ACADEMIC Leader

Considerations for Monetizing University Patents

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Universities protect researchers' inventions by securing patents. The resulting commercialization activities provide additional funding for research and spur start-up companies. Many universities retain their patent assets in-house even though monetizing them might increase related revenue. What barriers must universities overcome to realize greater funding? What should universities consider when they decide it is time to monetize their assets?

The Bayh-Dole Act of 1980 enabled recipients of federal grants the ability to patent inventions so that ownership determinations no longer were determined on a case-by-case approval system. This change in federal policy facilitated the exploitation of government-funded research by transferring ownership to the grant-receiving university. Although patenting activity occurred prior to the Bayh-Dole Act, such activities were less systematic.

Consequently, many universities have technology transfer offices (TTOs)—about 300 TTO offices nationwide, representing a tenfold increase from before the law passed. The number of university patents has also skyrocketed, and the law's success motivated other nations including Germany, Japan, and China to enact similar changes.

Some U.S. universities have successful licensing platforms. Many do not. In 2014, 15 universities produced 70 percent of all patent licensing royalties. Big paydays from enforcement suits contribute to universities' motivation to seek patent protection; most schools do not see significant payouts. Multimillion-dollar successes are rare at even well-funded research institutions.

For example, of Stanford University's 10,000 invention disclosures since 1970, the university obtained about 5,000 patents. Of those, about 2,500 were licensed. Of the licensed patents, 77 generated revenue of more than one-million dollars and only three generated more than one-hundred-million dollars. Thus, a small fraction of Stanford's invention disclosures (less than 0.8 percent) generates million-dollar revenue.

Most university TTOs lose money. About 89 percent of schools break even or lose money after distribution of royalties to inventors. Only 11 percent are profitable. Of the 89 percent, more than half operate at a loss after deductions for employee salaries and operating expenses. It is evident that some TTOs solely facilitate the school's recruitment of research professors who expect that their research will be the subject of patent filings. The policy objectives undergirding federal research grants are not solely patent royalties.

Many question whether competitiveness and acute focus on revenue potential results in TTO cultures where profit supersedes academic and scientific objectives. Critics of the Bayh-Dole Act assert that instead of freely trading information for purely scientific goals, the law's effect distorts researchers' motivations. Even if individual researchers retain academic motivations, some TTOs eagerly control the research and resulting patents with profit expectations.

Universities' experience with patents is similar to private industry. University managers and leaders should, however, consider alternate monetization strategies and objectives when assessing the overall success of TTO activities. Here are some things to consider:

Set goals

Most patent owners recover money from research and development activities, gain marketplace advantages by blocking competitors, foster a cutting-edge reputation, or simply generate revenue. University leaders should identify their goals and adjust them periodically with ongoing academic research and markets. Those goals should include student academic experience and job placement, as well as industry collaboration and community relationships.

Select patents to monetize

Most universities have portfolios of patents, and some patents are worth something—others are not. Assessing a patent's value is challenging. Patent valuation involves counsel from lawyers and technical expertise including marketplace research into similar technology transactions. Patents that have limited value may be ripe for abandonment avoiding ongoing maintenance and administrative costs.

Owners should identify whether others infringe their patents. An infringed patent has greater value. Owners should also evaluate the strength (and vulnerability) of patent claims. This includes reviewing court decisions of similar patents including claims held invalid as too broad or obvious.

Many patentees try to monetize patents that cover non-essential technology. Universities can do something similar if they identify applications outside the traditional industry to which a technology applies.

Select a monetizing strategy

A variety of monetizing strategies are available, and universities should identify the best option to meet their goals.

Direct licensing, the most commonly recognized approach, provides a license for a royalty fee. That fee can be a one-time amount or facilitate an ongoing, royalty stream. The university, however, retains patent ownership, must manage the patent's maintenance, and be involved in any enforcement action.

Less common is an indirect license where the university sells the patent to a licensing company. The licensing company subsequently licenses the patent to commercialization companies. Typically, the university receives an up-front cash payment from the licensing entity and royalties when it subsequently licenses the patent. This might be a viable option for patents where ongoing interest falters.

A third approach involves an outright sale of the patent to another without subsequent royalty. This maximizes the university's up-front cash and reduces the overall administrative costs to maintain the patent but forgoes subsequent potential royalty payments from products whose value accelerates over time. This too might be a viable option for patents were licensing interest is low and resources are limited.

A fourth approach involves litigation. If the university cannot license the patent or does not want to share its technology with an entity practicing the claimed technology, it can bring an infringement lawsuit. This approach involves upfront legal expenses that most universities are unwilling or unable to bear. In some circumstances, lawyers accept payment on contingent basis, but this too limits the amount of money the university obtains if successful.

Another option is to commercialize the technology itself. This option requires the most effort, and many universities are not equipped or structured for such activities. In some instances, a department or research group may be able to operate small-scale, commercial activities perhaps in partnership with companies that give their students real-world experience.

Choose the right targets

In any transaction, the university must decide with which entity to conduct business. In licensing transactions with ongoing duties, licensees with integrity and sound reputations should be sought to reduce complications when there are subsequent business disputes. Universities can also use licensing relationships to cultivate collaborations including expanded research activities as well as job placement for students and alumni.

If a company generates large revenues by infringing a patent, it may be the most likely to settle a dispute. Companies having large patent portfolios may resist court proceedings and consume more of a university's limited resources. Alternatively, companies generating modest revenues may be willing to quickly settle and enter into a licensing agreement. Such a settlement might not result in a big payoff but could quickly generate small, even ongoing cash flow.

In any case, companies that rely on the patented technology must buy or license rights or abandon an infringing product. If the technology is unessential to the product, the infringer may simply redesign their product.

While the threat or institution of a lawsuit brings an infringing company to the negotiating table, most successful monetization activities start with business interests that promote mutuality.

Most monetizing efforts are undertaken when invention rights are first sought to facilitate earlier market entry. The more difficult efforts involve granted patents for which no transaction occurs during procurement. TTOs and university leaders can and should consider less monetary driven outcomes including student academic experience and job placement, community relationship building, and business collaboration opportunities as successful outcomes with monetization strategy, particularly for patents that are not licensed early.

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