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MAIN ASPECTS OF INTELLECTUAL PROPERTY, AND INTERNATIONAL LEGAL FRAMEWORK. I) INDUSTRIAL PROPERTY - TRADEMARKS, INDUSTRIAL DESIGNS, PATENTS, PROTECTION OF PLANT VARIETIES, TRADE SECRETS

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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, which has a life of 20 years from filing, describes and claims any new and useful process, machine, article of manufacture or composition of matter.
- A design patent, with a life of 14 years from issuance, is 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, covers 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.

2) 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?

3) 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)

4) 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

B. TRADE SECRETS

Any business 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.

The Uniform Trade Secrets Act (§ 1 (4)-1985, 89) has the following definition:

"A trade secret is any information, including a formula, pattern, compilation, device, method, technique, or process, that:

(i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and

(ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy."

The latest and simplest definition is that of the Restatement (Third) of Unfair Competition (§ 39-1995):

"A trade secret is any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to offer an actual or potential economic advantage over others."

Interestingly, GATT TRIPs has a provision (Sect. 7) for the Protection of Undisclosed Information (i.e. trade secrets) which reads:

> "Natural and legal persons shall have the possibility of preventing information lawfully within their control from being disclosed to, acquired by, or used by others without their consent in a manner contrary to honest commercial practices so long as such information: is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known

among or readily accessible to persons within the circles that normally deal with the kind of information in question;has commercial value because it is secret; and has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret."

In many states of the U.S. trade secret theft is a crime. Theft of trade secrets affecting interstate commerce may also be covered under the recently-enacted federal trade secrets law (called the "Economic Espionage Act"), which imposes severe fines and jail terms.

Even if a development qualifies for patent protection, the owner may opt to maintain the information as a trade secret. Trade secret protection is available even if the development does not qualify for patent protection. Trade secret law prevents the unauthorized use and disclosure of a trade secret by one who has improperly obtained access to the information. However, trade secret law offers no protection where another has independently developed the same knowledge claimed as a trade secret or reverse-engineered a product that embodies the trade secret.

For these reasons, an important and difficult issue in intellectual property law and practice is the choice between patent protection and trade secret maintenance. On the one hand, it has become impractical to patent every minor improvement and development due to severe personnel shortages and escalating patent office fees and other patent solicitation costs; on the other hand, the Supreme Court has recognized trade secrets as perfectly viable alternatives to patents (*Kewanee Oil v. Bicron*) — "the extension of trade secret protection to clearly patentable inventions does not conflict with the patent policy of disclosure".

The two mentioned routes for protection are, in one respect, essentially mutually exclusive: the maintenance of an invention as a trade secret presupposes that no disclosure, by way of a patent or otherwise, will occur and the filing of a patent application with its subsequent disclosure concedes forfeiture of trade secret rights.

From another point of view, it is important to keep in mind that patents and trade secrets are mutually complementary, in fact, inseparable: firstly, in the critical R&D stage and before any patents issue, trade secret law particularly "dovetails" with patent law according to the 1989 *Bonito Boats* Supreme Court decision.

Secondly, assuming that a development has been enabled and the best mode described, as is requisite in a patent application, all associated know-how not disclosed, whether or not inventive, can be retained as a trade secret.

Thirdly, all R&D data, including data pertaining to better modes, developed after filing, again whether or not inventive, can also be protected as trade secrets.

Fourthly and especially with respect to technologically complex developments consisting of many patentable inventions and volumes of associated know-how, complementary patenting and secreting is tantamount to having the best of both worlds. GE's industrial diamond process technology comes to mind in this regard as an excellent illustration of the integration of patents and trade secrets.

The question then is not so much whether to patent or to padlock but rather what to patent and what to keep a trade secret and whether it is best to patent as well as to padlock, i.e. integrate patents and trade secrets for optimal protection of a given development.

C. TRADEMARKS — TRADE NAMES — TRADE DRESS — APPELLATIONS OF ORIGIN

In the U.S. the Trademark Act of 1946 (Lanham Act — § 1127) defines a trademark as follows:

> "The term 'trademark' includes any word, name, symbol, or device or any combination thereof adopted and used by a manufacturer or merchant to identify and distinguish his goods, including a unique product, from those manufactured or sold by others and to indicate the source of the goods, even if that source is unknown."

A service mark, which is used in the sale or advertising of a service, is similarly defined. A trade name (or commercial name), however, is not synonymous with trademark. Rather, a trade name is a name used to identify a business.

A trade name may also be used as a trademark or service mark to identify products or services. Thus the IBM Company uses IBM in its company name, it uses IBM to identify its computer products, and it uses IBM to identify its computer leasing services.

In addition to words and symbols, protection is also available for color, color combinations, configurations, designs, fragrances, labels, letters, logos, numbers, pictures, slogans, sounds. Virtually anything can be a trademark if indeed it functions as a trademark.

Arbitrary, coined or fanciful marks (**Exxon**, **Kodak**) as well as suggestive marks (**COPPERTONE**) are best because they are inherently distinctive. Descriptive marks qualify as trademarks only after they have acquired a secondary meaning.

Unlike in other countries, where trademark rights are acquired by registration, in the U.S. adoption and use is requisite but since 1989 it is possible to file a so-called intent-to-use application, which, however, will not be registered in the U.S. Patent & Trademark Office, until actual use has taken place. It is also possible to obtain trademark protection via registration on a state level as well as common law rights based on use without registration.

Trade dress law is a relatively new species of trademark law and is governed by the same rules of validity and infringement. It covers the totality of elements in which a product or service is packaged or presented. It includes the shape and appearance of a product as well as that of the container and all elements making up the total visual image, all aspects of appearance. Examples: shape and appearance of a product or container, cover of a book or magazine, layout and appearance of a place of business, e.g. a restaurant, distinctive and recognizable shape of an automobile.

If the elements making up the trade dress are so extraordinary as to be inherently distinctive, proof of secondary meaning is not required, according to the *Taco Cabana* Supreme Court decision in 1992. The test of trade dress infringement, as well as trademark infringement, is likelihood of confusion.

In light of recent publicity about French officials going to great lengths to protect appellations of origin, a brief reference to the existence of so-called geographic denomination as a form of protection is apposite in connection with a discussion of trademarks. This term encompasses appellations of origin and indications of source. The former refers to both a product's geographic origin and to its distinctive product characteristics due to particular geographic conditions or methods of production (e.g. *Roquefort* cheese, *Champagne* sparkling wine). The latter refers solely to the geographic origin (e.g., "Paris" perfume).

D. INTEGRATION OF INTELLECTUAL PROPERTY RIGHTS

As was shown in ~~Section B~~ above, patents and trade secrets are complementary, if not inseparable, and can and should be relied on side by side for optimal protection. In other words, it is possible to eat the cake and have it. The erstwhile view, prevalent even in the U.S. and still widespread in foreign countries, that only single protection is possible, e.g. utility and design patents on the same product are incompatible, has long gone overboard. 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.

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 other 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 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)

The U.S. Supreme Court stipulated in 1980 in the *Chakrabarty* decision, which dealt with the patentability of microorganisms, that "everything under the sun made by man" is patentable and that is the way it should be. With the *Chakrabarty* decision, the first of the conventional exclusions to patentability fell, namely, that living matter was not patentable. Many patents on animals and plants have since been granted. We also know now that software, supposedly unpatentable (only copyrightable), because of the unpatentability of mathematical algorithms, is not only patentable but patent protection has become the protection of choice, side by side with copyright and trade secret protection. And just ~~a few weeks ago~~ last year, we had a "seismic precedent", the *State Street Bank* decision, where the Federal Circuit Court of Appeals ruled that a computer program designed solely to make financial calculations was patentable. This decision reinforces the recent trend of federal decisions bolstering the patentability of software. With this decision the business-method exception to patentability was dealt a mortal blow.

E. CONCLUSION

If a strong industrial patent system is indispensable to technological development which in turn is indispensable to economic growth; if an industrial property system should be part of a country's infrastructure from the very beginning, rather than something to be considered after reaching a fairly advanced state of development; if an effective industrial property system provides not only an incentive to invent but also, and by far more importantly, an incentive to invest in innovation; if the quality of investments a country can attract (domestically and from abroad) is directly proportional to the quality of its industrial property system; if investments, technology transfer and licensing are easier to bring about via industrial property rights as vehicles and bases; and if industrial property rights ~~is~~ are not and cannot be ~~a monopolyship~~ monopolies per se, but rather a commodity and property, the acquisition and transfer of which has clear pro-competitive effects — all of which by now are well-established tenets and truisms — then our industrial property systems ~~must~~ should not only be effective, ~~modern~~ and strong but also liberally expansive rather than overly restrictive.

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