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BASIC PRINCIPLES OF PATENTS

A. PATENTS

A patent is a grant from the government giving its owner the right to exclude others from making, using or selling the claimed invention. There are three types of patents in the United States:

- A utility patent, with a life of 20 years from filing, for any new and useful process, machine, article of manufacture or composition of matter.
- A design patent, with a term of 14 years from issuance, for any new, original, and ornamental design for a manufactured article, such as the design of a table lamp.
- A plant patent, having a life of 20 years from filing, for any new, distinct variety of an asexually reproduced plant.

1) Utility Patents

An invention to be patentable must not only be useful and novel but also unobvious. Novelty can be destroyed by several so-called statutory bars (35 USC § 102). In other words, the invented technology must not be anticipated by being identical to technology disclosed in a single piece of prior art. Absolute novelty is not required as inventors are given a one-year grace period after divulgation or public use of the invention.

As regards unobviousness the test is whether "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject mater pertains."(35 USC§ 103). As this is a rather subjective standard, courts consider objective indicia of nonobviousness including: long-felt unsolved need, failure of others, commercial success, acquiescence by others, copying of the invention by an infringer.

To enforce rights conferred by patents, patent owners can file patent infringement lawsuits against infringers in appropriate federal district courts. A patent is presumed to be valid. A patent can be literally infringed or via the doctrine of equivalents.

The remedies for patent infringement are preliminary and permanent injunctions, compensatory damages based on lost profits or reasonable royalty and increased damages (up to treble) for willful infringement and attorney fees in exceptional cases.

The American Patent System was revitalized by the creation in 1982 of the Court of Appeals for the Federal Circuit (CAFC), considerable pro-patent legislation in recent years as well as less antitrust enforcement, so much so that we speak of a Golden Age for patents. Patents are indeed more valuable and courts "read the riot act" to infringers.

Patents are not "monopolies" *per se* but property, per U.S. patent Code and U.S. Supreme Court.

2) Design Patents — Industrial Designs

Unlike in most countries, there is no industrial design system as such in the U.S., although industrial design bills have been pending in Congress for decades but never saw the light of day, due to opposition by the insurance and automotive industries. However, we have a quite similar design patent law within our patent legislation.

Its main features were stated above and it is clear that it is appropriate only for "industrial" designs. An industrial design in other countries "is the ornamental or aesthetic aspect of a useful article. …. The ornamental aspect may consist of the shape and/or pattern and/or color of the article. The article must be reproducible by industrial means; this is why the design is called industrial. If this element is missing, the creation may rather come under the category of art, whose protection is assured by copyright law, rather than by a law on industrial property."(WIPO, **Background Reading Material on Intellectual Property**, p.189, 1993)

3) Plant Patents — Plant Variety Protection Certificates

In the U.S., intellectual property protection of plants can be achieved primarily pursuant to the Plant Patent Act of 1930, the Plant Variety Protection Act of 1970 (PVPA) and the Utility Patent law as of 1985. After amendments in 1994, the PVPA complies with the International Convention for the Protection of New Plant Varieties (UPOV Convention), which guarantees to plant breeders in member nations national treatment and the right of priority.

The requirements for Plant Patent protection are: novelty, recognition of novelty, asexual reproduction, nonobviousness, distinctiveness and unique-name designation.

Among the rights conferred are: exclusion of others from asexual reproduction, selling or using the so reproduced plant. Sexual reproduction (seed) and independent creation are not protected.

Tuber-propagated plants are not covered but plants found in an uncultivated state are.

The PVPA (Plant Breeders' Rights) protects sexually (seed) reproduced plants, other than fungi, bacteria and tuber-reproduced crops. Requirements: novelty (not sold or distributed in U.S more than one year or outside U.S. more than four years — six years for a tree or vine), distinctiveness, uniformity and stability.

PVPA Certificates are issued, after examination, by the U.S. Department of Agriculture.

Rights conferred for 20 years are: exclusion of others from selling, reproducing or importing, from using the variety to produce a hybrid or different variety and from selling seed of varieties which are "essentially derived" from the protected variety. Farmers may

reproduce for their own use only and a research exemption permits plant breeding to develop new varieties

4) Petty Patents — Utility Models

Some countries have a separate type of protection for inventions known as a utility model or petty patent, to permit certain inventions such as mechanical devices, which do not rise to the level of the normal standards of patentable invention, to be given some degree of exclusivity and protection for a shorter period of time.

While some novelty is required, the degree of inventive advance can be more modest than that required for a full patent. There is no examination for prior art. The duration of protection for utility model is usually much shorter than for a patent, averaging from 6 to 10 years. The United States has never had utility model protection.

Should the U.S. not also have, as do most (industrialized) nations — in some for over 100 years — a petty patent or a utility model or a short-term patent, as it is called in Ireland, which established such a system recently? The European Union is now also seriously considering one based on a proposal by the Max-Planck Institute. The norm is becoming a ten-year term with a six-month pendency and a superficial examination. Unobviousness would not be a requirement; a lower level of invention ("not clearly obvious") would suffice. Such second-tier protection may indeed be needed, given the strict patentability requirements, the long pendency and the high cost of conventional patents. In other words, petty or short-term patent protection would provide coverage for a large area of innovations which fall between design and utility patents, cannot be maintained and protected by trade secrets and for which present utility patents are out of reach because of high patentability standards and/or excessive costs. If *sui generis* protection was fashioned for microchips or mask works in a very short period of time (which some now believe was done improvidently), why not establish protection in the "twilight zone of subpatentable inventions" for the benefit of private inventors, entrepreneurs and small entities?

B. INTEGRATION OF PATENTS AND OTHER INTELLECTUAL PROPERTY RIGHTS

Dual or multiple protection, integrating various IP categories and exploiting their overlap, especially in modern fields of technology, e.g. biotechnology, computer technology and other high technology areas, is now increasingly the order of the day. This results in synergistic integration and secures invulnerable exclusivity.

Professor Jay Dratler, of the University of Hawaii "tied all the (formerly fragmented) fields of intellectual property together", for the first time in his treatise on "Intellectual Property Law: Commercial, Creative, and Industrial Property", Law Journal Press, 1991, inasmuch as intellectual property has become a "seamless web" in light of progress in technology and commerce, with new technologies straddling the gaps between most IP categories.

Professor Dratler explains:

> "The (IP) fields overlap significantly, and the boundaries of each are far from sharply defined. Indeed, several different types of protection are often available for the same thing, or for different aspects of the same thing; therefore, resort to several kinds of protection may be required for complete coverage.
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> ……
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> Although several distinct types of intellectual property protection may protect a single product or service, there is usually a center of gravity. That is, one form of protection is usually the most important commercially, and the others assume a subordinate or supplementary role. This does not mean, however, that supplementary protection lacks value. Supplementary protection may cover additional subject matter, strengthen the exclusivity provided by other coverage, or invoke additional remedies for piracy."

Professor Dratler goes further and shows how integration of IP categories may even achieve synergy and provide fall-back forms of IP. He gives detailed illustrations of the many forms of IP protection that are available in the fields of computers (hardware and software), biotechnology and aesthetic designs of articles. And multiple protection for plants is also clearly available, not only via plant patents and plant variety protection certificates but also via utility patents, trade secrets and even design patents.

More recently, Stephen Elias, picking up on Professor Dratler's theme, presented a "Guide to use of Intellectual Property Protections", in chart form, in which he lists 119 creative work categories and the multiple IP protection available therefor. (Stephen Elias, **Patent, Copyright & Trademarks — A Desk Reference to Intellectual Property Law**, Nolo Press, pp. 10-12, 1996)

C. TRADE SECRETS

Any information of a technical or commercial nature (proprietary information) that is the subject of reasonable efforts to preserve confidentiality and has value because it is not generally known in the trade, can constitute a trade secret.

Trade secrets are the "crown jewels" of corporations — not the "cesspool of the patent system."

Mark Halligan: "Trade secrets are the IP of the new millennium and can no longer be treated as a stepchild."

James Pooley: "Forget patents, trademarks and copyrights…trade secrets could be your company's most important and valuable assets."

88% of responses in an IPO Survey indicate trade secrets to be the really important intellectual assets because patents have limits: patentability requirements, publication and invent-around feasibility.

Trade secret misappropriation recently cost Walt Disney $240 million, Cargill $300 million, and Toshiba over $400 million.

Trade secret protection operates without delay and undue cost against the world — unlike patents which are territorial and so expensive to obtain and maintain that only very selective foreign filing is done.

Patents are tips of icebergs in an ocean of trade secrets, inasmuch as trade secrets cover over 90% of new technology and over 80% of technology licenses cover trade secrets or are hybrid licenses. Also, trade secrets are the "workhorse of tech transfer." (Bob Sherwood).

As a practical matter, licenses under patents without access to associated, collateral know-how are often not enough, because patents rarely disclose the ultimate scaled-up commercial embodiments of products and processes.

"One potential shortcoming of focusing on patents as a measure of innovation, besides the fact that it ignores the other types of intellectual property, is that patents are often valueless absent the 'know-how' that translates protected intellectual property into viable products." (Gavin Clarkson, Harvard).

"Trade secrets are a component of almost every technology license…(and) can increase the value of a license up to 3 to 10 times the value of the deal if no trade secrets are involved." (Melvin Jager).

Patents and trade secrets are inextricably intertwined: Most R&D data and collateral know-how cannot and need not be included in patent applications and therefore, are grist for trade secrets.

All patents are born as trade secrets. Trade secrets precede, accompany and follow patents.

D. CONCLUSION

Trade secrets are indeed a viable mode of protection. They can be used in lieu of patents but, more importantly, they can and should be relied upon at the same time and side by side with patents to protect any given invention as well as the volumes of collateral know-how. Hence, it is patents and (not "or") trade secrets. A happy marriage!

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