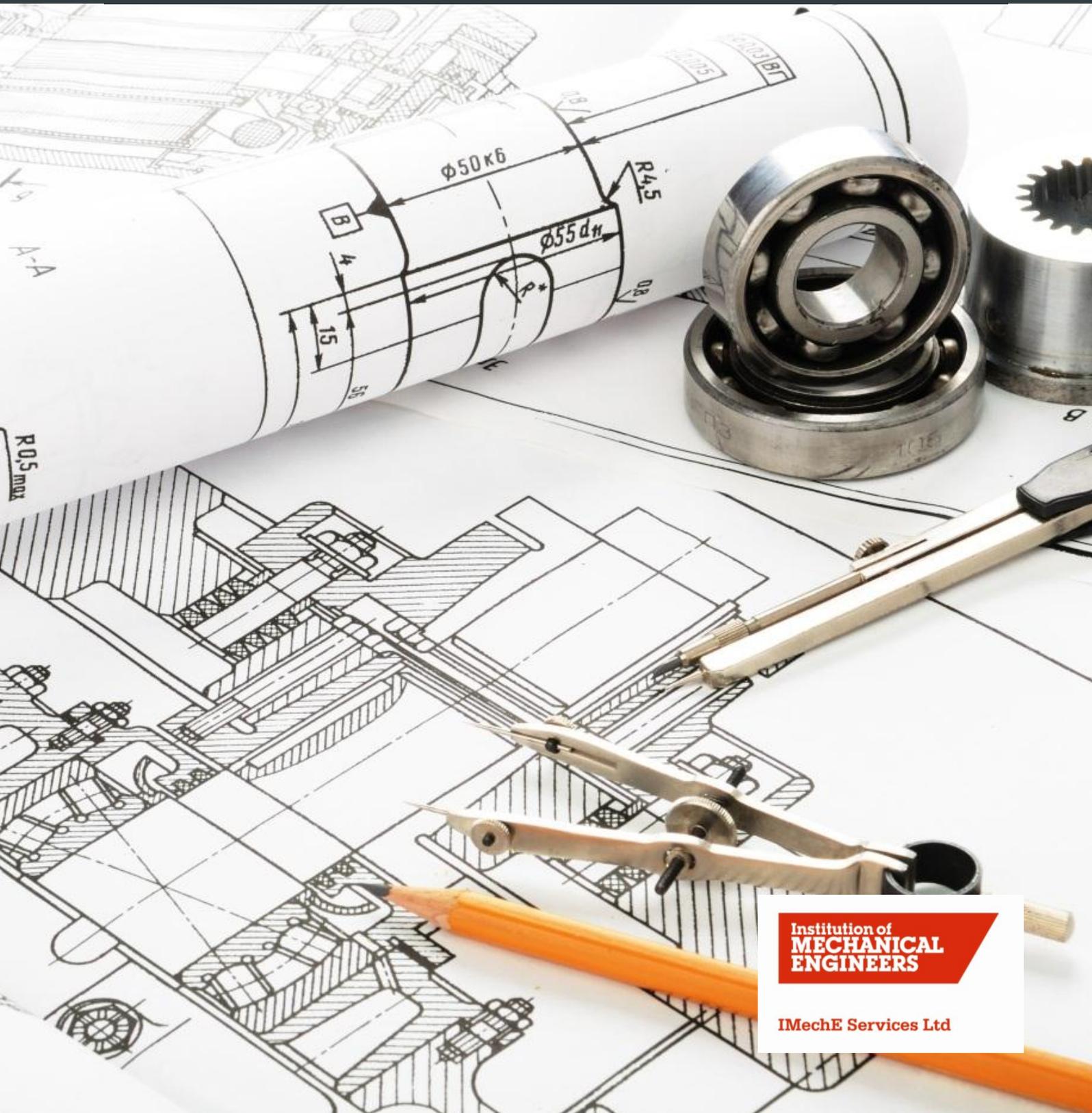


Bird & Bird

Intellectual Property Guide for Engineers

In collaboration with The Institution of Mechanical Engineers (IMechE)



Institution of
**MECHANICAL
ENGINEERS**

IMechE Services Ltd

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Foreword

With emerging technologies becoming the key to Britain's future as an engineering nation, protecting valuable intellectual property is more important than ever.

With over a century of intellectual property (IP) expertise, international law firm Bird & Bird has worked with many of the world's leading innovators.

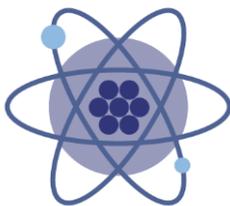
The firm's industry knowledge and outstanding skill in strategic projects, combined with the technical insight of its specialist lawyers, a number of whom have a background in engineering, enables it to remain at the cutting edge of IP law.

This guide is for engineers, providing an understanding of IP rights in the context of engineering activities. It shows how IP can be used to future-proof a business and most importantly, how it can be used to create and extract tangible value.



“I really welcome this concise guide as an aid to engineers. I fear that often we know too little about this important subject. It is perhaps surprising that a profession such as ours which prides itself on its “problem solving” skills doesn’t automatically see the value of securing intellectual property with equal intensity. Some of us who have tried to raise venture capital funding for example know just how important owning the intellectual property is, but many others who are just focused on practising engineering do not. Significant loss of value and commercial advantage both to ourselves and our employers is the result.”

Dr Colin Brown, Director of Engineering at the Institution of Mechanical Engineers



Overview

Intellectual property is the legal product of original thought, invention and creativity.

Intellectual property rights provide a business with competitive advantage in technology and knowledge focused markets, where companies battle to maintain an edge over their competition. IP rights can be bought, sold, licensed and used as security for borrowing. They can account for a significant portion of a business' assets and may outperform tangible assets in terms of wealth and value creation. Some IP rights come into existence automatically as the work is done. Most must be applied for and registered, often within specific time limits. Some must be kept secret before the application is made.

This guide introduces the different IP rights available in the UK and how they can be used to protect different types of technological and creative work product, as summarised in the table below. It then explains some of the considerations surrounding the exploitation of IP rights and provides, in the case study "From Creation to Commercialisation", an illustration of how IP rights may be identified and exploited in practice. The case study follows a utility supplier "Volts 4U" which turns around its fortunes by combining R&D with close attention to the IP rights required to secure, protect and exploit the resulting innovations. At the centre of the guide is a pull-out table that you can remove and use as a quick reference guide during your work.

<i>Work Product</i>	<i>Applicable IP Rights</i>
Innovation	<ul style="list-style-type: none">• Patents protect novel inventions that can be used in a practical way. They are important to consider in relation to engineering projects as they provide a monopoly right that can be used to recoup R&D investment over a period of exclusivity.• Trade secrets include know-how and confidential information. Maintenance of trade secrets can be important to engineering disciplines where there is significant know-how, for example, in manufacturing processes. Trade secrets can cover materials also protected by copyright and database rights.
Documents, software, drawings and data	<ul style="list-style-type: none">• Copyright protects a wide range of content and materials relevant to engineers such as documents, design drawings and software.• Design rights protect the appearance of a product. They are particularly important in consumer driven markets where the success of a product can depend on its physical appearance as much as its technical features.• Database rights protect collections of data and are important where there has been significant investment made in collating data that is to be made publicly available.
Brands	<ul style="list-style-type: none">• Trade marks can be protected through registration or through actions for passing off. They are particularly important for engineering businesses where the value of the brand may lie in a reputation for safety or innovation.

Bird & Bird & Protecting innovation



Patents

Patents are monopoly rights over inventions granted for a limited time period.

What is a patent?

A patent for an invention gives its owner the right to exclude others from doing certain acts in relation to the invention claimed in the patent. This includes making, selling and importing products which use the invention or are made in accordance with it if it is a process. By granting a period of exclusivity to exploit an invention an innovator is given the opportunity to recoup its development expenses and establish a product on the market before that invention can be used by others.

Patents are granted by a patent office. However the validity of a patent may later be re-examined during court proceedings for infringement of the patent or where its validity is otherwise contested.

There are three essential requirements that an invention must satisfy in order for it to be protectable by a patent:

- **Novelty.** This requires that the invention has not been publicly disclosed, for example in an industry publication or an earlier patent.
- **Inventive step.** This requires that the invention is not merely something which would be obvious to someone ordinarily skilled in the field to which the invention relates.
- **Industrial application.** This requires that it is possible to use the invention in a practical way.

Novelty and inventive step, are measured against the "state of the art" at the time a patent application is filed (also called the "prior art"). The state of the art includes anything available to the public before the date on which the patent application was filed. In order to have novelty, an invention must not form part of the state of the art and in order to have inventive step, an invention must not be obvious in light of it. Whether or not something is obvious is judged with reference to a fictional "person skilled in the art". The person skilled in the art has the normal level of skill and knowledge for the relevant area of technology but lacks inventiveness and imagination. The way inventive step is usually

assessed is by looking at the differences between the claimed invention and the closest prior art and deciding whether those differences amount to something that wouldn't be obvious to a skilled person.

Did you know?

Some things are not patentable even if they are novel and non-obvious. The most important exclusions that engineers need to be aware of are those in respect of mathematical methods, computer programs and presentation of information. If you think your invention might be within these groups you should seek advice from a patent attorney or a solicitor.

How do you get a patent?

To get a patent you must first file a patent application. The main document needed for filing a patent is a draft patent specification, which must contain:

- **An abstract.** This must summarise the invention.
- **A detailed description.** This must contain enough information to allow the skilled person to use the invention without having to spend a lot of time in trial and error. Failure to do so can make the patent invalid. This means that you need more than a pure idea to get a patent. You must have some real concept of how it can be put into practice, although you need not actually have done so. Normally good drawings are imperative for supporting the description.
- **One or more claims.** These are numbered paragraphs at the end of the document, and are the legal definition of the invention you are seeking to patent. There will likely be several claims of different scope. They should specify each of those features which set the invention apart from the prior art and also encompass the full breadth of the contribution over the state of the art. There are complicated rules about how claims are drafted and interpreted, so it is

advisable to use a patent attorney experienced in the relevant technical field to prepare them. Patent applications are examined by the relevant patent office including checking the three essential requirements above are met. Typically it takes 2-4 years from filing for a patent to be granted. It is important that inventors engage with the application process to make sure the invention is properly protected in the claims. The claims that are ultimately granted can be substantively different to those intended at the outset and may no longer cover the whole concept.

Where should a patent be filed?

If you only want a patent valid in the UK, you file your application with the UK Intellectual Property Office (IPO). If you want to get patent protection in more countries then you can file separate applications at each of the respective national patent offices. Alternatively, if you want protection in more than one European country, you can file a single application in the European Patent Office (EPO), which if successful grants a bundle of separate national patents in each of the European countries. Finally, and particularly where you want to obtain patents for a number of non-European countries such as the US or Japan, you can file under the Patent Cooperation Treaty (PCT) at the World Intellectual Property Organisation (WIPO) which provides a single application process for applying for individual national patents. You do not have to file patent applications in all jurisdictions at the same time. After a first application is made, counter-parts can be filed in other jurisdictions during a period of 12 months called the "priority period". These counter-part applications are measured against the prior art at the time the first patent application was filed.

How long does a patent last?

Patents last for 20 years from the date the application is filed, provided annual renewal fees are paid. Once the patent has expired, anyone is free to use the invention claimed in the patent. In Europe and some other countries certain pharmaceutical patents can have their lifetime extended by a few years to make up for the lengthy approvals period before a drug can be put on the market.

Who owns a patent?

The default position is that the inventor owns an invention and is entitled to apply for a patent for it.

If there is more than one inventor, they own it jointly. However, if the inventor is employed and the invention is made in the course of their employment the invention is owned by the employer unless the employee's job does not involve the sort of responsibilities that are likely to result in an invention. When research is sponsored or conducted in collaboration with an outside body or company, there should be an agreement setting out how ownership of inventions generated in the course of the research will be owned.

Top tip

Currently, all patents are granted as national rights: their protection is limited to one country and they must be enforced separately in each country. There is a new type of patent being introduced for Europe - the Unitary Patent. This will be a single patent, that if infringed can be enforced across multiple countries in Europe through a single set of proceedings. If you are considering patent protection you should consult a patent attorney or solicitor specialising in patents to find out how the Unitary Patent may be advantageous for you.

When is a patent infringed?

If others make, sell, use, import or keep something which is covered by the claims of a patent without the owner's permission then they are said to infringe the patent. A patent can also be infringed indirectly by supplying another person with the means to infringe a patent, such as supplying a specialised component which another person assembles into a device that then causes the device to infringe. Determining whether something is within the patent claims can be complicated, and specialist legal advice should be sought if you are aware of a patent which there is a risk you could be infringing or if you suspect infringement of your patent by others.

The defendant to an infringement action will usually allege that the patent is invalid on the basis of lacking novelty or being obvious. If the patent is found to be invalid then the court will not award any remedies for infringement. However, if a court decides that a patent is valid and infringed, it may grant an injunction (a court order to stop the acts which infringe the patent owner's rights) and monetary compensation. The court may also order destruction or delivery up of any remaining stocks of the infringing product.

Trade secrets

A trade secret may include know-how or confidential information which has not been made public.

How are trade secrets protected?

Trade secret protection in the UK is governed by the law of confidentiality. This involves a concept known as the 'obligation of confidence'. This is an obligation on a person receiving secret information not to disclose it to others and only to use it for the purpose for which it was provided.

There are three ways an obligation of confidence can be imposed under UK law:

- An express agreement by the recipient of the information, such as a non-disclosure agreement (NDA);
- An obligation upon the recipient of the information which is implied as a result of some other agreement - for example, the law implies an obligation of confidence on an employee who has entered into an employment contract;
- The information is of the type and imparted in such a way that any reasonable person would know that it should be kept confidential. This requires that the information concerned has been kept confidential and not been made freely available.

Who owns a trade secret?

Primarily trade secrets are owned by the person who develops the confidential information. However, where that person is an employee, the trade secret will be owned by the employer. During the period of employment, an employee must protect the confidentiality of the employer's trade secrets and other confidential information. The situation becomes more complicated when employees cease to be employed. Although they remain obliged to keep the former employer's trade secrets confidential and not to use them, they are allowed to use their skills and background knowledge, even though they may have been

acquired during their former employment (otherwise, many employees with a particular skill would not be able to find another job). Care is needed in disentangling the use of the employee's own skills from use of the previous employer's trade secrets, particularly where the new employer is a direct competitor or where the employee is departing in order to set up a competing business.

Top tip

It is advisable to take clear precautions to protect the confidentiality of secret information, by for example, limiting access to premises where such information is being developed or used and by ensuring that all employees (and third party contractors) understand the importance of keeping the information secret and marking documents accordingly.

How are rights enforced?

The owner must bring a civil action for breach of confidence. They will have to prove that they have taken reasonable precautions to protect the confidentiality of the trade secret(s), that the defendant had an obligation of confidence and that there has been an unauthorised disclosure or misuse of the trade secret(s).

Did you know?

Trade secret protection varies between EU member states. In order to increase business confidence and support international business there is a new European Directive currently under review which will seek to harmonise the protection of trade secrets across the EU.

How to protect your innovation: what you need to consider

Has the innovation been kept secret?

If the innovation has been publicly disclosed, then neither patents nor the maintenance of trade secrets can protect it. It is vital to keep the innovation secret until the best form of protection has been determined.

Can the innovation be kept secret even after a product is launched?

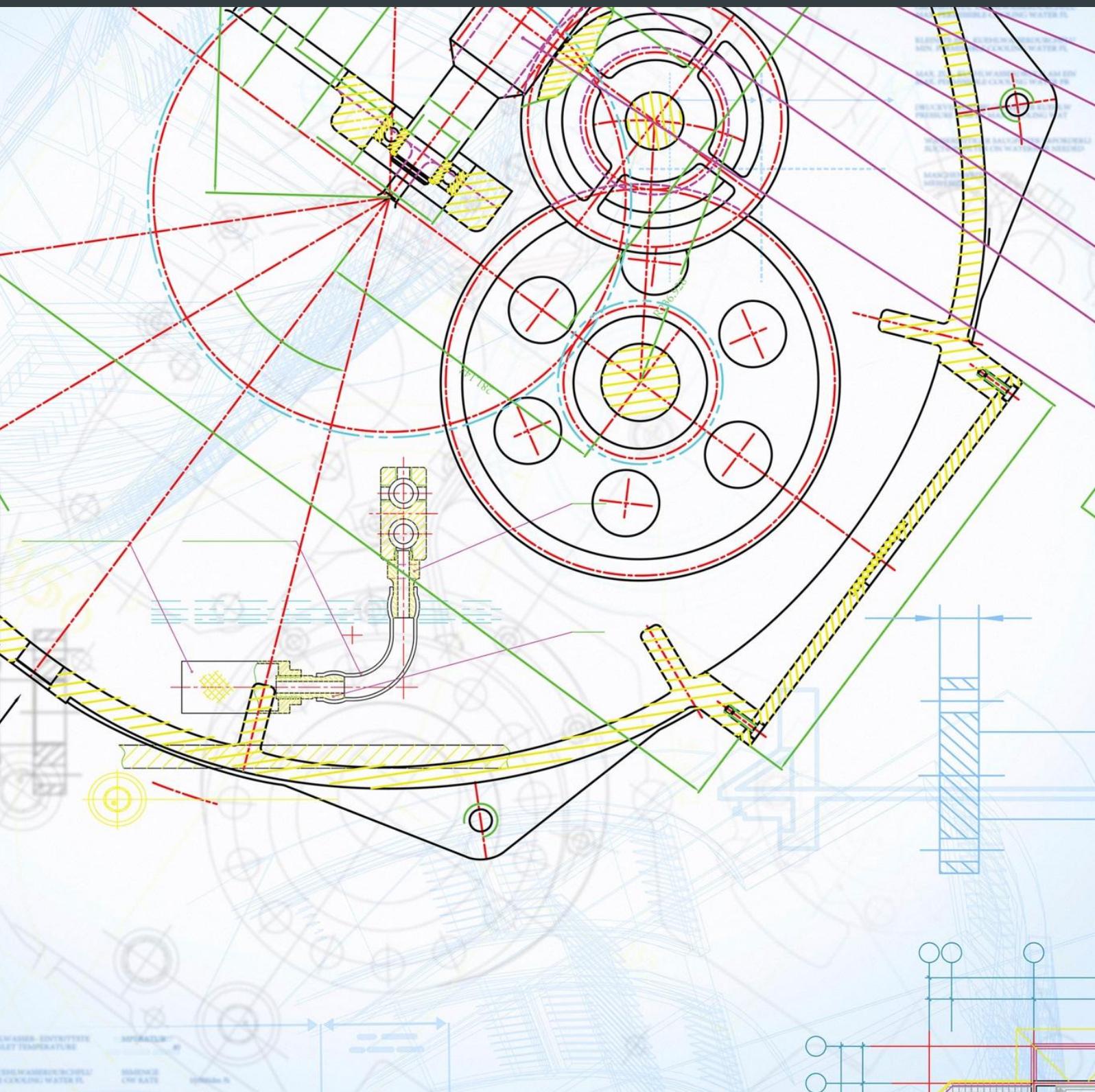
If the innovation is of a type that can be kept secret (such as a manufacturing process) or it is unlikely that reverse engineering will allow others to understand its operation, maintaining trade secrets may be the best option as this will mean that the invention can potentially be prevented from being used by competitors for longer than is possible with a patent (whose lifetime is generally limited to 20 years).

What are your competitors doing?

Patents provide stronger protection than maintenance of trade secrets because they are effective against someone who later comes up with something within the scope of the patent, even if they had no knowledge of the patent. An action for breach of confidence to protect a trade secret can only be enforced against a person with an obligation of confidence in relation to the trade secret and nothing can be done against someone who develops the same thing independently. Patents therefore offer better protection where there is concern that competitors may also be working to develop innovations in the same area. If this is not a concern then maintaining a trade secret may be preferable to avoid tipping off competitors who may be monitoring filed patent applications.



Bird & Bird & Protecting documents, drawings, software and data



Copyright

Copyright protects written and artistic materials from being copied or disseminated.

A wide range of materials can be protected by copyright: computer software, CAD files, sketches, drawings, photographs, instruction manuals, models and many others.

How do you get copyright?

Copyright comes into existence as soon as a work is recorded in a tangible form, for example, drawing a design concept. No formalities such as registration are required for a work to attract copyright protection in the UK.

Under UK law, to have copyright protection, a work must fall into one of the categories of work that are protectable: literary, dramatic, musical or artistic works, sound recordings, films, broadcasts or typographical arrangements. The most important categories for engineering activities are literary and artistic works. Literary works include design specifications, service manuals and reports as well as computer programs. Artistic works include drawings, blueprints, flow diagrams, models and plans, and photographs, irrespective of artistic quality.

Literary and artistic works must be “original” to qualify for copyright protection. This means that they must have been created through the author's own skill, rather than copied. A slavish copy will not have originality, but a derivative work or successive drafts of a work can each benefit from their own copyright protection independent of that in the underlying work provided that the author's own skill has been exercised in their creation. However, such copyright will only exist in relation to the contribution made and its existence does not grant any rights to make use of the underlying work. So the process of making a derivative work may infringe the copyright in the underlying work.

Copyright is not a monopoly right; it protects against copying. Accordingly, two people who independently come up with the same work could

each have their own copyright in their individual works and each not infringe the other's copyright.

Many countries, including the UK, are party to various international conventions affording copyright protection to works protected by copyright in other countries.

Did you know?

A problem that arises in many copyright cases is determining where the line is to be drawn between the protected work as an expression of an idea and the underlying idea itself. This problem is particularly acute in the case of software. There have been a number of cases concerning software which replicates the functionality of another (usually commercially successful) software system, or which comprises additions to such a system and therefore needs to interface with it. Recent case law has established that although the actual code of a program comprises a protectable form of expression, the underlying functionality of the program does not (this is something that may, in certain circumstances, be protectable by a patent).

How long does copyright last?

The length of copyright protection depends on the type of work. Literary and artistic works generally attract copyright protection from the date they were recorded until 70 years from the end of the calendar year in which the author dies (if more than one author, the death of the last to die). Copyright protection for computer generated works lasts 50 years from the end of the calendar year in which the work was made.

Did you know?

There is no official registration system for copyright in the UK and the © symbol is not a requirement for something to be copyright protected. Its use is optional but often used to put a user on notice that the work is copyright protected.

Who owns copyright?

The author of the work is the first owner of copyright in the work for most types of work, except where a work is made by an employee in the course of his employment. In that case the employer will own copyright in the work, subject to any agreement to the contrary.

Where the work is commissioned, the mere fact that the commissioner paid for it does not give him the copyright; there has to be an agreement by the author to assign the copyright or there must be sufficient evidence to show that the commissioner should have implied ownership for some other reason. In cases where more than one person created the work there will be joint authorship and joint ownership.

When is copyright infringed?

There are several acts which can infringe copyright in a protected work if done without the consent of the copyright owner, including copying, issuing copies to the public, renting or lending a work to the public, performing, showing or playing a work in public, communicating a work to the public and making an adaptation (or doing any of the acts listed above in relation to an adaptation).

To establish a case of copyright infringement of a work it is necessary to show that the work has been copied. In determining this issue the court will consider the similarities between the alleged infringing work and the original work as well as the access that the author of the alleged infringing work had to it (i.e. opportunity to copy). The requisite copying can be indirect (i.e. copying something that was itself derived from the protected work) or even subconscious (the infringer does not consciously realise that they are copying the protected work, for example, because they are doing it from memory).

The whole work does not have to be copied in order for there to be copyright infringement; it is also infringement to do any of the infringing acts in relation to a "substantial part" of the work. "Substantial" refers to quality rather than quantity, so if the most interesting or important part is copied, it doesn't matter that this is only a small proportion of the whole work.

UK copyright law has no general exception to copyright infringement for fair use. Instead there are a series of specific, limited exceptions which include:

- research for non-commercial purposes
- private study
- criticism, review, reporting current events, quotation and parody
- creating temporary copies as part of a technological process to enable a lawful use (excluding computer programs and databases).

There are special exceptions in respect of software that mean that certain acts with software do not amount to copyright infringement where they are necessary for lawful use. This includes making backups, de-bugging, and decompilation (where there is lawful access to source code).

Top tip

A number of steps can be taken to assist in protecting a work:

- *Make sure all employment, commission and consultancy agreements deal with ownership of copyright.*
- *Works can be marked with a copyright notice stating that it must not be copied without permission.*
- *It is good practice to keep contemporaneous records of when works were created and by whom so that there is evidence to support copyright ownership.*
- *Including markers in a work (such as redundant lines of code in a piece of software) that can be used to easily identify when a work has been copied.*

Design rights

Design rights can protect the appearance of all or part of a physical product.

How is a design protected?

In the UK, designs can be protected by registered and unregistered design rights. Registered design rights must be applied for and granted, whereas unregistered rights arise automatically.

It is possible for a product to benefit from both registered and unregistered design right protection.

There are two types of registered right available: (i) UK registered designs (which offer protection in the UK only) and for which an application must be made to the UK Intellectual Property Office (IPO) and; (ii) Community registered designs (which offer protection throughout the EU) and for which an application must be made to OHIM (the Office for Harmonization of the Internal Market, an EU-body based in Alicante, Spain) or with the intellectual property office of any EU member state.

Top tip

The scope of protection afforded to a registered design corresponds to the representation(s) (i.e. images of the design) filed by the applicant. If the applicant includes colours as part of these images, those colours will form part of your protected design. If you wish to protect your design in any colour, it is best to use monochrome images for your design.

There are two types of unregistered design rights: UK unregistered design right and Community unregistered design right. UK unregistered design right arises automatically as soon as the design is recorded in a design document or article. Unregistered Community design protection arises automatically as soon as the design is made public in the EU.

What can you protect?

Design rights only protect the appearance of a design (patent protection may be available to protect the technology underlying the design.)

The core requirements for a design to be protected as a UK registered, Community registered or Community unregistered right, which can all protect 2D (i.e. surface decoration) or 3D designs, are the same, namely:

- **Novelty.** It must not be identical to another design or differ only in immaterial details and must not have been publicly disclosed anywhere in the world for any type of product before the application date.
- **Individual Character.** It must give an overall impression which is different to that of previous designs to a person familiar with similar designs (known as the "informed user"). When assessing whether or not the same overall impression is created, the degree of design freedom of the designer and the similarity of other pre-existing designs will be taken into account to determine the scope of protection afforded to the protected design. Where there is little design freedom (for example due to technical constraints) then small differences over existing designs may establish individual character and conversely, where design freedom is great, large differences are required.
- Features solely dictated by technical function and 'must fit' features whose shape is dictated by the need to fit mechanically with another article (such as an electrical plug) are excluded.

There are special rules in relation to rights for parts of a product that are separately made or sold "component parts". In order to qualify for protection, component parts must remain visible once incorporated into the final product, during normal use (not including maintenance and repair). The purpose of this provision is to allow repairers to supply replacement spare parts without

infringing design rights. Any right in a component part is not infringed where it is used to repair a product to restore its original appearance.

Top tip

If you want to test public reaction before committing to the expense of registering a design you can rely on unregistered rights without limiting your ability to obtain a registered right provided you apply for registration within 12 months of disclosure. However, beware that Community unregistered design protection is not available for designs which are first disclosed outside the EU. In these circumstances only UK unregistered rights (if applicable) could be relied upon until registration is sought.

For a design to be protected by a UK unregistered design right the core requirements are:

- **Original and not commonplace.** It must not be commonly used for the particular type of article in a qualifying country. Qualifying countries include EU states, UK dependencies and some Commonwealth countries but notably does not include the United States.
- **The designer or their employer must be a qualifying person.** This requires a person residing in a qualifying country or a company with substantial business activity in a qualifying country.
- **3D designs only.** This includes a shape or configuration but not surface decorations, such as patterns or colours (which can be protected by copyright).
- **Also excluded are:** methods or principles of construction, 'must fit' features and features which are dependent on the appearance of another article of which the designed article is intended to form part - 'must match' (for example, a panel of a car body).

How long does design protection last?

Both UK and Community registered rights last for a maximum of 25 years from the date of filing. Community unregistered designs last for a non-renewable period of three years from the date on which the design was first made publicly available anywhere in the EU.

UK unregistered design right lasts for the lesser of: 10 years from the first marketing of articles made to the design; or 15 years from the creation of the design document.

Who owns design rights?

Normally, the designer will be the first owner of any design right in that design and where more than one person was involved in developing the design, the design rights will be owned jointly. However, for both registered and unregistered designs, where the design was created by an employee as part of his job, the employer will generally be the first owner of any design right.

For Community registered and unregistered designs and UK registered designs, the designer will be the owner of a commissioned design, subject to any agreement to the contrary with the commissioner. From October 2014, changes in the law mean that the designer of a commissioned work will also be the owner of any UK unregistered designs. However, this change in the law will not apply retrospectively so any unregistered rights in designs commissioned before this date will be owned by the commissioner, subject to any agreement to the contrary with the designer.

How are design rights infringed?

For UK and Community registered designs and Community unregistered designs the design is infringed by the use of a design, which creates the same "overall impression" on the "informed user" as the protected design without the owner's consent. Design freedom is again an important factor in considering infringement: where there is greater design freedom, greater differences will be needed to avoid infringement.

Importantly, for both Community and UK unregistered design rights, it is also necessary to show that copying has taken place.

UK unregistered design rights are additionally infringed by making exact or substantially similar articles to the protected design.

Bird & Bird & Your Quick Guide to IP Rights

	Patents	Trade Secret	Copyright	Database Right	UK Registered Trade Mark	Passing Off	Community Trade Mark	UK Registered Design Right	UK Unregistered Design Right	Community Registered Design Right	Community Unregistered Design Right
What does it cover? 	New inventive products and methods excluding (among others) mathematical methods, computer programs and presentations of information.	Confidential information that has not been made publicly available that is subject to an obligation of confidence	Original expression, film and sound recordings	Collection of independent material arranged in a systematic way	Sign that is capable of distinguishing goods/services	Any mark or get-up	Sign that is capable of distinguishing goods/services	2D or 3D design with novelty and individual character, that is not purely functional or "must-fit"	Original 3D shape and configuration that is not "must-fit" or "must-match"	2D or 3D design with novelty and individual character, that is not purely functional or "must-fit"	2D or 3D design with novelty and individual character, that is not purely functional or "must-fit"
How it's obtained 	Application to European Patent Office (EPO) for bundle of national patents; Application to UK Intellectual Property Office for UK only patents; PCT application for applying for individual national patents around the world.	An obligation of confidence can be imposed by: Express agreement; or Implied agreement; or Due to the confidential nature of the way it is imparted	Automatic upon recording of work	Automatic provided substantial investment in obtaining, verifying or presenting contents	Applied for at UK Intellectual Property Office	The right to bring a passing off action arises when mark has goodwill or reputation; There has been misrepresentation by defendant to public; and Damage to claimant	Applied for at OHIM	Applied for at UK Intellectual Property Office	Automatic upon record of design in document or article	Applied for at OHIM	Automatic upon design being in public domain
Who owns it? 	Inventor unless developed in course of employment, or subject to an agreement	Developer unless in course of employment, or subject to an agreement	Author unless in course of employment, or subject to an agreement	Author unless in course of employment, or subject to an agreement	Whoever is named on register	Company/person with whom the goodwill is associated	As named on register	Designer unless in course of employment, or subject to an agreement	Designer unless in course of employment, or subject to an agreement because of first marketing in the UK when the first owner is the person who first marketed.	Designer unless in course of employment, or subject to an agreement	Designer unless in course of employment, or subject to an agreement
How long it lasts? 	Up to 20 years (further extension possible for some pharmaceutical related rights)	Until no longer confidential	Depends on work -generally author's lifetime +70 years for films, literary, artistic and musical works; +50 years for computer generated works	15 years from creation but extended upon substantial change	Forever provided renewal fees paid	As long as goodwill/reputation can be established	Forever provided renewal fees paid	Up to 25 years	10-15 years	Up to 25 years	3 years

Note: Quick guide correct at time of writing – February 2015 The information given in this table concerning technical legal or professional subject matter is for guidance only and does not constitute legal or professional advice. Always consult a suitably qualified lawyer on any specific legal problem or matter. Bird & Bird assumes no responsibility for such information contained in this document and disclaims all liability in respect of such information.

Database rights

Collections of data can be valuable and may be protected using database right.

What is database right?

A database is defined for the purpose of database right as a collection of independent works, data or other materials arranged in a systematic or methodical way which are individually accessible by electronic or other means.

How do you get a database right?

To have a database right you must have made a substantial investment in obtaining, verifying or presenting the contents of the database. This investment means expenditure on finding and collecting independently created materials, not expenditure on creating those materials in the first place. For example, a list of racing fixtures and runners was held by the courts not to be protected by database right, because the substantial expenditure was incurred in creating the materials in the list, not the list itself. There is no registration or other formality - the right arises as soon as the database is completed.

Did you know?

Database rights can exist in ways that are not always obvious. For example, a website may be a protected database as it consists of a series of individually accessible web pages and parts of software such as look up tables may also be protected as a database.

How long does a database right last?

Database rights last for 15 years from the end of the calendar year in which the database compilation

was completed or, if the database was made available to the public before the end of this period, 15 years from the end of the calendar year in which the database was made available. However, this period may be extended if a substantial change is made to the contents of the database, involving substantial new investment, when a new 15 year term will apply.

Who owns database rights?

The first owner is the maker of the database. 'Maker' is defined as being the person who takes the initiative and assumes the risk in obtaining, verifying or presenting the contents of the database. Where the work is done by an employee as part of his job, the employer is regarded as the maker unless there is an agreement to the contrary. Where the database is created for a business by a contractor, the database right is probably owned by the business as it assumes the risk, but it is better to have certainty through a clear agreement on ownership with the contractor.

How are database rights infringed?

Database rights are infringed by extracting or reusing all or a substantial part of the contents of a database without permission. Further, the law is clear that repeated and systematic extraction or re-utilisation of insubstantial parts of the database can be an infringement, the cumulative effect of taking small amounts being the taking of a substantial amount. Transferring a substantial part to a new medium, or making a manual copy of the data after looking at the database, is also extraction.

Why copyright may not be enough

There are certain exceptions to the scope of protection offered by copyright that mean it is important to consider other rights, in particular:

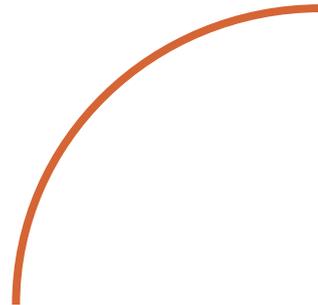
3D Designs

Other than for a 3D design with artistic qualities (e.g. a sculpture or ornamental furniture) it is not an infringement of copyright in a design document (such as an engineering drawing) recording or embodying a design to make an article to the design document or copy an article made to the design. This means that copyright infringement in relation to the design only occurs when a 2D copy of the design document is made (e.g. a photocopy). In order to protect the 3D embodiment of a non-artistic design, design rights have to be relied upon.



Databases

If the database contains individual items which are themselves works then each of these will individually benefit from copyright protection. However, compilations of data and the structure of a database are only protected by copyright where there is some degree of creativity in the selection or arrangement of the contents. This can be a difficult hurdle to overcome and therefore it is generally better to seek to rely on database rights.



Scope of protection

It is important to be aware that in relation to unregistered rights (UK and Community unregistered designs, copyright and database rights) an essential element of proving infringement is to demonstrate copying. This is not necessary in relation to registered rights which grant monopoly protection (patents, registered designs and registered trade marks). Registered rights therefore offer wider protection and are generally easier to enforce.

Bird & Bird &
Protecting brands



Trade marks

Trade marks are used to protect a brand from use by competitors.

What is a trade mark?

Trade marks are signs that are used to identify the origin of goods and services. Trade mark protection is considered to be in the public interest, both in protecting the work and expenditure required for a business to build up a reputation that is associated with a particular mark, and to protect the public from fakes which are usually of inferior quality.

How do you protect a trade mark?

A trade mark can be protected by registering the mark. However, they can also be protected in the UK as unregistered rights through the law of passing off, as discussed in the next section.

UK only registered trade marks can be applied for at the UK Intellectual Property Office (IPO) but it is also possible to file for a CTM (Community trade mark), applied for at the OHIM (the Office for Harmonization of the Internal Market), which covers all the member states of the EU.

Following an application for a mark, the relevant registry may raise objections relating to the fact that the mark does not satisfy the registrability requirements discussed in the next section. It is possible to file submissions and evidence to try and overcome any substantive objections made. Once an application is accepted it is published in the UK trade marks journal (UK-only marks) or OHIM Official journal (CTMs) and third parties have a maximum of 3 months from this date to oppose registration. An opposition can be made by anyone on the basis of a failure to meet the registrability criteria or by an earlier right holder because the mark applied for is the same or too similar to their right. If no objections are raised the application will proceed to grant.

When preparing to apply for registration, you must consider what goods and/or services the mark is to be used in relation to because a registration will only cover specific goods or services. There is an

internationally agreed system used to classify goods and services for the purposes of the registration of trade marks, called the Nice Classification.

Did you know?

There is no automatic right for the owner of a registered trade mark to register a domain name incorporating the trade mark and registering a domain name does not mean that the name is a registered trade mark. However, in certain circumstances, action can be taken against so called "cyber squatters" who use a domain name that incorporates a trade mark of another person.

What can you register as a trade mark?

A trade mark must satisfy certain requirements in order to be registered including that, it must be:

- **A sign.** This can be many things such as a word, logo, colour, shape (for which there are further requirements), sound, and even smell;
- **Capable of being represented graphically.** This requirement is particularly relevant to registered trade marks which are not words or symbols. Colour marks must be described using an internationally accepted colour classification system (such as the Pantone system), sounds are usually described using musical notation;
- **Capable of distinguishing goods and services.** This requirement is judged with reference to the goods and/or services in respect of which registration is sought and asking whether the mark enables the origin of the goods and/or services to be distinguished from others; and
- **Not descriptive and not customary.** These requirements are in the public interest to ensure that descriptive and customary terms can be freely used without infringement.

The requirements that the mark has distinctive character and is not descriptive or customary may not be necessary in the event that a trade mark has acquired distinctiveness through use. This will generally be the case where a significant proportion of the public have been exposed to the mark such that they associate goods and or services bearing the mark with a particular undertaking.

Top tip

A successful mark may lose protection if it becomes a generic term for referencing the product. If you own a successful mark you must take steps to avoid the mark becoming generic, including regularly reminding the public that it is a trade mark, not a generic name.

How long does a registered trade mark last?

Provided that the registration is renewed every 10 years, a trade mark can last indefinitely, however the registration can be revoked if:

- it has not been used for five years;
- the mark has become the common name for the goods or services it is registered for; or
- the mark has become misleading.

Who owns a registered trade mark?

A registered trade mark is owned by the entity named as owner on the relevant register. The owner is normally the company or other entity using the trade mark in its business.

Top tip

Unlike for patents and designs, a trade mark application can be applied for at any time however it is advisable to apply for a registered trade mark prior to launch to prevent third parties subsequently registering the same or similar marks.

How is a registered trade mark infringed?

A registered trade mark is infringed when used, in the course of trade, without consent. There are four types of infringement, depending on the accused mark and on the goods or services on which it is used. For some types of infringement it is necessary to show a likelihood of confusion. This means that it must be shown that the use of the allegedly infringing mark is likely to cause the average consumer to be confused as to the origin of the goods or services. The requirement to prove infringement in each case is:

- identical marks and identical goods - generally speaking, nothing further needed;
- identical marks and similar but not identical goods - must show likelihood of confusion;
- similar mark and identical or similar goods - must show likelihood of confusion;
- identical or similar mark on non-identical or dissimilar goods - must prove mark has a reputation, use is without due cause, and that the use takes unfair advantage of or is detrimental to the character or reputation of the mark.

Did you know?

European rules on the free movement of goods mean that once goods bearing a registered trade mark are placed on the market in one EU member state with permission of the trade mark owner they can then be freely distributed and sold in other member states (often referred to as "parallel trade"). The trade mark rights in these circumstances are said to be "exhausted".

There are a number of defences to trade mark infringement, the most important being that: the defendant is honestly using his own name or; the mark is only being used to describe the goods or services or the purpose for which they are intended. The defendant can also challenge the validity of the mark on the basis of earlier rights.

If infringement of a valid mark is found, there will normally be an injunction against further use and delivery up or destruction of goods with the infringing mark in the defendant's control as well as monetary compensation.

Passing off

Passing off can protect a brand from use by competitors even if no trade mark has been registered.

What is passing off?

Passing off is a common law action, developed over the years by the courts. In general, passing off occurs when goods or services are misrepresented as to their origin, so for example as being those of another. A passing off action can protect a trade mark even where it has not been registered and no formalities are required in order to protect a trade mark in this way.

How do you bring an action for passing off?

The potential scope of protection offered by an action for passing off is wider than that for trade mark infringement as there are no requirements for registrability. However, there is a higher evidentiary burden on a claimant which can make pursuing an action expensive. To bring an action, a claimant must establish:

- Goodwill attached to the goods or services within the UK.
- A misrepresentation by the defendant to the public that leads or is likely to lead the public to believe, for example, that the goods or services offered are those of the owner of the goodwill. This involves proving, on the balance of probabilities, that a proportion of the public would be confused or deceived as a result of the defendant's misrepresentation.
- Damage to the claimant as a result of the misrepresentation that the defendant's goods or services come from the same source as those offered by the claimant.

Did you know?

Protection in the UK for unregistered marks is different to that in the US and most other European Countries where more general laws of "unfair competition" may apply.

It is the owner of the goodwill attached to the goods or services that can bring an action for passing off. Goodwill may be jointly owned and joint owners may sue one another for passing off if one's activities threaten those of the other.

The state of mind of a defendant is irrelevant, it does not matter whether or not it was intended that the goods or services would be passed off as those of another or whether any malice was intended.

A successful claimant in a passing off action will generally get an injunction and financial compensation. However, damages can be hard to quantify, particularly when assessing damage to reputation over and above lost sales. There may be such damage if, for example, the defendant's products were of poor quality.

Top tip

It is advisable for companies looking to protect their get-up to maintain records that show the use of their particular get up and trade marks for example in advertising campaigns, sponsorship deals and on labels. Maintenance of such records may be helpful in establishing goodwill for a passing off action and a reputation or acquired distinctiveness for the purposes of a trade mark infringement action.

How you should protect reputation: when and where to register a mark

What type of mark do you have?

As discussed above, not everything can be registered as a trade mark. For example the overall get-up or look and feel of a brand often cannot be registered as a trade mark. Where a registered trade mark cannot be obtained protection may be found in a passing off action. It is possible to bring an action for trade mark infringement and passing off at the same time and there are instances where actions for trade mark infringement have failed but those for passing off have been successful.

Which jurisdictions do you want to sell the goods and services in?

A passing off action only applies in the UK and there are different unregistered rights in other jurisdictions. Where you intend to conduct business in more than one European country, a CTM can be helpful.

Do you have goodwill in the mark?

Establishing the evidence required to show the existence of goodwill for a passing off action can be time consuming, expensive and also incredibly difficult if a product is new on the market. To establish infringement of a registered trade mark there is no need to establish goodwill and so an action can be more straightforward to pursue.



Bird & Bird & IP exploitation



Transferring IP rights

How are IP rights bought and sold?

IP rights are a form of property that can be bought and sold like any other form of property. When ownership of IP rights is transferred an IP assignment is used. IP assignments must be in writing and signed by the assignor (the person from whom the IP right is being transferred). Sometimes an assignment will include obligations on the assignor and in these circumstances; the assignee (the person receiving the IP right) should also sign in order to be able to enforce those obligations.

The transaction is usually straightforward for registered IP rights such as patents, trademarks and registered designs however, can be more complicated for unregistered rights where the precise rights being transferred will need to be identified.

Top tip

Always obtain tax or transfer pricing advice before assigning IP. While stamp duty is not payable for assignments of IP, VAT and corporation tax issues may arise.

Can I legally use someone else's IP?

The owner of an IP right can choose not to exercise their right to stop others from using it. This can be done by means of a formal agreement called a licence. A licence enables the owner of the IP to share the risks and benefits of the exploitation, and the licensor (person licensing the IP right) will often receive royalty payments. A licence can be oral, or even implied as part of another relationship or contract, but is most usually (and preferably) in express written form. A licence can enable a licensee (person receiving the licence) the opportunity to save resource, time and money in developing a product and getting it to the market.

For the private inventor or small company licensing can be particularly attractive as it allows them to obtain revenue in return for the licence without having to invest in the resources required to exploit the IP themselves. Licensing is also important in order to promote interoperability and standardisation. The use of licensing further allows companies to individually focus on their specialist areas and work together to create a final product.

Did you know?

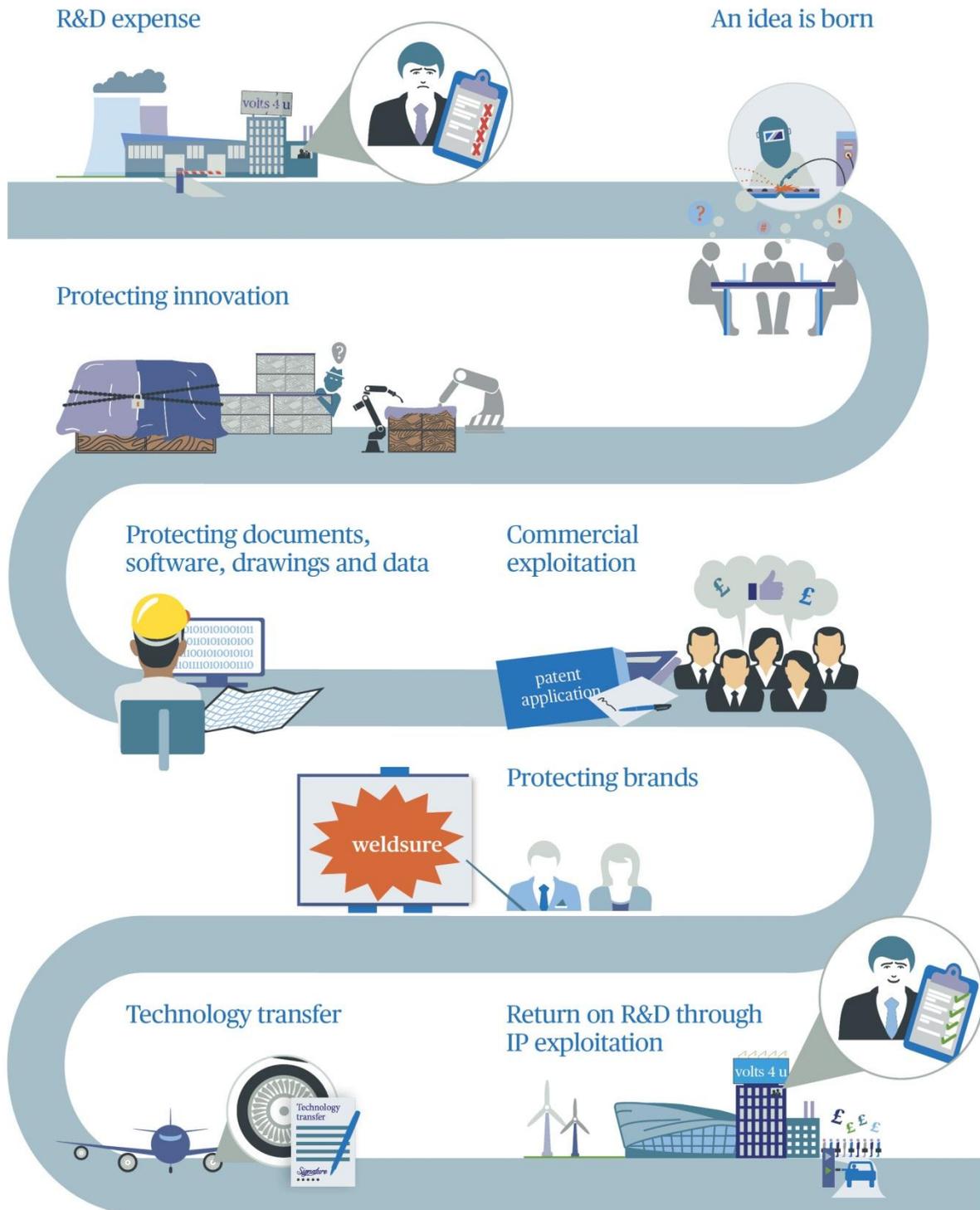
EU competition rules require intellectual property owners participating in standards development to declare all intellectual property that is potentially "essential" to a standard and to give a commitment that such intellectual property will be licensed on fair, reasonable and non-discriminatory (Frand) terms.

There are three main types of licence:

- **Exclusive** - only the Licensee can use the IP, even the owner is excluded
- **Sole** - only the Licensee and the owner can use the IP
- **Non-exclusive** - the owner can continue to use the IP and grant non-exclusive licences to other people.

Any of these types of licence can also be limited in scope and by technical field. For example, a patent may be licensed for a specific product or technology which comes within, but does not completely cover, the scope of the patent claims: a patent for a general computerised braking system could be licensed to one manufacturer for cars and to another for lorries. Licenses may also be limited in time (fixed duration, up to the life of the relevant IP right) and by territory. At the end of the term of the licence, the rights revert back to the licensor, who is then free to commercialise the IP again, perhaps with others.

IP exploitation in practice



From creation to commercialisation

Our case study follows the development and commercial exploitation of a novel test rig for creep-fatigue testing of welded joints. It is fictional but the facts are close to real life and we hope this helps you to see how the IP rights described in this guide are important in practice.

An idea is born

During the service life of industrial equipment welded joints are often subjected to high temperature environments under mechanical strain and thermal cycling. These conditions result in a risk of weld failure through creep fatigue. This is a particular problem in power plants where the required service life is long.

Due to constraints restricting the manufacture of new power plants, an energy supplier "Volts 4 U" is looking to extend the life of its existing power plants. However, one of the main concerns is that the authorities will not grant a life extension for the plants because of a lack of confidence in the structural integrity of the welded joints in the infrastructure. A meeting is organised and it is decided that an incentive scheme should be set up to ask employees to come up with ideas to test the welded joints in the existing plants to confirm their structural integrity.

One of the Volts 4 U engineers comes up with a novel design for a new test rig that uses relative differences in the thermal expansions of different materials to produce an applied displacement across a sample weld which can be used to measure its structural integrity. The rig has the inventive concept that the very same temperature cycling to which an in service weld would be subject causes applied loads in the test sample sufficient to cause creep fatigue and is therefore representative of in service conditions. Moreover, the cycling applied to the rig itself causes the displacement resulting in no need for the extra expense of loading apparatus.

Precautions to protect this inventive idea must be taken. At this stage, the idea is probably too sketchy for a patent to be filed. No way of putting

the idea into practice has yet been thought of. Indeed, it is not yet certain the idea can be made to work at all. Therefore, it is vital that the idea is kept secret (if a public disclosure is made this could prevent future patent protection being granted). Those who know about the invention must agree to keep information confidential, and employees who are assigned to work on developing the product must do the same. Any documents which reveal the idea for the test rig should be marked and treated as confidential. It is particularly important to keep track of employees who know about this project, in case any of them leave to work for a competitor. In the event of that happening, the departing employee must be warned that this information is confidential and must not be imparted to the new employer. Visitors to the premises should be kept away from anything that would disclose the project.

Research and development

After considerable work, the engineers come up with a test rig design. They perform hand calculations to confirm the predicted strain cycles and conduct a finite element analysis (FEA) of the rig under thermal cycling. They also prepare engineering drawings for the rig's manufacture. They then work on developing data logging software that can be used with the rig to record the measured strains. They also start to collate the required in service strain tolerances specified by the relevant regulatory bodies so that these can be used to determine whether or not the measured strains are acceptable.

At this stage, a lot of potentially protectable items have come into being.

The test rig

Both the method for measuring creep fatigue used by the test rig and the test rig itself are potentially patentable.

One advantage of applying for a patent at an early stage of development is that there is less risk of loss of patent rights through a non-confidential disclosure. The main disadvantage of early application for a patent is that it is usually too soon to be able to ascertain the commercial importance of the invention, and so know whether the cost of applying for a patent will be justified. Further, the process of commercial production may lead to significant improvements in the design, which will require further patents for protection. The alternative is to keep the design a trade secret.

Volts 4 U decide to maintain the test rig design and the method used as a trade secret until an operative prototype has been developed and the first results exchanged with the authorities. They want to find out whether or not the authorities accept the results from the rig before committing to the expense of obtaining patent protection. They decide to accept the risk that other companies may develop the same thing and file an application before them and that they must rely on a non-disclosure agreement with the relevant authorities in order to ensure that the requirements of novelty will be maintained.

The data-logging software

There are several kinds of intellectual property which are relevant to the protection of the data-logging software, and they are not all mutually exclusive. The software source code will be copyright protected and since the source code is not published may also be treated as confidential information. The measured strains collected and stored by the data-logging software will not be protectable per se, but the way the results are ultimately presented may be protected by copyright.

The databases containing the strain tolerances are likely protected by database rights given the resources expended in finding, checking or presenting the data from the relevant regulatory bodies.

The engineering drawings

The drawings themselves are protected by copyright but the 3D design will not be. The 3D design is also unlikely to be protectable as a registered design as it is purely functional, this also excludes protection

through Community unregistered design rights. UK unregistered design right protection may protect the rig design provided it is original and not common place, however, any features of the design which enable the rig to fit with another article or are dependent upon another article will not be protectable.

Commercial exploitation

The test rig proves to be very popular with the regulatory authorities who are impressed with the reliability of the results from the rig and its high cost effectiveness compared to alternative test apparatus. The authorities approach Volts 4 U to see if they can obtain rights to use the rig for testing welds in power stations run by other energy companies who are also trying to obtain permission to extend their life.

Volts 4 U consider this to be an excellent opportunity. They approach specialist IP lawyers to assist in the process of putting suitable agreements in place with the authorities. They are advised to obtain patent protection for the test rig as it will be difficult if not impossible to maintain it as a trade secret once the idea is disclosed outside the internal team especially since it is possible to reverse engineer the test rig from visual inspection. A single patent is filed covering the method used by the test rig and the test rig design.

An agreement is negotiated with the authorities whereby they are granted a licence to the patent and data-logging software for testing the material integrity in welds for power stations. During the licensing negotiations the lawyers are careful to make sure that they limit the field of use of the licence to only power station testing in the UK so that the licence does not interfere with any separate licensing of the patent in other fields (or countries). They also ensure that only a non-exclusive licence is granted so that Volts 4 U retain the ability to license the patent further and use it themselves.

The corporate team decide that it may be possible to reach similar licensing deals with other authorities around the world for the purposes of testing power station welds. They decide to develop a brand that can be associated with the rig for marketing purposes. One name proposed is 'CreepTest' but Volts 4 U are advised that this would likely be refused registration because it is descriptive. As an alternative the name 'WeldSure' is proposed and a search of the OHIM (the Office for Harmonization of the Internal Market) and US

trademark registers reveal nothing closely resembling 'WeldSure' in the relevant classes. Accordingly, this name is selected and CTM & US trade mark applications are filed, covering a suitable range of relevant goods and services.

Technology transfer

One of the engineers in the original design team previously worked on turbines for jet engines and recognised that the test rig could also be used in this field. The engineer mentions this to the corporate department who instantly recognise that the test rig could potentially be a fruitful source of income for the company if it can be licensed out for other applications.

The corporate team ask the engineers to think about how the test rig could be used in other applications. The engineers select 3 sectors for which the application of the test rig should be considered. One of the engineers speaks to their contact at a preeminent university engineering department to explore the possibility of feasibility studies being conducted by students as part of a Masters thesis. The University agrees to provide 3 students for the studies and an agreement is put in place so that that any IP generated as a result of the work performed by the students is assigned to Volts 4 U. In order to ensure that this agreement is effective Volts 4 U confirms that each of the students have signed agreements with the university to the effect that any IP they generate during the course of their studies is first assigned to the university.

The results from the feasibility studies are very encouraging and off the back of them Volts 4 U is able to secure three further licensees to their patent in different fields of use.

Conclusion

This case study illustrates the important role that intellectual property rights play for engineering companies by providing a mechanism to commercially exploit investment in research and development by allowing inventive output to find an avenue to those better placed to exploit it.

Useful contacts

The UK Intellectual Property Office
www.ipo.gov.uk

World Intellectual Property Office
www.wipo.net

Office for Harmonisation in the Internal Market
oami.europa.eu

European Patent Office
www.epo.org



“The sheer number of supremely talented and respected IP specialists at the firm contributes to its position at the pinnacle of the market.”

Chambers & Partners UK

This guide is limited to English law. While certain IP rights provide European Community-wide protection, others are purely national rights, so if you require information regarding IP protection elsewhere, country specific advice will be required.

For more information on this guide or for further IP advice, please contact the following:-



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