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# Legal protection for inventions, designs and other information

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**Abstract** Information is capable of being the stuff of intellectual property and related non-proprietary rights if the correct steps are taken to attract legal protection to the information, to have it recognised as information that the law will protect. Proprietary rights, for example patents for technical inventions (including technical features of computer programs), design rights for industrial designs, database rights for arrangement and contents of a database, and copyright for literary and artistic works (to name but two types of work protected by copyright) can be deployed along with non-proprietary rights over confidential information (including trade secrets), to form a protective screen around intangible assets. Depending on the circumstances, all, some, one or perhaps none of these rights may be available when one person seeks to prevent information belonging to him from being disclosed or used without his permission by another. The questions most often raised (and those addressed in this paper) by business executives and those carrying out research or development concern the acquisition of proprietary and non-proprietary rights and the protection of these intangible assets.

**Keywords:** patents for inventions, design rights, copyright, database rights, confidentiality

## Registrable intellectual property

The patent system seeks to encourage innovation, that is, the development and commercial exploitation of a technical invention, that is to say, a concept or idea for a product or a process (eg a method of manufacture or testing), by the grant of exclusive rights to inventors for a specified period over their inventions. In most countries, that period is 20 years, but after an initial few years the patent must be renewed by payment of annual renewal fees for the remainder of its life. If an annual renewal fee is not paid the patent will be lost.

Genes and chemical compositions, along with apparatus and instruments used in medicine and packaging and containers for medicines, can be patented if they satisfy the basic conditions (novelty, inventive step and industrial application) for the grant of a patent. New uses for known chemicals may be patented also. A classic here is aspirin, which has a number of uses within and without the field of medicine, including (according to one US patent) making pigs grow fatter faster. A more recent instance of a new use involves the medicine sold as Viagra. Medical methods (methods of surgery, therapy or diagnosis) cannot be patented in Europe, but in other countries

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(eg Australia and the USA) they may be patentable.

A discovery *as such* cannot be patented in Europe, except where the discovery is applied to solve a technical problem. How then, it might be asked, can a new use of a known product be patented, since in essence this is patenting a discovery? A rather tortured interpretation of the European patent law, something of a 'smoke and mirrors' view, permits that, to encourage research by pharmaceutical companies into the hitherto undiscovered properties of known substances.

As such, computer programs and mathematical formulae cannot be patented either under European patent law. But where it can be shown that a computer program has a new and inventive *technical effect* then, contrary to a popular but understandable misconception held by many business executives that computer programs cannot be patented in Europe, the program may be patentable. What is meant by 'technical effect' cannot be answered in the abstract. But if, for example, a computer program makes the interacting components (eg hard disk drive, volatile memory) of the computer or the peripherals (eg modems, printers) attached to the computer, work more efficiently or effectively, then the program is likely to be seen as having a technical effect. Patent laws in Australia, Japan and the USA take a different view of the patentability of computer programs as such. Computer programs that have a technical effect as well as programs that have a commercial effect may be patentable there.

A patent for an invention, that is, the inventor's exclusive right, is violated by an unauthorised person who makes or sells a product or uses a process embodying the inventive concept defined in the patent specification. (By contrast, copyright protects an expression of a concept, as distinct from the concept itself.) The patent proprietor does not have to prove that an alleged infringer copied the patented invention, but evidence that the alleged infringer copied the invention will seal the case against him or her.

Patent acquisition and maintenance can be costly, and patent enforcement can be

ruinously expensive. It is not a property for those of a weak disposition or shallow bank balances. A key patent (or group of patents) that controls entry to a new technology with great market potential is apt to be attacked by major companies with businesses that are threatened by the technology. If the patent owner lacks either access to the litigious resources needed to withstand and defeat an attack on his property or the managerial skills to convert a would-be attacker into an ally (a licensee) if an alliance is the better move, then the patent will count for nought. A strong patent, legally speaking, in weak hands is apt to count for less in the market place than a weak (or potentially invalid) patent in strong hands.

Registration of a design gives the proprietor rights akin to a patent. Registered design rights are known as a design patent under US law. 'Design' means the shape or configuration of a product. A design must be new and have so-called 'eye-appeal' before it can be registered, but neither of these legal requirements is very demanding. Product packaging as well as the shape of the product itself may be registrable as designs.

The registered proprietor has exclusive rights over the design and these rights are violated by any person who, without the proprietor's licence, makes or sells a product to which the registered design or a design not substantially different from it has been applied. Thus, it is not a question whether the alleged infringer copied the registered design, although that certainly violates the design owner's rights.

Designs that have not been registered, either because the design does not satisfy the conditions for registration or because the costs of registration are seen by the designer to outweigh the benefits, may be protected against copying by copyright law, unregistered design rights law or unfair competition law.

### **Non-registrable intellectual property**

Intellectual property that cannot be registered includes copyright and database

rights. Some countries (eg the USA) provide for the registration of copyright, but these provisions are not a prerequisite for copyright, only an aid in its enforcement.

### Copyright

Copyright arises when an *original* literary, artistic or other work (eg a musical, dramatic or cinematographic work) is created. The standard of originality can be very low, as witness in the United Kingdom and other English-speaking countries – that is, the common law world – where the standard is met by a work that is not a copy of another work. A modest element of creativity is required by European law, including UK copyright law, before a database will attract copyright protection.

A very broad range of work attracts copyright protection. Single words and short sentences will not attract copyright protection, but these may be registrable as trade marks. For example, computer programs (whether patentable or not) are regarded as literary works by copyright law and, if they are original works, they attract copyright as soon as they are written or fixed in permanent form. Likewise original documents relating to a computer program, including instruction manuals and schematic diagrams, are copyright works. Standard forms, drawings, computer screen layouts, product packaging, written specifications or protocols, and correspondence in the form of letters or e-mails are further examples from the wide range. Different copyrights may reside in a single work and likewise two or more authors jointly may be entitled to the single copyright in a work. The designer (author) of a sales brochure may own a copyright in the layout of the brochure and the photographs or drawings used in it (artistic copyright) and the author of the words used to describe the products or services for sale in the brochure may own a literary copyright.

The author of a work owns the copyright in the work, except where the author makes the work (a) in the course of employment, when the employer owns the copyright, or

(b) under commission and agrees in the contract that copyright will belong to the commissioner.<sup>1</sup> Care must be taken where a consultant (or contractor; the term consultant is used to mean a person who is not an employee as the law understands this word) is commissioned, to ensure that the contract provides for a transfer to the commissioner of any copyright in the consultant's work (eg reports) or that, where ownership of copyright will not pass to the commissioner, appropriate licences to reproduce or otherwise exploit the work are granted by the contract. This point can be made also where consultants are commissioned to carry out research, development or design work. The commissioner should include in the contract with the consultant terms addressing ownership or access to inventions, designs or other results which may arise from the consultant carrying out the work.

Copyright in a literary or artistic work, for example, lasts for the life of the author or artist plus 70 years in the countries of the European Union. The period of copyright which some works attract can be far less than that. In non-EU countries, the period of literary or artistic copyright may be the author's life plus 50 years.

Copyright is violated when the whole work or a substantial part of it is reproduced or otherwise exploited without the copyright owner's licence. Whether or not a substantial part was reproduced or otherwise taken without the copyright owner's consent involves a qualitative assessment of what was taken in the context of the whole work. Within strict legal limits, a work protected by copyright can be reproduced or used for research, for example, without infringing the copyright, unless such use would breach a duty of confidence.

### Database rights in Europe

Proprietary rights in databases have been harmonised throughout the EU by the Directive on the Legal Protection of Databases (96/9), adopted by the EU on 27th March, 1996, and now in force through

the EU. A database is defined in the Directive as a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means. The *copyright* provisions apply to the selection or arrangement of the contents of a database, that is, the structure of the database, as distinct from its contents; and a database attracts copyright when, by reason of the selection or arrangement of its contents, it constitutes the author's own intellectual creation.<sup>2</sup> Whether or not there is copyright in a database, the 'maker' of a database, ie the person who takes the initiative and the risk of investing in the creation of the database, has a *sui generis* right in the database contents and the materials necessary for the operation or consultation of databases such as thesaurus and indexation systems, but this right does not apply to computer programs used in the manufacture or operation of a database accessible by electronic means.

Copyright in a database can be enforced against an unauthorised person who reproduces (temporarily or permanently) the database by any means and in any form, in whole or in part; translates, adapts or arranges the database or alters it in any other way; distributes the database, or copies of it, to the public; publicly communicates, displays or performs the database; reproduces, or publicly distributes, communicates, displays or performs a translation, adaptation, arrangement or other alteration of the database. Reproduction for private purposes of a non-electronic database, use for the sole purpose of illustration for teaching or scientific research does not violate the copyright in a database.

The *sui generis* right is violated by the unauthorised extraction and/or re-utilisation of the whole or a substantial part of the database contents. Extraction means a transfer of the database contents to another medium (eg volatile memory, tape, disk) by any means or in any form, even on a temporary basis as when the database contents are displayed on-screen or when during a search of a database the whole or a

substantial part of its contents are sequentially transferred imperceptibly to the machine's volatile memory (RAM). Re-utilisation means making the database contents available to the public whether by distributing copies of it or by some other form of transmission.

### Confidential information

In business parlance, the distinction to be drawn between intellectual property and the legal protection given to confidential information is seldom recognised. Intellectual property to many business executives embraces both forms of protection, the one proprietary and the other non-proprietary (confidential information). An originator of confidential information, such as a trade secret, does not own the information and cannot prevent another party who obtains the same information independently by legitimate means (such as by independent research effort or analysis of publicly available products or compounds), from using the information for his or her (the other's) own ends. The inventor of a recipe or a compound must patent the invention, if it be patentable, before they can claim ownership of the invention.

All types of information (except the utterly trivial), personal and non-personal, technical and non-technical, may qualify under the law as confidential provided the information in question is not in the public domain.<sup>3</sup> Whether, in a given case, the law will treat information as confidential is a separate issue; and if the person who has a trade secret does not protect it as such but instead allows unrestricted access to it or to where it can be seen and understood, then such manifest failure to treat the information as confidential will remove it from the ambit of legal protection. Again, if an employee, for example, has access to information which the employer would see as confidential but which the employee might not see as such and could not reasonably be expected so to see it, then the employer must make his view of the information, and the importance he attributes to it, known to the employee.

Whether a person is bound in confidence to another will depend on the circumstances. If there is a contract or agreement that requires one or both sides not to disclose confidential information passing between them, then so much the better. But a consultant who contracts to carry out clinical trials would probably be bound implicitly (in the absence of an express term) not to divulge data obtained in the trials.

A specific, express obligation of confidence imposed on consultants is preferable to an implied obligation (the scope of which may be uncertain). Express terms should define the rights and obligations of both sides with respect to confidential information divulged at or before the commencement of the work and clinical data obtained in the performance of the contract. The contract terms may define when or where the obligation of confidence will not apply, such as where the information becomes public through no fault of the party bound or where, in accordance with the terms on academic publications, the information is included in an academic paper written by the consultant.

A person (Z) who receives information which they know, or ought reasonably to know, is confidential, from a person (Y) who discloses the information to Z in breach of confidence, will be bound by an equitable obligation not to disclose or use the information without the consent of the person (X) to whom Y owed the duty of confidence. It matters not that there is no agreement or contract between X and Z; it is enough that Z knew the information was confidential when he received it from Y. If the confidential information is in a document, the author of the document would own the literary copyright in the document, except where the author is bound to transfer the copyright to another person. Copyright could be enforced to prevent reproduction or distribution of copies of the document, or parts of it.

Suppose for example that the information received by Z, a newspaper editor, relates to a matter which Z feels the public should

know about. Can Z publish the confidential information, and thereby possibly damage the commercial interests of X, free of any legal liability to X? The answer depends on whether the law would see disclosure by Z without X's consent as 'in the public interest'. There are no hard and fast rules as to what is or is not in the public interest, but courts have said that a disclosure is not to be seen as in the public interest merely because the public may want to read or hear the confidential information. The public's eye or ear for salacious titbits about a person's private life, for example, is not to be equated with the public interest. That said, the public interest defence is a matter that business executives need to be aware of when conducting their business and selecting people to do business with.

## Conclusion

Intellectual property does not, by itself and without more, protect commercial information. The property is a means towards to an end. If the proprietor lacks the skills or other resources required to manage the property effectively, then it may amount to no more than a wasting asset. Whether to register an invention or a design, assuming it meets the requirements for registration, is (or should be) a commercial decision, properly informed by advice from a patent attorney or agent. If registration would not yield a discernible commercial or tactical advantage to the registered proprietor, it is not justifiable on a rational basis. The alternative of secrecy, supported or supplemented by copyright in documents or other media in which the secret (confidential) information is recorded, may be viable in some cases, but in the modern commercial world it is practically impossible to prevent the information from 'leaking' over time into the public domain. Finally, the great advantage of copyright, unlike the registrable forms of intellectual property, is that no fees have to be paid to attract or retain the right throughout its much longer life. True, copyright and kindred rights (like the special right over the contents of a database) only afford

protection against copying, but deployed effectively such rights may be as powerful as registered forms of intellectual property.

**Notes**

1. The phrase 'course of employment' has a special meaning in intellectual property law. It is not necessarily tied to the office or place of work, or indeed to working hours. It means roughly that, when an employee creates the work that attracts copyright, the employee is doing what he or she is employed to do and the work in question is the reasonably expected outcome of the employee doing his or her job. The sales manager who writes a report on sales, or sales prospects, for the company that employs him, is the author of the report, but his employer is entitled to the copyright in the report, assuming that the preparation of sales reports was part of his job as a sales manager.
2. If a database arranges its contents automatically, as with most (if not all) of the databases used by researchers, there may be little or no scope for intellectual creativity by researchers. The structure is predetermined by the software. Copyright in the contents of a database is distinct from copyright in its structure; and the author of a database will need permission from owners of the copyrights in any

proposed contents before they are included in the database.

3. In the circumstances envisaged in Article 4.8(a)(iii) of EC Directive 65/65, even publicly available information may be protected to a limited extent from unfair competition. My thanks to the reviewer of this paper who pointed out that the effect of Article 4.8(a)(iii) 'is to stop a generic competitor from basing his own application for a marketing authorisation on clinical trial data submitted by the innovator to regulatory agencies for a period of 6 or 10 years depending on the Member State. So, it protects the innovator's clinical trials data (which costs millions of pounds to produce) from use by a competitor.' To avoid any doubt on this point, it should be noted further that outside paragraph (a)(iii) the basic facts in data, once published, can be used by anyone, provided the use of such data does not violate another's intellectual property rights, for example, a patent for an invention. Paragraph (a)(iii) gives the innovator a strictly limited respite from competition, but it does not give the innovator a right as such. It seeks to prevent a specific act of unfair competition, to stop a rival from 'free riding' on another's investment. A generics competitor who independently obtains the same data cannot be stopped under paragraph (a)(iii) from using that data in its application for marketing authorisation.

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