Proposed Statutory Technology Protection

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**(The latest version of this proposal, as well as the paper that discusses it, can be found at http://digital-law-online.info/papers/lah/tech-protect.htm
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Introduction

This represents the current thinking for the proposed statutory protection for fast-moving technology that supplements current utility patent protection. It includes a commentary for each section that indicates what the selected language tries to accomplish. It is expected that it will be enacted as part of Title 35 of the United States Code, which covers patents, but as a chapter independent of other parts of that title unless indicated.

401. Protection of technology.

Any person who traffics in a technology in commerce which may be regulated by Congress, aware that the technology is protected under this chapter, shall be liable as provided in this chapter.

This provision creates a new cause of action against a person who traffics in another's technology through the distribution of a product embodying a protected technology or using a protected process to provide products or services in commerce. (See section 403.) It does not create a new property right, such as a patent does, but instead protects an existing technology. In this respect, it is more like trademark or copyright laws (especially copyright before the Copyright Act of 1976), where registering one's intellectual property with the federal government created a federal cause of action for the infringement of that intellectual property.

The chapter is enacted under the Commerce Clause of the Constitution, and it is intended to reach any and all avenues of commerce that may be regulated by Congress under that clause.

402. Technologies protected.

(a) Any process, machine, manufacture, or composition of matter may be protected under this chapter, if it is original and is not an insubstantial advance over the prior art

The types technologies which may be protected are the same as for a utility patent. Unlike the similar provision for patents in 35 U.S.C. 101,

there is no explicit requirement that the technology being protected be "new and useful."

In order to receive protection under this chapter, Section 414 requires that the technology must have been embodied in a product or used in a process in commerce in the United States, making the question of whether the technology is "useful" unnecessary.

To be protected under this chapter, the technology must pass two distinct tests. First, it must be "original" to the person seeking protection. This term is intended to have the same meaning as in copyright law – a low threshold essentially meaning it is not copied from another.

Second, the technology must represent more than an "insubstantial advance over the prior art." This means that it is not only "new" or "novel," as in 35 U.S.C. 102, but also has to represent some advance over the collective prior art. But it does not have to meet the nonobviousness requirement for a utility patent in 35 U.S.C. 103.

So, for example, a mere combination to two existing technologies would not be protectable under this chapter if it simply performed the functions of those technologies without doing more. But if the combination results in something that had not been done before, but is not surprising to somebody skilled in the art of the technology, it would be protectable.

As another example, a part for an automobile, such as a fender, would not represent an advance over the prior art if it differed only in its particular shape and that shape did not impart any new functionality beyond fitting a particular automobile.

(b) As used in this chapter, the term "process" includes steps that can be executed by a digital computer or similar device as well as methods for conducting a business.

This provision makes it clear that processes that may utilize a digital computer, as well as methods of doing business, are protectable if they meet the requirements of this chapter. Such technologies are regularly granted utility patents today, although some question whether this is proper. Limiting this provision to "this chapter" makes it clear that these technologies will be protectable under this chapter, while not affecting their patentability under the current patent statutes.

(c) In determining whether a machine or manufacture is an insubstantial advance over the prior art, any information stored in the machine or manufacture shall be disregarded unless that information has a unique and unobvious relationship to that machine or manufacture.

For computer-based inventions, it has become common to claim the invention not only as a process or machine, but also as an "article of manufacture" consisting of a conventional medium (such as a floppy disk or compact disc) which stores a computer program that implements the method of the invention. Some have even suggested claiming a signal that carries such a computer program as an article of manufacture, since it is clearly man-made.

This is lead to great difficulty in establishing a line between patentable articles of manufacture that contain computer programs and unpatentable articles of manufacture that contain music or literature. In some cases, the same type of media, or even the same compact disc, can store both.

This provision resolves the problem saying that determining eligibility for protection under this chapter, the information stored in the medium is disregarded unless it has some special relationship with the medium.

The “article of manufacture” claim came about as an attempt to hold as a direct infringer a person who makes and sells a computer program stored on a medium. If the computer-based technique were only claimed as a process or machine, only the actual user of the computer program or the person who loads it onto a machine (often again the actual user) would be a direct infringer, and the person actually making or selling the computer program would, at best, be a contributory infringer or inducing infringement.

Because section 403(d) explicitly addresses this problem, there is no need to continue the “article of manufacture” problem in this chapter.

403. Trafficking in a technology.

(a) A person traffics in a technology when that person distributes any product that is derived from the technology, or uses a process derived from the technology to provide products or services to others.

To be liable, the person must first derive his product or process from a technology protected under this chapter. This means that the person must be aware of the technology, either by seeing it in a product or reading about it in a document, such as the registration application, that describes the technology sufficiently so that it can be implemented without undue experimentation.

It is intended that using a process to provide products or services to others in the United States means either using the process in the United States, wherever the products or services are provided, or using the process anywhere in the world with the products or services available in the United States.

The person must then either distribute or import a product that embodies the protected technology, or use the technology in the making of a product or the providing of a service to another party.

The personal use of a protected technology does not result in any liability under this chapter. That includes the use within a business or corporation. This differs from a utility patent, which is infringed whether the use is personal or not. That is because the purpose of this chapter is to prevent unfair competition in products or services by free-riding on another’s technology. Persons who use a protected technology solely for their own benefit need not worry about liability under this chapter.

For example, if a company uses a protected method for controlling inventories only within their business, they would not be using the technology “in commerce” as defined here. But if they used that method as part of an Internet-based inventory management system used by customers of the company, they would be liable.

There is no liability for a person using a protected technology for their personal use. A home hobbyist will have no liability under this chapter for his or her own use. In another example, if the protected technology were a method for producing a manufacture, a company would not be liable if

they used the manufacture they produce within their own company, but would be if they provided it to others outside the company.

(b) A person traffics in a technology when that person actively induces another to make, use, or distribute the technology, knowing that the technology is protected under this chapter.

Liability for inducement is common to all forms of intellectual property, and this provision makes that explicit.

A person may be an inducer if he is aware that a technology is protected and actively induces another to make or use the technology, even if that making or using is personal to that other person and would not, in itself, be trafficking in the technology.

(c) A person traffics in a technology when that person distributes a component especially made or especially adapted as a component of the technology, knowing that the technology is protected under this chapter.

This provision is similar to that for patents in 35 U.S.C. 271(c), but does not contain the "staple article or commodity of commerce suitable for substantial noninfringing use" exception. If the component is especially made or adapted to be a component of the technology, it would not be a staple article in commerce.

(d) If the technology is a process or method, a person traffics in the technology in commerce when that person distributes a computer program especially made or especially adapted to perform that process or method, knowing that the technology is protected under this chapter.

This section is the counterpart to 402(c), making a person that distributes a computer program that performs a protected method directly liable. This makes the "article of manufacture" claims for computer programs unnecessary, and eliminates the problem discussed above.

(e) The term "distributes" includes making an offer to distribute, distribution after importation into the United States, and exportation to a foreign country from the United States.

This expands the definition of "distributes" to make the language in this chapter less cumbersome. It includes the offer to distribute in the definition, much like the definition for patent infringement in 35 U.S.C. 271(a) includes "offers to sell."

By including "exportation to a foreign country," it is not the intent to add extraterritoriality to this chapter. The act of exportation to a foreign country occurs within the United States, the corresponding act in that foreign country being importation from the United States which is not covered here. In particular, it is not the intent of this chapter to forbid the use or distribution that occurs wholly in a foreign country unless there is active inducement that occurs within the United States.

404. Derivation.

(a) A person has derived a product from a technology, or uses a process derived from a technology, whenever –

(1) that person is aware of the technology; and

(2) every element of the technology is performed in substantially the same way to obtain substantially the same result in the product or process.

Derivation is key to this protection. Unlike a utility patent, where it is an infringement whether a person is aware of the patent or not (but damages may be limited if the person is unaware of the patent), the product or process must have been influenced in its development by the protected technology.

This provision combines the patent concepts of "literal infringement" and "infringement under the doctrine of equivalents" by saying that derivation includes not only exact use of the protected technology, but changes that still result in substantial use of the protected technology by using the framework first stated in *Graham v. John Deere*, 383 U.S. 1 (1966).

(b) A product or process is not derived from a technology when that portion of the product or process similar to the technology has been substantially completed before a person is aware of the technology. Such substantial completion must be shown by the party asserting this defense by clear and convincing evidence.

One of the problems with a utility patent is that it can stop a person who has substantially completed a product without any knowledge of the work of the patentee, thereby losing any investment in that development. This problem was recognized in 35 U.S.C. 273 for methods of doing business that may not have been patented because of the uncertainty of their patentability.

Showing substantial completion requires clear and convincing evidence, in the form of prototypes, computer program listings, test results, and the like.

405. Reverse engineering.

(a) As used in the chapter, the term "reverse engineering" means the discovery by engineering techniques of the underlying ideas and principles that govern how a machine, computer program or other technological device works.

This definition is taken from the position statement on reverse engineering of IEEE-USA, one of the largest professional engineering societies in the United States, with particular expertise in computer and electronic technologies.

See http://www.ieeeusa.org/policy/positions/reverse.html.

(b) It is not trafficking in a technology for a person to reverse engineer a protected technology solely for the purpose of analyzing or evaluating the concepts or techniques embodied in the technology, and to provide information so obtained to another.

Since reverse engineering it used to learn the underlying ideas and principles of a product, and not to produce a product or provide a service *per se*, it is permitted under this chapter, and this provision makes that clear.

But it is important to note that providing information gained through reverse engineering to another may give rise to liability for inducement if

there is also active encouragement to make or use the protected technology.

(c) No term that attempts to limit the reverse engineering of a product in a contract, license, or other agreement that has not been freely negotiated shall be enforceable in the United States.

It has become common for shrink-wrap and other similar contracts to contain a provision that purports to forbid otherwise-lawful reverse engineering. Congress structured the intellectual property laws to be a balance between the rights of the intellectual property owners and users. Reverse engineering is permissible under the above subsection, under 17 U.S.C. 906 for mask works, and as a "fair use" of computer programs in accordance with *Sega Enterprises vs. Accolade*, 977 F.2d 1510 (9th Cir. 1992), *Atari vs. Nintendo*, 975 F.2d 832 (Fed Cir. 1992), and other court decisions. The use of one-sided contracts, such as shrink-wrap or click-on licenses, that allows the owner of a technology to reap all the benefits of Congressionally-provided protections without allowing the balance that Congress intended.

It is not the intent of this provision to affect legitimate trade secret agreements or to provide a defense for the infringement of any patent or copyright.

411. Ownership of a technology.

(a) Except as provided in paragraph (b), the owner of a technology is the natural person or persons who created the technology.
(b) If a technology is created by an employee within the scope of his employment, and is related to that employment or the current or anticipated business of the employer, the employer shall be the owner of the technology.
(c) Ownership of a technology may be transferred by any means of conveyance signed by the owner of the technology being conveyed, or by operation of law.

The provision follows the "work made for hire" doctrine of copyright law, so that an employer does not need have employees sign a new technology ownership agreement to accommodate this new protection.

412. Registration of a technology.

(a) To be protected under this chapter, a technology must be registered with the Patent and Trademark Office before it is first supplied or offered to another in the United States.
(b) The Director shall prescribe by regulation the form of the application for registration of a technology, which shall include an application that complies with section 112 of this title and an oath that –

(1) the technology is original,

(2) to the best of the applicant's knowledge, the technology has not been distributed in the United States,

(3) the applicant is the owner of the technology under section 411 of this title, and

(4) all information on the application is accurate.

(c) The application must be accompanied by the fee required by law. The fee and oath may be submitted after the application is submitted, within such period and under such conditions, including the payment of a surcharge, as may be prescribed by the Director.
(d) The Director shall make all registration information available to the public.

Application for registration is in the same form as application for a utility patent, with a specification containing a written description of how to make and use the technology, followed by one or more claims that indicate the scope of the technology.

Publication of the application occurs when registration is made, in contrast to utility patents, where publication of an application occurs 18 months after filing, except where earlier publication is requested by an applicant or special rules provide that the application not be published.

413. Marking.

(a) The Director shall prescribe by registration the form of marking the registration number on a product utilizing a protected technology.

Marking is an important part of this protection, to provide notice to those exposed to the protected technology. The means of marking will necessarily depend on the nature of the product or service, but it should be such that a person can determine what aspects of a product or service is protected.

Since a product or process may embody a number of protected technologies, the permissible marking should allow reference to a web page that contains all the pertinent registration numbers.

(b) If a product or service to which a person has access is marked in accordance with subsection (a) of this section, there is a rebuttable presumption that that person is aware that the technology embodied in that product or service is protected under this chapter.

One of the effects of proper marking is to create the presumption that a person who uses the product or service is aware of the protection. That presumption shifts the burden of going forward with evidence to the defendant, who must demonstrate reasons why he would be unaware that the technology is protected.

414. Term of protection.

(a) A technology registered as prescribed in section 412 of this chapter is protected under this chapter for a period not to exceed four years, commencing at the time a product utilizing the technology and marked as prescribed in section 413 is first distributed in the United States or a process marked as prescribed in section 413 is first used to provide products or services to others in the United States.

To be protected under this chapter, a technology has to actually be used in a product or process in the United States. This differs from utility patents, where there is no requirement that an invention actually exist as long as it can be fully described in the patent application.

(b) Not later than 30 days after protection comes into being under paragraph (a) of this section, the owner of the technology shall notify the Director in a manner prescribed by regulation. If such notification is not made, protection under this chapter shall cease.

This requires that information about when the protection begins (and from that, the maximum of four years of protection ends) so that that information can be added to the registration information.

(c) If a product or process is first used without the required marking, it is not eligible for protection under this chapter.

This makes it clear that protection will not be given under this chapter for products and processes that have not complied with the requirements of registration and marking. Such products or processes may be protected under patent law.

(d) Protection under this chapter shall cease if products utilizing the technology are no longer distributed in the United States by the registrant of the technology.

Since it is the intend to this chapter to provide protection against others free-riding on commercial technology, there is little justification for continuing the protection when the owner of the technology abandons it by no longer producing products based on the technology.

415. Administration by the Commissioner for Patents.

The provisions of this chapter shall be administered by the Commissioner for Patents and shall be reviewed by the Patent Public Advisory Committee.

The American Inventors Protection Act of 1999, Pub.L. 106-113, established two operating components in the United States Patent and Trademark Office. This provision makes it clear that the registration and other activities under this chapter are to be handled by the patent operation.

421. Interpretation of claims.

(a) In interpreting a claim included as part of the application for registration under section 412, the scope of the claim shall be limited to embodiments that actually exist in a product marked as prescribed in section 413 and their equivalents.

This provision limits speculative claiming by requiring that a claim will be interpreted in light of the products or processes actually making use of the protected technology. For example, if the only products using a protected technology used Ethernets, a claim element of “a network” would include only Ethernets, and a claim element of “a token ring” would result in a null claim because no product used a token ring.

(b) In interpreting a functional claim element as permitted under 35 U.S.C. 112, sixth paragraph, the scope of that element shall be limited to structures, materials, or acts that actually exist in a product marked as prescribed in section 413 and their equivalents.

Since the purpose of this chapter is to provide protection for technologies that are in actual products, rather than simply described in the application for registration, it is necessary to have an additional limitation to the scope of a functional claim beyond what is described in the specification of the registration application.

422. Presumption of validity.

There shall be no presumption of validity based on any registration under section 412. However, asserting that a technology does not meet the requirements for protection

under this chapter shall be proven by the preponderance of the evidence by the party making such an assertion.

Unlike patents, there is no presumption of validity based on the registration of a technology because there has been no examination on the part of the USPTO beyond a determination that the application meets the requirements as to form. In addition, there is no need for a heightened evidentiary standard since there is no administrative decision that commands deference by the courts.

423. Misuse.

If an owner of a protected technology misuses the protection of this chapter to restrain competition in the distribution or use of an item which was not within the scope of the technology's protection, protection of the technology shall be unenforceable until such misuse has been cured.

This provision makes it clear that the doctrines of patent misuse (see *Morton Salt v. Suppiger,* 314 U.S. 488 (1942)) and copyright misuse (see *Lasercomb America v. Reynolds*, 911 F.2d 970 (4th Cir. 1990)) apply to this new protection.

431. Damages

(a) Upon finding for the claimant the court shall award the claimant damages of three times a reasonable royalty for the use made of the protected technology, together with interest and costs as fixed by the court. The court may reduce those damages only in exceptional circumstances and in the interest of justice. The court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances.

Any violation of the protection of this chapter will be willful, since section 401 requires that the person trafficking in the technology be "aware that it is protected under this chapter." The patent and copyright statutes both provide for multipliers in such circumstances. See 17 U.S.C. 504(c)(2) and (d) and 35 U.S.C. 284, second paragraph.

Without such a multiplier, a person could commandeer a protected technology and only be faced with paying the normal royalty if found to violate this chapter.

(b) If infringement of a copyright or patent by the same activity is also found, no additional damages beyond those for that infringement shall be assessed.

This makes it clear that a plaintiff cannot "double dip" damages for the same activity.

432. Injunctions.

Injunctions may be granted in accordance with the principles of equity to prevent the violation of any right secured under this chapter, on such terms as the court deems reasonable.

This provision mirrors the provision for patents in 35 U.S.C. 283, and should be interpreted in light of the opinion of the Supreme Court of the

United States in *eBay v. MercExchange*, 547 U.S. ___, 126 S.Ct 1837, 78 USPQ2d 1577 (2006).

433. Costs and attorney fees.

In any civil action under this chapter, the court in its discretion may allow the recovery of full costs by or against any party other than the United States or an officer thereof. Except as otherwise provided by this title, the court may also award a reasonable attorney's fee to the prevailing party as part of the costs.

This provision mirrors the provision for copyright in 17 U.S.C. 505.

434. Criminal provisions.

(a) Any person who wantonly traffics in a technology protected under this chapter –

(1) shall be fined not more than $500,000 or imprisoned for not more than 5 years, or both, for the first offense; and

(2) shall be fined not more than $1,000,000 or imprisoned for not more than 10 years, or both, for any subsequent offenses.

As with other forms of intellectual property, such as copyright, where civil damages may not be sufficient to deter violations, a criminal provision is included. This is particularly necessary when trafficking in software is considered, since the damages that may result can far exceed the assets of the violator, who may be using a free or inexpensive site to host his activities.

Because the *mens rea* for criminal copyright infringement, willfulness, will likely be present in any violation of this chapter, since any violator must aware that a technology is protected, "wantonness" is required for criminal liability. While that term is intended to track numerous cases in criminal law and not have a special meaning here, it generally is regarded as unreasonably or maliciously risking harm while being utterly indifferent to the consequences.

There should be little for people to fear from this criminal provision if their conduct is reasonable. First, if a technology is only used personally, there is no trafficking under this chapter. Second, "wanton" prescribes a high requirement for prosecution. And third, it is unlikely that a prosecutor will bring a criminal action for other than the most outrageous conduct.

The penalties mentioned are similar to other intellectual property criminal violations (see, for example, 17 U.S.C. 1204 and 18 U.S.C. 2319), and under appropriate sentencing guidelines will only be imposed when extreme damage has resulted from the violation.

(b) Any person who, with fraudulent intent, places on any article a notice of registration or words of the same purport that such person knows to be false, or who, with fraudulent intent, publicly distributes or imports for public distribution any article bearing such notice or words that such person knows to be false, shall be fined not more than $2,500.

This provision mirrors the provision for copyright in 17 U.S.C. 506(c).

(c) Any person who, with fraudulent intent, removes or alters any notice of registration shall be fined not more than $2,500.

This provision mirrors the provision for copyright in 17 U.S.C. 506(d).

(d) Any person who knowingly makes a false representation of a material fact in the application for registration provided for by section 412, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

This provision mirrors the provision for copyright in 17 U.S.C. 506(e).

435. Limitations on actions.

(a) Except as expressly provided otherwise in this title, no criminal proceeding shall be maintained under the provisions of this title unless it is commenced within 5 years after the cause of action arose.
(b) No civil action shall be maintained under the provisions of this title unless it is commenced within three years after the claim accrued.

This provision mirrors the provision for copyright in 17 U.S.C. 507.

436. Notification of filing and determination of actions

(a) Within one month after the filing of any action under this title, the clerks of the courts of the United States shall send written notification to the Director setting forth, as far as is shown by the papers filed in the court, the names and addresses of the parties and registration number of each protected technology involved in the action. If any other protected technology is later included in the action by amendment, answer, or other pleading, the clerk shall also send a notification concerning it to the Director within one month after the pleading is filed.
(b) Within one month after any final order or judgment is issued in the case, the clerk of the court shall notify the Director of it, sending with the notification a copy of the order or judgment together with the written opinion, if any, of the court.
(c) Upon receiving the notifications specified in this section, the Director shall make them a part of the public registration information for each technology.

This provision is based on 17 U.S.C. 508.

437. Liability of States, instrumentalities of States, and State officials for infringement of copyright

(a) Any State, any instrumentality of a State, and any officer or employee of a State or instrumentality of a State acting in his or her official capacity, shall not be immune, under the Eleventh Amendment of the Constitution of the United States or under any other doctrine of sovereign immunity, from suit in Federal court by any person, including any governmental or nongovernmental entity, for an violation of this chapter.
(b) In a suit described in subsection (a) for a violation described in that subsection, remedies (including remedies both at law and in equity) are available for the violation to the same extent as such remedies are available for such a violation in a suit against any public or private entity other than a State, instrumentality of a State, or officer or employee of a State acting in his or her official capacity.

This provision mirrors the provision for copyright in 17 U.S.C. 511.

Other sections in the United States Code to be amended

35 U.S.C. 119. Benefit of Earlier Filing Date; Right of Priority.

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(h) An application for patent under section 111(a) or section 363 of this title filed by the owner of a registration under this chapter for an invention, shall have the same effect, as to such invention, as though filed on the date of the application for registration filed under section 412 of this chapter, if the application for patent filed under section 111(a) or section 363 of this title at any time during the term of protection under section 414 and if it contains a specific reference to the registration under section 412. The Director shall reference the application for patent in the registration information. Any amended or new claim determined to be patentable shall have the same effect as that specified in section 252 of this title for reissued patents on the right of any person who has made, purchased, or used within the United States, or imported into the United States, anything patented by such amendment or new claim, or who has made substantial preparation for the same, prior to the granting of the patent.

A registration of a technology acts much as a provisional patent application by providing a priority date. Protection under this chapter provides up to a four-year period for the owner of the technology to determine whether it will be worthwhile seeking a utility patent, particularly if the patent fees are substantially increased to support better examination.

Because the registration information is published like a patent application, between the end of protection under this chapter and the granting of a patent, the applicant would be entitled to provision rights under 35 U.S.C. 154(d).

But to prevent "submarine patents," a safe harbor is provided if the claims are expanded beyond those filed for registration of the technology. That provision is based on the one for claim expansion during reexamination in 35 U.S.C. 307(b) and 316(b).

35 U.S.C. 273.

This section, which provides prior user rights currently applies only to methods of doing or conducting business. Under the current patent reform proposals in the House and Senate, it would be amended to provide a prior user defense for any patent. It may need to be further revised to better coordinate with this legislation.

Other provisions that need to be amended in light of this chapter include:

- **35 U.S.C. 41 (Fees)**
- **28 U.S.C. 1498 (Jurisdiction of the Court of Federal Claims)**
- **28 U.S.C. 1295 (Jurisdiction of the Court of Appeals for the Federal Circuit)**

At the same time, the patent statutes should be revised to grant a patent "if," not "unless" (see 35 U.S.C. 102) and to substantially raise the fees so that a more complete examination can be performed.