



Practice Statement:

Procedures for Developing and Securing University Intellectual Property

I. Purpose of this Practice Statement

Tech Transfer Arizona (TTA) is a unit of Tech Launch Arizona dedicated to the protection, marketing, management and licensing of intellectual property (IP) owned by the Arizona Board of Regents (ABOR) on behalf of the University of Arizona (UA). TTA is staffed by licensing managers experienced in IP protection, license negotiations and business development, and is focused on moving intellectual property developed at the University to the public. This Practice Statement focuses on and outlines the initial procedures related to patent protection of IP by Tech Transfer Arizona.

II. Definitions

Intellectual property (IP) – this encompasses the broad category of creations of the mind for which rights, such as ownership and disposition, are recognized by law. For the purposes of this document, IP primarily refers to patents.

US Patent & Trademark Office (USPTO) – the government entity that reviews and then denies or grants patent protection.

Provisional Patent Application (PPA) – a patent application that is not reviewed by the USPTO unless a utility patent application is challenged at some later date. PPAs provide a single year of protection (expiring after one year) and must be converted to a utility application prior to expiration or the invention risks losing patentability.

Utility Patent Application (Utility) – the full patent application that the USPTO reviews to determine patentability of an invention. Utility patent applications have to pass several “tests” to

be deemed patentable, including: novelty (it must be new, not published or used anywhere); non-obviousness (it cannot be obvious from any available publications [articles, books, other patents] to a “person skilled in the art”, meaning another expert in the same area of study); usefulness (it must provide a valuable use); and of patentable subject matter (something the patent laws are designed to protect).

Conversion – the process of filing a full utility patent application after having filed a provisional patent application. The utility filing must be based on the contents of the provisional filing.

Patent Cooperation Treaty (PCT) – the initial utility patent filing, filed at the time of conversion, to gain patent protection outside the US. Within 18 months of the PCT filing, the patent owner must begin the process of filing individual country applications.

Prior Art – any available materials disclosed in a patent application or that a patent examiner may review/find pertaining to the utility patent application.

Enablement – the description of how to make and how to use the invention.

Invention – a unique or novel device, method, composition or process. It may be an improvement upon a machine or product, or a new process for creating an object or a result.

Invention Disclosure – the reporting of an invention or perceived invention by a faculty or staff member to TTA. Invention Disclosures cover patentable inventions as well as copyright protected items (e.g. software).

III. Nature of the Problem

Intellectual property is transferred through license agreements in which the University grants (some or all of) its rights in the IP to a commercial entity or end-user. These license agreements, which cover a period of time, field-of-use and region of the world, include terms that require the licensee to, among other things, meet certain performance requirements and make financial payments to the University. In order to accomplish this, IP, including patent applications, copyrights, trademarks and tangible materials, must be properly secured and maintained. This process, in particular pertaining to patents, is both complex and expensive, transitioning through multiple steps and phases, usually over multiple years. While not all IP requires patent protection, TTA is striving to make this process more transparent to the UA community, improve the value of patents held by UA, and increase the effectiveness of TTA.

IV. The Previous Approach

Provisional patent applications (PPA) are filed prior to public disclosure of the invention to provide a single year of protection while investigating the market for the invention. PPAs are used to establish priority date, a declaration that an invention exists as of the date of the PPA. If a patent is challenged at a later time, the PPA may be reviewed to ensure that the claims of the Utility application were adequately described at the time the PPA was filed.

Universities typically file PPAs to mitigate the expense of filing a utility to provide time needed for market and product investigation, primarily when enabling features of the invention may be published/released to the public (papers, presentations, discussions with potential partners, etc.)

Until recently, the UA's approach to patent protection upon receipt of an invention disclosure was to file "cover-sheet provisional" applications, usually consisting of nothing more than a cover sheet application form and a soon-to-be-published article or paper. These cover-sheet PPAs, while inexpensive to file, provided very little actual protection, and could in some cases actually impair Utility (or full) patent prosecution. Often, the inventions were not even fully enabled at the

time of filing the cover sheet PPA, and therefore the PPA was not fully enabled and would not even provide the priority date desired by filing a PPA. In addition, due to lack of resources, only a small percentage (less than 15 percent) of these PPAs were converted to a Utility. Usually, the technology transfer office only supported PPAs that were licensed by the time of conversion. Often, when the PPA was expiring and no obvious licensee had been found, the office either licensed the invention to a company started by the faculty inventor or in a few cases re-assigned the invention from the University to the inventor. In both cases the onus of responsibility was on the inventor, not the University.

This resulted in considerable inventor dissatisfaction with the tech transfer office. Inventors felt disconnected and disenfranchised from the entire process, often not understanding why inventions were "let go" or simply returned to them with minimal further help from the office. Many companies were simply started too early in the development of the technology.

V. Standard University Practices

Most university tech transfer offices handle this process differently and UA is pursuing an approach consistent with best practices. At best practice universities, the tech transfer office generally works closely with the inventors to ensure that the disclosure to the office is fully enabled prior to any other work being performed. Then, unless a specific public disclosure date is imminent (such as a public presentation), a thorough review of the existing prior art and potential markets is conducted. If sufficient reason exists to believe that a good patent may issue, and there is a market need to justify the expense of the patent, then a PPA will be filed. This PPA is better than a "cover-sheet" PPA, in that some initial work by an outside attorney will be performed, in most cases including initial patent claims.

During the period of the PPA, the office works diligently with the inventor(s) to clarify the market position of the invention, potentially perform proof-of-concept experiments or construct a prototype, and find a commercial partner to take the invention to market. Simply put, the best practice tech transfer offices partner with inventors to help mature inventions and give those

that have favorable characteristics a much better chance for adoption by a company. This typically takes more than one year, and the tech transfer office must make a judgment call related to further investment in the invention, whether or not a significant market actually does exist or a company adoptee has been identified. At best practice universities a high percentage of PPAs are converted to utility patent applications. The exceptions are found when during the course of the PPA, it is discovered that the initially perceived market simply does not exist, inventors have moved on to different areas of research, or the value added by the invention is not significant enough for a company to license the IP. At the time of conversion from a provisional to utility application, the issue of international protection for the invention comes to bear. In some cases when a public disclosure was made prior to the PPA filing, no foreign patent rights can be pursued. Otherwise, when considerable value could be realized by filing in countries other than the US, a PCT is likely to be filed. Lacking any commercial partner to then file country-specific applications (also known as, national stage filings, which must be pursued within 18 months of the PCT filing), all but the highest perceived PCTs are abandoned by universities due to their exorbitant cost (potentially \$100's of thousands of dollars).

VI. The Tech Launch Arizona Best Practice

It is vital that the University of Arizona, as a premier research university, strive to not only meet the standard practices of most universities, but diligently work to exceed inventor expectations. When patents are being pursued, it is the goal of TTA to clearly articulate to inventors exactly what the process is and where in the process their invention currently resides. After disclosure to TTA, a Licensing Manager assigned to the case will work closely with the inventor(s) to pursue IP protection and commercialize the invention. The new UA practice functions as follows:

- A TTA officer will work with the researchers to distinguish inventions from scientific discoveries and understand and vet ideas versus enabled inventions much earlier in the research process;

- Primary faculty inventors or their high level designees will be engaged in the protection process;
- If a patent is pursued, key factors will be carefully explained and reviewed such that the following standards are met: inventorship (who the inventors are), a clearly written description of the invention including the manner and process of making and using it, novelty, non-obviousness, enforceability, and the nature of market application;
- If the invention disclosure meets these standards, TTA will work closely with the inventor(s) and an appropriate outside attorney to prepare the PPA. The PPA will not be a simple “cover-sheet” PPA, but instead will contain additional work, a full enablement of the invention and often a limited set of claims related to the invention that are supported by the PPA;
- Patents will not be pursued for all IP related projects. Many projects, for instance software or curriculum, are more appropriately handled through copyright and/or trademark licensing. The TTA officer will discuss the alternatives with the inventor(s)/creator(s);
- TTA, working closely with the inventor(s), will pursue customer discovery and will aggressively market the technology to potential licensees, coordinating conference calls and other discussions between such licensees and UA inventors;
- In select high potential cases, TTA will work with the inventors to financially support “proof-of-concept” (POC) or similar prototype development;
- For cases suitable for start-up companies, TLA will work to introduce the inventor to domain expert advisors and others who will help devise commercialization strategies and help launch new companies that will license the invention;
- If during the year of PPA protection it is determined that the market does not exist for the invention or some other reason comes to light upon mutual agreement with the inventor, the PPA will be abandoned (or if

desired and allowed by the research sponsor, reassigned to the inventor);

- In most cases, while the invention “matures” TTA will convert the PPA to a utility application while continuing to market the IP. The attorneys will work closely with inventor(s) to draft a valuable, defensible and enforceable patent.
- Also, if international protection is required/desired, a PCT may be filed. This adds additional cost and will be decided case-by-case. If no licensee is interested within approximately 18 months of the filing date of the PCT, the PCT will be abandoned.

It is important to note that a fraction of these projects, usually between 10% and 20%, will be focused on creation of a start-up company based on this IP. Rather than marketing the IP to external companies, TTA, along with other resources within

TLA, will work with the inventor(s) and others from the business community to create such a company. This is a complex process. However, these startups will be well prepared to commercialize the IP, including adequate business management and a business plan, before able to license from the University.

Due to TTA’s increased commitment to this process, reassignment to the inventor is expected to be a rare occurrence. There will be very few occasions where TTA finds that the value of the invention, either in the market for the invention or the added value the invention provides to the market, is so low as to warrant abandoning the IP, but is unable to explain to the satisfaction of the inventor(s) that this is the case. The University doesn’t file with the sole intent of using IP for the purpose of blocking another party’s innovation, a practice not in keeping with University’s public mission.

Do you have questions about this IP Practice Statement or other issues around technology transfer?

Contact Tech Transfer Arizona.

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