loudly to an investor's willingness to invest in something that has recognition.

Frank Marco, a partner with the New Haven law firm Wiggin & Dana, represents both venture capital investors and emerging companies. He says the need for patent protection depends on the industry that a company is in. If it's in biotechnology, for example, a patent is absolutely essential - not just a patent, but a strong patent - one that will past muster from a due-diligence standpoint. In biotech, there needs to be a good, defendable patent, or an investor might not even be tempted to look your company's way.

At the other end of the spectrum, Marco points to the software industry, where patents are not as common and frankly, he says, not as important.

"In many businesses, what's more important is the business plan," Marco explains. "Investors typically will not back a patent. They invest in a company, which means it must have a good business plan with good management, good intellectual property and a good business foundation.

"Intellectual property does need to be protected, but that protection could come from any number of sources." Adds Marco, "sometimes from the fact that there is a good management team who took a good, running head start."

Investors look for promise of growth, downstream returns and, in the technology industry, a platform technology that provides a basis to grow the company. From this platform technology, the business can build peripheral technologies and products, all of which should be patented.

Since biotechnology companies often remain at the development stage for a long time, Marco agrees that patents are key.

"In order to be funding in biotech, an investor has to know that at the end of the day there must be something there worth funding," Marco notes. "In many other industries there is room to grow, and it is the time to market that is most critical. At this point, an investor looks at market channels, distribution arrangements and partnerships as evidence of future growth."

Marco too says, 'It depends on the market' when asked if a company needs patents in order to do be successful. He uses Higher One, a New Haven-based business that creates and sells financial-services products to institutions of higher education as a

prime example.

Mark Volchek, chairman and chief financial officer of Higher One, says he does have a number patents pending, but he does not rely on them to attract funding the way a typical bioscience company would.

"Ours is more of a niche service marketing business, and our key advantage is the contracts that we have with universities and our proprietary methods and processes," explains Volchek.

"Our patents are more business process patents. When you look at companies, like Priceline, they have a novel concept with a good way to market it so that people will buy things from them. It's different from a drug discovery, where anybody can copy your drug."

In the case of Higher One, skeptics certainly ask what is going to keep competitors from invading its market niche. Volchek's answer is not in patents, but in that he has the first product of its sort in the market.

"We are more nimble and focused than a big bank would be, and as a small company we are ahead of the curve," Volchek says. "We've done well in that even today, there is no direct competitor who is doing what we are doing. Even without patent protection, we are working our patent because it's a nice PR thing to have."

Nice, but not a necessity.

"Our customers are all universities and our patent does help to say that we are a legitimate player and the only people who are going to be able to do this for a long time," explains Volchek. He adds that none of Higher One's patents have come up for examination since they were applied for in 2001 and 2002. However, inasmuch as the average time is running in the range of five to six years, he's hoping they'll rise to the top of the in-box soon.

Debate Over Patent 'Trolls' Heats Up

The term "troll" conjures up images of an unpleasant little creature lurking under a bridge waiting to pounce on an unsuspecting passerby. In mythology, the troll was looking to collect a toll. Today's trolls are into technology and pharmaceuticals.

The term "patent troll" is about a year old, designating an entity seeking to patent an important commercial process, but not actually manufacturing the item the patent is for. These trolls accumulate portfolios of patents for non-items and then seek to pounce on unsuspecting companies that use a product or process similar to the patented one. The objective: expensive litigation.

A patent gives its holder a legal monopoly and is comparable to a real estate property right, which can keep people from trespassing on your property. A patent is a right, for a limited time, to exclude others from using your product or process.

"Aside from the mythology involved, one way to look at the troll situation is that you have 'bad patent trolls,' on the one hand, and 'bad patent thieves,' on the other," explains Dale Carlson, an attorney with the New Haven law firm of Wiggin &

Dana and adjunct professor of law at Quinnipiac University.

"The 'bad patent troll' is a patent owner who does not manufacture under the patent, but attempts to hold Tech Company X hostage via the threat of a patent suit" and likely injunction, Carlson explains. "Tech Company X decides to pay the troll rather than fight a litigation battle.

"And then you have the 'bad patent thief,' who decides that Bio Startup Y doesn't have the wherewithal to enforce its patent, and therefore it will simply infringe Y's patent with impunity," Carlson adds.

Without an injunction option, the "bad patent thief" may simply infringe on a patent, calculating that the worst that could happen to him is having to pay monetary damages. With the injunction option, the "bad patent thief" could be put out of the infringing business.

In recent years, companies on the forefront of technology and business method patents - Amazon.com, eBay, Barnes & Noble, among others - have brought attention to so-called patent trolls.

Today, a great deal of patent reform legislation being considered, but not without great debate.

"If you look at it from the 'mom-and-pop' point of view, they may not have the wherewithal to commercialize in some instances, so if they make an invention, they should have the right to tell other people it's their turf," Carlson says. "Part of the patent reform suggestions is to eliminate the right to this injunctive relief. All you would have a right to is a royalty, but not the right to shut other people down from doing it because you're not doing it yourself."

The battle over what to do to squelch the actions of these patent trolls without diminishing the rights of legitimate patent holders is biggest between the tech companies and the pharma-bioscience companies. The battle between the two industries is credited for the any failed legislation on this topic last year.

Carlson says that in April 2005, legislation supported by about 70 companies, was introduced in the U.S. Senate. By autumn some were trying to forge a compromise measure.

"It went from 70 companies to about 30 signing on, so instead of a compromise, it was a bunch walking away from the table," Carlson says. "The bio-pharma companies believe that patents are their lifeblood. For that reason, they don't want to have the patent right watered down in any fashion."