# FROM IDEA TO MARKET-PLACE

## An Introduction to UK Technology Law

BIRD & BIRD

This booklet provides a general introduction to some aspects of UK technology law. It is not intended to be exhaustive, nor can it provide the detail necessary to give guidance in relation to any specific problem. Appropriate professional advice should be sought in relation to any specific circumstances.

The position is stated as at August 1988. © Bird & Bird 1987, 1988
Second Edition

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## An Introduction to UK Technology Law


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# INTRODUCTION

Every day technology rights are created, traded and litigated. Occasionally these activities have spectacular results, such as Kodak's withdrawal from the instant film and camera market following Polaroid's successful United States patent infringement lawsuit.

Cases such as this illustrate the value of properly secured technology rights. In the same way that there are property rights that protect the ownership of assets such as land, buildings and motor vehicles, so property rights such as patents and copyright can protect the ownership of inventions and industrial designs.

In fact the most valuable assets of a high technology business may be its inventions, know-how and designs. For such a business it is particularly important to pay proper attention to securing its rights in this "intellectual property"; and any business, large or small, involved in manufacturing, buying or selling technology is likely to benefit from ensuring that its intellectual property is properly protected.

Once technology rights have been secured, many further points have to be considered when financing and commercialising a technology venture and marketing the resulting products. Hence the theme of this booklet, "From Idea to Market-Place."

At the stage of commercialising and marketing, the business may be subject to external constraints that limit (or sometimes enlarge) its freedom of action in exploiting its technology rights. These constraints range from UK and EEC competition law, through statutory regulation (sometimes directed to specific industries) to technology rights owned by competitors. This booklet outlines the main considerations in these areas, dealing in particular with computers, telecommunications, and biotechnology.

The financing of a technology venture raises yet further considerations. This booklet outlines possible sources of finance, the conditions that investors are likely to require and some of the points that a potential investor should consider before investing in a technology-based company.

Finally, the booklet sets out some of the steps that can be taken in the courts to enforce technology rights. This is most likely to arise once a product or process has become successful in the market-place.

# INTRODUCTION TO THE SECOND EDITION

When the first edition of this booklet was prepared, the authors little thought that it would be so enthusiastically received and generate such interest that it ran to two reprints. The year since it was written has seen the passage of the Copyright, Designs and Patents Act 1988 ("the new Act"), which amends and restates the entirety of UK copyright and designs law. Whilst the most significant changes that it makes to the law were predicted in the first edition of this booklet, now that the likely form of these changes is known (although at the time of writing the new Act has not yet received Royal assent) it seems opportune to produce a new edition. The authors do not, however, undertake to make a new edition an annual event!

# PROTECTING THE IDEA

## 1. SECURING TECHNOLOGY RIGHTS

### 1.1 In the UK

Intellectual property is the general name given to a number of quite different legal rights (all with different rules as to their creation and exercise) with which commercial ideas and technology can be protected. These are primarily, in relation to technology, patents and copyright. Of the other rights, that of confidential information can be significant in the context of protecting trade secrets. The other major intellectual property right, trade marks, does not directly protect ideas and technology and is discussed in the section dealing with commercialising technology.

The value of such intellectual property rights lies in the fact that, unlike a restrictive covenant in a contract, which is only effective against the person with whom the contract is made, an intellectual property right in a particular country is effective against anybody in that country. They are also (in general) "property" which can be transferred or licensed, rather like a piece of land, and so constitute something identifiable of interest to potential backers.

The rights in the various different types of intellectual property vary considerably. Intellectual property generally only provides a right to *stop* others doing something; it does not give the owner a positive right to do something that he could not otherwise do. The scope of these negative rights depends to some extent on whether or not official registration is required. If registration is necessary, the law tends to confer a limited monopoly on the owner which means that no one is entitled to exploit the subject-matter of the rights, not even someone who develops the same invention or design independently of the registered owner of the rights. If registration is not necessary the only protection is against copying, when the existence of any link between the third party and the originator or authorised user of the rights becomes important.

The new Act has amended much of UK intellectual property law, in particular amending and restating copyright and designs law. It is not yet known when it will be brought into force but this is imminent. Where it affects the position, this is stated in the text.

#### 1.1.1 Patents

##### 1.1.1.1 Patents - Scope

Patents are intended to cover new processes and devices which are of practical commercial utility. They are granted for inventions made in most fields, although there are certain areas where patents cannot be obtained, e.g. for mathematical rules and schemes, and inventions relating to surgery.

The basic idea of the patent system is that in exchange for the inventor publishing details of his invention and how to make it work he obtains from the state a limited monopoly over his invention, for a period of 20 years. Thereafter the invention is available for the public to use freely.

A patent can be used to prevent third parties from making patented articles or using a patented process, irrespective of whether the third party has deliberately copied from the patentee or has done his own design or research work in total ignorance of the patent. A granted patent has a number of statements at the end called the claims, which define the area of the monopoly. If a competitor's product falls within the scope of any of these claims then, on the face of it, this is an infringement of the patent.

However, the possession of a granted patent duly examined and issued by the Patent Office does not guarantee that it is a valid patent as it is open to third parties to say that the patent is invalid, for example because the "invention" is not new.

##### 1.1.1.2 Patents - Ownership

If an inventor makes an invention then it is he who is primarily entitled to apply for a patent. However if he is employed and the making of the invention was part of his job then his employers are automatically entitled to the invention and to make the application. If the invention is later determined to be of outstanding benefit he may claim compensation. However employees who are not employed to invent, or who are working well outside their normal remit may well own the

invention themselves, irrespective of any provision in their contracts of employment to the contrary. It should also be recognised that a director is not necessarily an employee of his company although he may hold any patent that ensues on trust for the company.

1.1.1.3 Patents - Procedures

An application for a patent must include a detailed "specification" describing the invention and explaining in sufficient detail how it can be carried out and also containing the claims. The drafting of such a specification and claims is a specialised task undertaken by registered patent agents, most of whom are members of the Chartered Institute of Patent Agents. They will also attend to the subsequent prosecution of the patent.

The filing of an application does not give the applicant any protection as such. The application has to be formally examined by the Patent Office (to see that it appears to be novel and involves some inventive step) and it is only after meeting any objections raised by the Examiner and after the grant of the patent that any monopoly is acquired. The initial application (and any corresponding foreign applications, which have to be filed within 12 months) remains secret until published by the Patent Office, normally 18 months from the filing date.

A patent, if it is to be valid, must cover that which is new. Thus re-invention of the wheel does not lead to a valid patent; indeed in theory it should lead to no patent at all. However the wiles of inventors are such that they may convince the Examiner to the contrary! When a patent application has been filed the Patent Office Examiner will usually carry out a search through the literature to find out whether the invention claimed really is novel and inventive or not. In order to do this search the Examiner looks only at material (often called the "prior art") published up to the date of filing of the patent application which he is examining. The applicant can therefore sell samples of his invention the day after filing his application without any risk of jeopardising the application, as that which he does *after* the filing date does not count. It is worth mentioning that it is not just publication in writing which can destroy novelty in an invention but also oral communication (for example in a lecture) and prior use of the invention.

Those unfamiliar with the patent system often feel instinctively that publications made by the inventor himself should not count and should not destroy the novelty in his invention. This is not usually the case and it is important that the first application is filed before any "publication" of the invention is made.

An inventor trying to obtain financial backing for his invention should therefore ensure that his patent application is filed before he starts trying to interest potential business partners. He can to some extent protect his position before filing a patent application by making any disclosures only to those who have signed an enforceable confidentiality agreement as this is not regarded as "publication." However this is not ideal and indeed many potential business partners may well not accept unsolicited new ideas on such terms. However, the inventor may have no alternative if he needs backing to develop his basic idea to the stage where it becomes patentable.

The over-astute inventor might decide that it was best to file a patent application as soon as the basic idea has come to him. However that is not likely to work. Patents are not intended to protect ideas as such, only those ideas which are practically useful. So before the basic application is made it is necessary to have done something more than just have the basic idea; some tokens of putting the idea into practice must also have been obtained. This is to prevent applicants from trying to obtain a monopoly on mere pipe dreams. The only (limited) protection which mere ideas can acquire is under the law of confidential information.

1.1.2 Registered Designs

Registered Designs are used to protect the "eye appeal" of goods and include, for example, designs and patterns applied to textiles and shapes and ornaments applied to goods; for example the shape of the "Dimple Haig" whisky bottle. Registered Designs are similar to patents in that the designer permits his design to be published in return for securing limited monopoly rights. Furthermore, the registration can be invalidated.

The new Act extends the protection from 15 years to 25 years in the case of applications

made after commencement of the relevant Part of the Act. The test of registrability is intended to be stricter under the new Act. Transitional provisions will affect some applications made prior to commencement.

### 1.1.3 Copyright

#### 1.1.3.1 Copyright - Scope

Copyright was originally intended to offer protection from plagiarism of the fine arts; for example music, drama, sculpture, paintings and literature. However in the UK artistic copyright has also provided a means of preventing the reproduction of functional articles and has accordingly been a valuable means of protecting technology. Literary copyright has also come to be of particular significance as a means of protecting computer software.

Copyright, as the name implies, protects only against copying; not against independent design of something which looks or sounds objectively similar. However, copyright does not simply cover slavish copying; it can prevent the production of copies in which a substantial part of the copyright work has been taken, even although there may also be substantial differences. Thus to escape infringement it is not enough to identify a number of differences; what is significant is whether the most striking, or most original, features of the copyright work have been taken or not.

It is sometimes said that copyright does not protect ideas, but only their "expression," or their concrete embodiment. This in general terms is true but in very strikingly original works the protection afforded can come close to protecting the underlying idea. Copyright protection subsists for a considerable time, up to 50 years after the death of the author.

Before the passage of the new Act copyright had come to assume particular importance in the UK as a means of protecting functional designs. However, functional designs brought into existence after the coming into force of the new Act can no longer be protected by copyright, and the new unregistered design right (see section 1.1.4) is intended to replace that protection. But drawings prepared before the coming into force of the new Act will still, for 10 years after that date, continue to be available as copyright works to protect from copying functional designs based on those drawings. For the last 5 of those years anyone will be able to obtain a licence as of right at a royalty to be determined by the Patent Office in the absence of agreement.

#### 1.1.3.2. Copyright - Ownership

Unlike a patent, copyright arises as soon as the author, artist, sculptor, composer or draughtsman has created the copyright work. There is no need to register this; and any arrangements for deposit serve only to allow an author to establish that he had created a particular copyright work at a given date. Subject to agreement otherwise copyright is generally held by the individual who created the copyright work, unless such creation is part of his job when it will be held by his employer.

Copyright is one of the areas where ownership can be most problematic. Thus an employed draughtsman who prepares plans or drawings will not own the copyright; however if the same drawings are produced by an outside consultant that consultant is the legal owner of the copyright. Similar principles will apply to a computer programmer employed by a company, as against an outside software house retained by them. However, in either case, if the work has been paid for then the company may be beneficially entitled to the copyright. But in this case the company has no right to take proceedings (other than interlocutory proceedings) on the copyright. Outside contractors can be slow, and in many cases reluctant to assign such copyright to the company. It is therefore advisable to make suitable provision for assignment of copyright at the outset wherever outside consultants are involved. Such pre-planning is typically dealt with in a commissioning letter or in a more formal consultancy agreement.

### 1.1.4 Unregistered Design Right

To make up for the abolition by the new Act of copyright protection for drawings of functional designs the new Act has created a new design right. Designs which are not "commonplace" will automatically attract the new design right without the need for registration. There are exclusions, known as the "Must Fit" and "Must Match" exemptions which are primarily

intended to exclude car spare parts such as exhaust pipes (which "must fit" a certain car chassis) and body panels (which "must match" the rest of the car). However, these exclusions may in practice be used further to reduce the practical scope of the new right. In any case, the period of protection under the new right will be less than any other intellectual property right; it will only last for 10 years from the end of the year when the article is first marketed or 15 years after it was first designed (whichever period expires first). For the last 5 years of its life anyone will be able to obtain a licence as of right at a royalty to be determined by the Patent Office in the absence of agreement. The new design right will only be available to UK (or other EEC) residents or nationals and to those of other countries which are designated as providing adequate protection for UK designs.

### 1.1.5 Know-how and other Confidential Information

Only certain types of information can benefit from the protection afforded confidential information, for example trade secrets which, as their name implies, will tend to be secret formulations or processes. Additionally the law of confidential information can protect matters such as "know-how" as to the detailed operation of processes (where the general nature of the process may not in itself be a trade secret as such because it may for example be patented) and customer lists.

To be capable of protection in this way the information must not only be "confidential in nature" (not generally available) but also initially disclosed in circumstances "importing an obligation of confidence" (i.e. imparted to someone who had an obligation to respect the confidence and not to disclose the confidential information).

This protection is only against a person who has received the confidential information and proposes to make use of it. The protection is not restricted to the original recipient of the information but can stop subsequent, innocent, recipients of that information (if it was originally impressed with the obligation of confidence) from using it or from disclosing it to others. Although information can in theory be kept confidential indefinitely, in practice it is rare for confidential information to continue to have value for more than 10 years or so.

As confidential information is not, under English law, a recognised species of property it cannot be said to be "owned" in quite the same way as other intellectual property. However an employer will generally be able to assert rights in respect of trade secrets generated by its employees.

In order to protect such information, it is advisable before its release to a third party, whether for the purpose of product evaluation or otherwise, for that third party to be required to enter into a confidentiality undertaking. This should avoid any doubt that the information is disclosed in circumstances "importing an obligation of confidence."

### 1.1.6 Plant Breeders Rights

These are proprietary rights which can be obtained by people who breed or discover a new plant variety. These rights are a little like patents in that they can be used to prevent third parties from commercially offering propagating material without a licence. However the rights cover only the particular variety which has been registered and do not cover any derived variety. Anyone may freely use the variety to try to create new derived varieties. The creator need not (unlike a patent) describe how the new variety was obtained, and although a deposit of a sample of the propagating material is necessary, this is not made publicly available.

### 1.1.7 Semiconductor Product Topographies

This is a new form of intellectual property protection introduced in the UK under an EEC directive intended to establish a system equivalent to that already existing in the USA and Japan for the protection of integrated circuit layout designs (sometimes referred to as "mask works"). The protection is similar to but in certain respects less extensive than that previously afforded such works by the law of copyright in the UK.

## 1.2 Securing the Position Abroad

The rights discussed above are essentially those which subsist in the UK and by and large they only cover activities in the UK. If one wishes to obtain protection in foreign countries one has to examine the various different types of rights involved in each country in question. Whilst most countries tend to have some type of patent system the detailed rules vary quite considerably from

country to country. Usually (except in a few UK linked territories, like Hong Kong) it is necessary to file a number of separate applications to obtain patents in all the countries desired although there are now certain provisions for making a single application to cover more than one country (see Section 1.2.2.2). Most countries also have systems for the registration of designs but some will also protect designs which are not registered by unfair competition laws.

### 1.2.1 Copyright

The position as to copyright is somewhat special as it is enjoyed in many countries without further formality. This normally arises because the UK adheres to the Berne Copyright Convention. The only major country which does not adhere to the Berne Convention is the USA which adheres only to the Universal Copyright Convention to which the UK and most other countries also adhere. Nowadays the protection afforded to authors in the UK in relation to exploitation in the USA is broadly similar to that provided under the Berne Convention although there are advantages from the point of view of protection in the USA in ensuring that any copyright works incorporate a copyright notice and in registering copyright in the USA. However there is now strong support in the USA for adhering to the Berne Convention and so these differences may not last for long.

### 1.2.2 Patents

Generally speaking a patent is only effective in the country in which it has been obtained. Hence a granted UK patent is effective to prevent unlicensed third parties from making or selling the patented product in the UK. However it is completely ineffective against such products for example made in Taiwan and sold in France. To be able to stop that one needs a patent, either in France or in Taiwan (or both). There have been a number of moves to simplify and standardise the procedure for obtaining patents abroad; but this is still an area where it is necessary to examine each case individually.

#### 1.2.2.1 Filing and the Paris Convention

One of the most important aspects of obtaining patent protection abroad is an international convention called the Paris Convention, to which most countries adhere.

As we have already seen, after a patent application has been filed, the Examiner searches the prior art up to the filing date. In most countries publications world-wide are considered as prior art. Without some special provision the applicant would have to file applications for patents in all the countries where he would like protection before making a single sale or disclosure to the general public.

To avoid this the Paris Convention permits the applicant to make a single first filing (which often must be in his home country) and then to file all the corresponding foreign applications within one year of the first filing. Provided this is done the applicant can "claim the priority" of the date of first application (which is known as the "priority date") so that this becomes the cut-off date in each of the foreign countries for assessing which prior art publications could affect the novelty of the invention.

It is vitally important to be able to claim the priority of the basic application for the following reason. Assume that one has filed a patent application in the UK and a few weeks later exhibited the patented product at an exhibition abroad and started selling samples. Within one year of the UK filing one can claim the priority and thereby protect oneself from the effect of this exhibition and of the sales. Thus the general rule is that if one is thinking of filing a patent then the initial application must be on file first, before there are any sales or distribution of samples or other public use of the invention anywhere in the world.

Although it is important to get the first patent application on file as soon as possible it is not expected that the applicant will have fully worked up his invention by the time of the first filing. Accordingly when the corresponding foreign applications are filed, within the year period, it is normal to put additional material into the patent specification, perhaps giving more, and more detailed, practical examples and possible new applications. To that extent the present patent system retains a benefit of the earlier patent legislation whereby an initial application, called a provisional

specification, could be filed which was often fairly sketchy in its coverage of the invention. This would then be followed up by the more fully explained and exemplified specification within a year in the UK (the complete specification). Except when filing such a new specification (within the year) no new matter can be added to a patent application after filing. However if the claimed invention is substantially widened not all the claims may be entitled to the earlier priority date.

When judging the novelty of an invention made independently by more than one person at about the same time it is effectively (except in the USA) the person who is first in time anywhere in the world to file a patent application who obtains the patent. If one delays making a first filing of a proposed patent application whilst trying to assess the likelihood of a valid patent being obtainable it is quite possible that a publication of some or all of the discovery has been made elsewhere, or some third party has filed a patent application for the protection of the same or an overlapping invention. Hence in applying for a patent the sooner an application is made after the idea has been proved the better. Thereafter one has a period of one year within which to evaluate the invention, do more work on it and to decide in what foreign countries to seek protection.

#### 1.2.2.2 Patent Cooperation Treaty and European Patent Convention

If an applicant files his invention in, say 17 different countries, then in principle 17 different examiners in 17 different Patent Offices will make 17 different searches (which ought in theory to yield the same results, but which often do not) and will then engage in 17 arguments with the applicant before deciding whether to grant a patent or not. This obviously involves a great deal of duplication of effort. In order to try to avoid some of this, two quite separate systems have arisen, the Patent Cooperation Treaty (PCT) and the European Patent Convention (EPC).

Under the PCT the applicant files one application with his home Patent Office designating the 17 countries in which he is interested. The Patent Office then examines the case for formal defects and arranges to have a single search carried out by an internationally recognised searching body. When the search result is available the basic application papers, together with the search report are then forwarded to the 17 different Patent Offices who each carry out their own examination, based on the single international search. This is quite a step forward, although not all the nations in which one might be interested have joined the PCT system.

A much more ambitious scheme is that of the EPC which has set up the European Patent Office (EPO) in Munich. As with the PCT a single application is filed, designating the countries in which protection is wanted, and a single search is then carried out. However thereafter a single EPO examiner examines the case and, if ultimately satisfied, by allowing the application, in effect grants a whole set of national patents in the designated countries. This has the drawback that an adverse decision by the EPO examiner can result in patent protection in all the designated countries being lost. However generally the system seems to work well, and if one wants protection in about 3 or more countries which adhere to the EPC then there are clear cost advantages in filing via the EPC.

There is also mooted a still more streamlined system which has not yet been put into effect, under which a single Community Patent would be granted which could then be litigated in one member country but with effect also in all other countries of the EEC.

### 1.3 Specific Topics

#### 1.3.1 Commissioned Work

In theory ownership is not a difficult problem; it is usually employees who make the inventions, or write the computer software, in which case the rights are held by the employer. However when one involves outside consultants the position is very much less clear unless the legal relationship between the company and the consultants has been set up from the outset in such a way that the company is likely to have the rights to the intellectual property produced. If there are specific rules which exist as to the types of contracts which have to be concluded with third party helpers, whether they are co-inventors, consultants or merely sub-contract draughtsmen, this will help to avoid problems arising at a later stage. However usually when an important situation develops it is necessary to look at this on a case-by-case basis to ensure that the company has a defensible position.

The topic of commissioning in the context of development contracts is discussed in more

detail in Section 4.4, but it should also be mentioned here that such contracts should not only prevent disclosure of the companies' confidential information by the consultant or contractor but also its use other than for the purpose of the particular commissioned work.

1.3.2 University Research Work

One area where there can be complications is in relation to research work which has been carried out by academics working in universities. It is necessary to look rather carefully at who employs the academic and the scope of his employment to discover whether the institution where he works has any interest in the work. Additionally work which has been wholly or partly funded by Research Councils or by Charitable Trusts requires special consideration as the terms of the funding may be such that certain rights accrue to these funding bodies and not to the employer, or the researchers themselves. In each case it is much better to examine these matters before the work is commenced so that the question of rights has been decided and dealt with before they arise. Otherwise if it is left until an apparently useful discovery has been made it can be much more difficult, particularly as the various contenders by that stage have had their appetites whetted for some, if not all, of the rights.

1.3.3 Biotechnology

This field has a high legal profile, partly because of the glamour of innovations in genetic engineering and also because of the ethical questions which are tied up in its pursuit. However biotechnology is not a recent manifestation: thus for example, brewing technology and the science of yeasts and ferments have been well established for a long time.

1.3.3.1 Protection Available

The protection available in biotechnology is in some ways typical of other areas but is, if anything, even more fragmented. Apart from the limited protection afforded by plant breeders rights, most protection is available under patent law.

In the case of biotechnology the types of processes or entities which an inventor might like to patent come into conflict with certain basic rules as to what and what may not be patented Although the precise rules vary from country to country the UK (as with most patent systems in Europe which adhere to the EPC) does not permit the patenting of varieties of animals or plants or of any essentially biological processes for the production of animals or plants, although slightly illogically it then excepts microbiological processes and their products. Part of the reason for this exception was to avoid overlap with plant breeders rights, although this exception goes much wider and would exclude, for example, methods of animal husbandry. However, quite irrationally, plants or animals which have been produced by more sophisticated microbiological techniques are patentable.

Up until about 5 or so years ago there used to be a belief that it would be immoral to permit living things to be patented. This was not a wholly rational position, as yeasts which are living organisms had been recognised as being patentable for years. Thus it was held in the now famous *Chakrabarty* case in the US Supreme Court that the question of whether the matter which was being patented was living or not was not relevant. The position is likely to be the same in the UK. However such arguments are not totally dead; although patents have been granted for oysters and methods of their culture (and very recently for transgenic mice) in the US it is possible that in Europe claims for higher animals or humans generated or cultured in some specific way would be refused for example under provisions barring patents for "animal varieties" or even for public policy considerations.

Another matter which needs to be considered in relation to genetically engineered materials is the scope of the protection available. Under traditional patent law, as developed by application to chemistry, the first person to make a new compound could obtain a claim to the compound itself irrespective of how it was made. That meant that although the inventor had perhaps only described one way of making the new compound he could, in effect, monopolise all methods of making the compound. In biotechnology there are two problem areas. Firstly there is a tendency not to assume that any new material is necessarily patentable just because it is new; which means that protection may be limited to the process actually used for its production. Such protection is much less extensive than that accorded to novel chemical entities. The other problem area is where the

material produced is not novel, but is itself naturally occurring but difficult to make or to isolate. Claims to such materials at large are necessarily invalid. The recent English decision in the *Genentech* t-PA case has taken a restrictive view at first instance and the patentees are only likely (at best) to obtain claims to their process for making t-PA. An appeal against that decision has been heard but judgment has not yet been given.

1.3.3.2 The Problems of Description, Deposit and Self-replication

Another complication in the protection of microbiological inventions is that in more traditional sciences a description of the invention would normally be sufficient to allow anyone who wanted to experiment to make use of the invention after the patent has expired. However it can be very difficult adequately to describe microorganisms; but even if that can be done, mere description will not thereby permit the reader to obtain any of the microorganism. It is not uncommon for useful novel microorganisms to be found by laborious selection from thousands of microorganisms present in some particular soil sample from say, South America. Even if the general public can be assured of supply of the relevant soil sample the isolation of the desired microorganism would be a huge task.

As this ran so counter to the principles of the patent system the Budapest Convention now exists which requires the deposit of samples of new or inaccessible microorganisms in recognised culture collections. It is very helpful for the inventor to be able to supplement the description of his microorganism by referring to a deposited sample. However most inventors are profoundly unhappy about having to make available samples of their cultures, which they often regard as being "their invention." They see this as being undesirable even if the culture collection agrees not to supply third parties with samples of their culture; however the rules relating to obtaining patents go much wider and require public access to the culture from the culture collection.

If one visits a museum and sees sample of, for example, certain chemical compounds, these samples are useful in teaching, for example, what copper sulphate crystals look like. Even if you were given a few crystals their usefulness would be limited to using them as a reference or touchstone with which to compare other samples. They do not provide you with a source of the material itself. However with samples of microorganisms this is not the case. Provided the sample is viable (which in theory it should be) then the tiniest sample can be used to grow enormous quantities of the same microorganism. This is why access is such an emotive matter.

This access requirement has discouraged some from patenting and this is reinforced by the fact that certain areas of biotechnology have tended to rely traditionally on the maintenance of technology as trade secrets. This applied particularly to the large companies who produced synthetic penicillins by fermentation technology. The cultures which they used and the methods for their employment were very closely guarded secrets.

1.3.4 Computer Software

Protection of intellectual property rights in software is primarily effected under copyright law, although the law of contract (in licence agreements) is effective in controlling licensees. Confidential information protection, whilst available, is in practice little used in relation to software but attempts to patent novel software concepts by presenting them as part of a computer system are now starting to meet with some success, particularly at the EPO.

The new Act retains the principle, established beyond any doubt by the Copyright (Computer Software) Amendment Act 1985, that literary copyright subsists in computer software. But it has gone further in extending beyond the traditional areas of copying the definition of what constitutes infringement of that copyright; in the case of computer software not only making it clear that its transmission and in practical terms its use both constitute copying but also introducing a "rental right" making it a copyright infringement to hire out software (such as legitimate packaged software) without the licence of the copyright owner. However, the computer program itself is not the only copyright work which may be of use in protecting software; any specifications or screen layouts are works in which literary and artistic copyright respectively subsist. It can be argued that such works may still be copied (in the copyright sense of "substantially reproduced") where a program is totally rewritten but appears to the outside world to behave in much the same way as the

original and where what has come to be called the "look and feel" of the original has been taken. Attention has now to some extent turned from "piracy" which is where the code of a program is itself copied (and as to which the legal position is clear) to these "look and feel" issues, which are less clear-cut not only from the legal point of view, but also from the point of view of public policy as there is a little of the old in everything that is new.

The reliance on copyright protection (which does not in the UK involve registration) coupled with multiple authorship and the tradition in the computer software industry of poorly documenting its products, particularly in the early stages, means that establishing one's title, or even identifying and dating the most appropriate copyright works, can be one of the major problems when asserting copyright in this field. Accordingly much can be done when a program is being written to assist any subsequent litigation of that program by properly documenting the process.

### 1.4 The Generation and Protection of Technology - a case study

Some of the practicalities of this topic can perhaps most easily be explained by discussion of an example.

A company which specialises in making alloys has discovered that they can make an alloy which has the unusual property of being very hard, harder than diamond. The alloy uses a number of different metals but depends critically on a heat treatment which is used to anneal the alloy. The discovery was made by a research group under the company who collaborated with an outside consultant.

The question then arises as to how best to protect this discovery. The most obvious possibility is to apply for a patent but in this case the company could also consider keeping the discovery as a trade secret. An important consideration is that the company does not need a patent in order to be able to make or sell the alloy. A patent is not a positive right which enables the patentee to do something which he otherwise would not be able to do. It is, on the contrary, a negative right which enables the patentee to prevent unauthorised third parties from making and selling the invention in the UK.

The idea of keeping the discovery as a trade secret is quite attractive. Any purchaser of the alloy would, with sufficiently sophisticated analytical techniques, be able to discover the precise composition of the alloy. However the nicest examination would not reveal the precise nature of the annealing process. Following the trade secret path has the advantage that the costs involved in applying for patents are avoided.

Additionally, unlike patents, trade secrets can survive in theory for an unlimited period. However, trade secrets have a habit of becoming public over a period of time; additionally if a third party quite independently discovered this alloy nothing could be done to stop it from making and selling the alloy, and even worse from publishing the details of its manufacture.

If the company is thinking seriously of keeping the discovery as a trade secret it is then necessary to look at the general legal arrangements of the company: in effect to see whether this option has already been foreclosed. Thus one needs to look at the contracts of employment of the inventors and of all the other employees who have knowledge of the development. Additionally as it has used an outside consultant one has to look at the arrangements which have been made with him. If his knowledge of the project is not held in confidence then it may be impossible to keep this as a trade secret; indeed it may also have obviated the possibility of obtaining a patent. This is a good illustration of how general law considerations must be taken into account when deciding how best to protect an idea. Indeed they ought to have been considered even before the research project was set up and any discovery made.

If the company obtains a patent then it obtains a monopoly right in the sense that it can stop any third party making the alloy. However by applying for a patent (unless the application is withdrawn at an early stage) the discovery is published 18 months after the first patent application is made. Hence thereafter other research groups would have this information available to them, and the research lead which the company had enjoyed could be substantially reduced. Furthermore there is no guarantee that a patent will be obtained.

If there is a prospect of obtaining patent protection then the best way to proceed is to file a patent application as soon as that can be done. Then, within the one year period, the company should do further work in trying to establish whether a valid patent can be obtained. If so then it can continue with the application and file within that year such applications abroad as seem appropriate claiming the priority of the UK application. If not the company can still withdraw the application in time to prevent publication and then try to keep the discovery as a trade secret.

# BRINGING THE IDEA TO THE MARKET-PLACE

## 2. CONSTRAINTS

### 2.1 Competition Law

When one comes to look at the commercialisation of technology, particularly if licensing is involved, competition law imposes constraints on the freedom with which one can operate. In the UK one must consider both domestic competition law and EEC competition law.

#### 2.1.1 Domestic Competition Law

Although certain common law doctrines (such as restraint of trade) still form part of domestic competition law, this law is now essentially embodied in statute; namely the Fair Trading Act 1973, the Restrictive Trade Practices Act 1976 and the Competition Act 1980 (together with, though not strictly relevant for these purposes, the Resale Prices Act 1976). The Patents Act 1977 also contains certain competition law provisions specific to patent licensing which are discussed in the context of that topic in section 4.2.3. In the case of certain individual industries, such as British Telecommunications and British Gas, their privatizations brought with them additional sets of competition rules governing their operations.

In contrast with other systems of competition law, particularly the EEC, one of the peculiarities of UK law has been its concern with the form and content of restrictive agreements, rather than their effects. This is also somewhat out of step with other countries' national laws, which recognise that competition law and policy can in general be more effective if based on the effect of any particular practice or agreement on the market; a system based on what agreements say rather than what they do does not have this flexibility.

However the Consultative Document (Green Paper) entitled "Review of Restrictive Trade Practices Policy" (Cm331), published in March 1988, reveals the Government's intention to abolish existing restrictive practices legislation and replace it by an EEC style of general prohibition of agreements and concerted practices having anti-competitive effects. There will be exemptions, however, for certain types of agreement conferring exclusivity, including licences of technology rights. Although this revolutionary change will involve the repeal of the Restrictive Trade Practices Act, it appears that the Competition Act (see 2.1.1.3 below) will be left untouched.

#### 2.1.1.1. The Fair Trading Act 1973

This Act enables the Secretary of State and, in most cases, the Director General of Fair Trading (DGFT), to refer monopoly situations and their effects to the Monopolies and Mergers Commission (MMC) for it to carry out an investigation as to the desirability of the monopoly from the point of view of the public interest. A monopoly situation is for these purposes taken to exist where at least one-quarter of the goods of any description supplied in the United Kingdom are supplied by or to one and the same person.

In a typical reference the MMC may only investigate and report with a view to determining whether or not a monopoly situation exists and whether any act or omission complained of in the reference operates, or may be expected to operate, against the public interest. Such matters must relate to prices or recommendations or suggestions as to prices, refusal to supply and preference "whether by way of discrimination in respect of prices or in respect of priority of supplier or otherwise."

The MMC must normally report on a monopoly reference within six months of the date of the reference. If the report concludes that any matters do operate against the public interest the Secretary of State may by order exercise certain powers. These powers are wide-ranging but essentially enable him to proscribe the offending activities in relation to prices, refusals to supply, preference and discrimination. Certain powers are exercisable only with the approval of Parliament.

The Secretary of State may also at any time require the MMC to report on the general effect on the public interest of practices which are "commonly adopted" in order to preserve monopoly situations or on practices which appear to be "uncompetitive practices." He may also require the MMC to report on appropriate remedial action required.

The 1973 Act also controls mergers. This can extend to joint ventures in that a merger situation qualifying for investigation is one where two or more enterprises, one of which is carried on in the UK, cease to be "distinct" and as a result, at least a quarter of the relevant goods or services are supplied by or to one and the same person (or such a previously existing market share has been increased) or the value of assets taken over exceeds (currently) £30 million.

In 1988 the Government published a 'blue' paper on Mergers Policy in which it indicated its intention to modify existing merger control procedures whereby a qualifying merger can only be referred by the DGFT to the MMC once it has taken place. If introduced the new arrangements would include a non-mandatory pre-notification system and a power for the DGFT to obtain suitable partial divestment undertakings from the parties in order that a reference to the MMC need not be made; firms would however continue also to be able to seek confidential guidance about possible mergers.

Articles 85 and 86 of the Treaty of Rome are also susceptible of use in controlling mergers (see Section 2.1.2.2)

2.1.1.2 The Restrictive Trade Practices Act 1976

As mentioned above (2.1.1) this legislation is likely soon to be abolished and replaced by an 'effects'-based law very similar to Article 85 of the Treaty of Rome.

This Act (and its precursors) has mainly been used to prevent price-fixing cartels. It controls what are termed "registrable agreements" as to goods or as to services. Such an agreement is one between two or more persons carrying on business within the UK under which two or more parties to it accept restrictions in respect of certain specified matters such as prices to be charged or the process of manufacture to be applied to goods. An agreement does not have to be in writing and "includes any agreement or arrangement, whether or not it is intended to be enforceable ... by legal proceedings."

The 1976 Act is the UK domestic competition statute most likely to affect agreements for exploiting technology although there are some significant exemptions, such as certain types of patent licence, as discussed in Section 4.2.3. Joint ventures (as to which the application of the Act is discussed in more detail in Section 4.4.1) and other collaborative agreements are particularly liable to be caught if they contain restrictions as to goods or services.

If an agreement is registrable it must be registered within 30 days of the agreement being made or, if earlier, when the restrictions take effect, otherwise the agreement is void in respect of all restrictions contained within it. Once registered, the DGFT is under an obligation to take proceedings in respect of the agreement before the Restrictive Practices Court. It will then be for the parties seeking to uphold the agreement to prove that it is not against the public interest and for this purpose to identify, within the provisions of the legislation, certain specific benefits, known as "gateways."

It is important to note that the Act empowers the Secretary of State to discharge the DGFT from his duty to take proceedings before the Restrictive Practices Court where the Secretary of State is satisfied that the restrictions contained in an agreement are not of such significance as to call for investigation. This procedure can only apply where the agreement has been duly registered under the Act.

2.1.1.3 The Competition Act 1980

This empowers the DGFT to investigate anti-competitive practices, to report on the results of such investigation, to accept undertakings in relation to any anti-competitive practice the subject of such report, and to refer any such practice to the MMC. Following an MMC report, on the request of the Secretary of State, the DGFT may seek undertakings from the person concerned to take or refrain from taking action with a view to remedying any effects of such practice found by the MMC to operate against the public interest.

For these purposes an anti-competitive practice is defined in similar, broad terms to those used in the Treaty of Rome and discussed later, although the ambit appears to be narrower in that the practice must amount to a "course of conduct." This similarity is not carried though to the procedure

adopted by the 1980 Act to deal with such practices. Whereas, for example, under the Treaty of Rome the European Commission can investigate and issue legally binding pronouncements as to the validity under EEC law of agreements and practices in some cases giving rise to directly enforceable claims by persons affected, under this Act the DGFT can undertake an investigation but cannot take any executive action himself. Once the matter has been referred by him to the MMC it is out of his hands unless and until he is to seek undertakings (if any) arising out of the MMC report.

The MMC's terms of reference and its ability to make suitable recommendations to bring an end to an anti-competitive practice are heavily circumscribed. In particular, as in the case of a monopoly reference under the 1973 Act, the MMC's objective is to discover whether or not there are effects adverse to the public interest. If the public interest is not adversely affected, the MMC has no locus to make any other determination on the matter.

Thus it may come as a surprise, at least to foreign lawyers, that under the Competition Act an anti-competitive practice is not itself illegal and does not invite legal sanction until the whole procedure of DGFT investigation, MMC report and Secretary of State order has been completed.

### 2.1.2 EEC Competition Law

The source of this law is to be found in the Treaty of Rome and can be divided as follows: restrictive agreements (Article 85), abuse of a dominant position (Article 86) and free movement of goods (Articles 30-36). From the point of view of technology generation and exploitation, it is to Articles 85 and 86 and the various (European) Commission decisions and European Court of Justice (ECJ) judgments, as well as exempting regulations issued by the Commission, that one should look.

#### 2.1.2.1 Article 85

A principle of particular importance in relation to this aspect of European law is determination of the effects of an agreement on competition within the Common Market. Article 85 prohibits agreements, decisions or concerted practices which may affect trade between the Member States of the Common Market "and which have as their object or effect the prevention, restriction or distortion of competition within the common market."

The inter-Member State element has been interpreted quite widely and the Commission appears to need little convincing of such effects once restrictions on competition affecting trade within a substantial part of the Common Market, including one Member State, are discovered. Indeed, the fact that the parties to an agreement are all from the same Member State does not mean that there can be no effect on inter-state trade. Such effect must be appreciable, although no one criterion has been laid down as the test for such appreciability, which depends upon the commercial context and the economic circumstances.

However, the Commission's Notice on Agreements of Minor Importance is an indication of the Commission's thinking in this respect. This Notice states that agreements which do not relate to more than 5% of the goods in the relevant product market in a substantial part of the EEC and where the aggregate turnover of the participants is less than 200 million units of account (the unit of account is broadly equivalent to the US Dollar), do not normally infringe Article 85. The Commission is, however, at pains to point out that this definition of appreciability is no absolute yardstick and agreements between undertakings exceeding these limits may well only have a negligible effect on trade between Member States and therefore not be caught by Article 85.

The Commission is empowered to grant both individual and block (i.e. class) exemptions under Article 85 for agreements which help to improve the production or distribution of goods or to promote technical or economic progress. Where an agreement does not fall within a block exemption and is subject to prohibition under Article 85 it must be notified to the Commission for individual exemption if the sanction of fines is to be avoided and the agreement is to be enforceable. The Commission has already issued block exemptions in relation to Article 85 for exclusive distribution and purchasing agreements, specialisation agreements (where the parties rationalise their activities and accept reciprocal obligations under which they each concentrate on a separate field), patent licences, and research and development agreements. The last two exemptions are further discussed in Sections 4.2.4 and 4.4.2. The Commission is also proposing to issue a block

exemption in relation to know-how agreements, a draft of which was published in 1987.

2.1.2.2 Article 86

There is no such power to grant exemption under the provisions of Article 86, which applies to the abuse of a dominant position within the Common Market or a substantial part of it. Specific non-exhaustive examples of such abuse are given in the Article itself. A dominant position has been defined by the ECJ as one where the enterprise in question is able to prevent effective competition being maintained on the relevant market and to behave independently of its competitors and customers (the *United Brands* case).

As is the case with the Fair Trading Act and the Competition Act under UK domestic law, the key issue in relation to Article 86 in determining the presence of monopoly situations and anti-competitive practices is the effect on the market and this requires a determination of both the product and geographical markets involved.

In order for a company to have a dominant position it is not necessary of course that it should hold any particular intellectual property rights. Indeed, many of the leading cases relate purely to market power unassisted by such rights. On the other hand, in certain limited circumstances the abusive exercise of such rights could result in infringement of Article 86, for example, the refusal by a patentee to grant a non-exclusive licence to a particular company either at all or on reasonable terms, when that patentee has granted similar licences to other parties.

The Commission also clearly regards Article 86 as capable of being utilized to control, and therefore to prohibit if necessary, mergers which have the effect of strengthening an existing dominant position. It has even been established that Article 85 may prevent agreed mergers if the 'concentrative' effect is anti-competitive.

2.1.2.3 Articles 30 to 36

The provisions in these Articles dealing with the free movement of goods within the Common Market have had considerable effect on marketing policies in relation to patented and trade marked goods within the Common Market.

The EEC authorities have developed their own doctrine of what is known as "exhaustion of rights",similar to that applied under US antitrust law, based upon Articles 30-36 of the Treaty of Rome which deal with the free movement of goods within the Common Market. Article 30 prohibits quantitative restrictions on imports and "all measures having equivalent effect" between Member States. The application of this Article in the field of intellectual property rights was bound to arise given that the principle of free movement of goods has an inherent conflict with "personal" monopoly rights. This conflict was intended to be dealt with by Article 36 which provides that the provisions of Article 30 should not preclude prohibitions or restrictions on imports if the prohibitions or restrictions are justified for the protection of industrial and commercial property.

This exception to the general prohibition on restrictions affecting the free movement of goods has, not surprisingly, been construed narrowly. Essentially, the relevant case law has interpreted it to mean that an inventor's monopoly is confined to the right to be the first to manufacture and place the product on the market. Once he or his licensee has done so he has exhausted all further rights over the product under his patent and cannot later seek to block the export of the product to other parts of the Common Market.

However, the exhaustion doctrine will not operate to prohibit a patentee from relying on his patent to prevent imports where, because of the lack of patent protection in the country in which the goods were first marketed, that marketing took place by someone other than the patentee and without its consent. Yet where a patentee voluntarily chooses himself to market the product in a Member State where no patent protection is available, he cannot thereafter block its import to a Member State where he holds such protection.

2.2 Regulatory Controls

In addition to the competition law constraints there are numerous regulatory constraints which affect any person involved in technology in the UK. These are established by Acts which tend to impose broadly expressed obligations and to authorise detailed regulations to be made which will

themselves impose obligations.

Such Acts can be general in their application, for example the planning legislation, the health and safety legislation, and that concerned with consumer safety. Alternatively, they may apply to specific areas such as controls on users of computers, controls on the nuclear industry, rules for the approval and packaging of pharmaceuticals or agrochemicals and conditions on the running of telecommunication systems. These regulatory constraints tend to vary widely from country to country and so experience in other countries may be of little assistance in understanding the UK position except where regulations have been imposed in response to EEC directives, the most recent example being the Consumer Protection Act. The legislation under which some of the more important regulatory controls that particularly affect technology arise is outlined below.

### 2.2.1 General Controls

#### 2.2.1.1 Export of Technology

There are various restrictions on the export of technology. The major one is under the Import, Export and Customs Powers (Defence) Act 1939. This wartime Act is still in force and is the authority under which the Export of Goods (Control) Orders have been promulgated. These restrict the export to a number of, mainly Eastern Bloc, countries, of high technology and strategic goods (now including computer software) without an export licence given by the Government.

Under the Patents Act 1977 an inventor working in the UK must first file his patent application in the UK Patent Office or obtain an export licence. The Industry Act 1975 confers on the Secretary of State the power to prohibit the passing to persons not resident in the UK of control of important manufacturing undertakings, where this would be contrary to the interests of the UK.

#### 2.2.1.2 Trades Descriptions

These are governed by the 1968 Act of that name. Although a regulatory enactment, which makes it an offence for a business to apply a false trade description to goods or to supply such goods, this has come to be a valuable adjunct to intellectual property rights in combatting counterfeiting, for example of packaged computer software.

#### 2.2.1.3 Health and Safety at Work

The basic Act regulating this field is the Health and Safety at Work etc. Act 1974, one of the most pervasive pieces of regulatory legislation, being for example that under which most of the controls on the biotechnology industry (discussed further in Section 2.2.2.4) arise.

The Act imposes a general duty on an employer "to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees" and "to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health and safety." Further general duties are imposed in relation to the safety of premises, limiting atmospheric pollution and as to the manufacture and supply of articles for use at work. Failure to discharge any of these duties is a criminal offence.

The Act established the Health and Safety Commission and the Health and Safety Executive. The Commission has an educational and advisory function, recommending the making of various detailed health and safety regulations (such as those relating to the classification, packaging and labelling of dangerous substances) and generating approved codes of practice. Breach of health and safety regulations in addition to being a criminal offence is a breach of statutory duty which is accordingly actionable in a civil suit.

The Executive has an enforcement role, both in relation to this Act and in relation to earlier Acts in this field (such as the Factories Act) which are gradually being updated and replaced by regulations made under this Act. Their inspectors have various powers of entry and examination and can serve improvement notices, directing that improvements be made, or prohibition notices closing down operations (both of which can be appealed) or can institute criminal proceedings.

#### 2.2.1.4 Pollution

The control of pollution is an area where legislation has been piecemeal. To some extent there is control under the public health legislation and the planning legislation. However the major

piece of legislation controlling the disposal of environmentally dangerous waste is the Control of Pollution Act 1974. It also controls noise pollution and contains limited provisions as to atmospheric pollution but is not the major source of the legislation in the latter area which is also governed by the Clean Air Acts and certain health and safety legislation. Part II of the Food and Environment Act 1985 has replaced existing legislation controlling dumping at sea.

A number of provisions in the 1974 Act relating to waste disposal on land impose duties on various public authorities but of most significance in this context are those making the unlicensed disposal of waste a criminal offence. There are special provisions as to waste which is "poisonous, noxious or polluting" or gives rise to an environmental hazard. Where damage has been caused by the deposit of such waste the Act establishes civil liability for such damage. That part of the Act concerned with the pollution of water makes it an offence to discharge "poisonous, noxious or polluting" matter into various water courses. Although this extends not just to inland waters but also to coastal waters there is further legislation specifically addressing the problem of oil pollution at sea.

2.2.1.5 Data Protection

The Data Protection Act 1984 is now fully in force. It has the potential to affect and impose new obligations on virtually any organisation which holds information relating to individuals on computer.

The Act sets up a statutory framework to control the activities of anyone who "holds" (control in a broad sense) data (Personal Data) about individuals (Data Subjects) on computer. If one does this, one is a Data User. It sets up a register (under the supervision of the Data Protection Registrar (the Registrar)) on which must be registered details of Personal Data which one holds. These details include the description of such data, the purposes for which it is held, its source, to whom it may be disclosed and to where it may be transferred. The register is open to inspection by the public. As a Data User, one must observe the "Data Protection Principles" set out in the Act. The chief obligations are as to access, correction, proper use of Personal Data and non-disclosure of Personal Data to third parties.

Enforcement of these obligations is primarily the responsibility of the Registrar. He can serve notices on Data Users, breach of which, as with failure to register, can be a criminal offence. Moreover Data Subjects can take civil proceedings to enforce their rights and to seek damages for breach of the Data Protection Principles. They also have a right to access to their own Personal Data.

2.2.1.6 Product Safety

The Consumer Protection Act 1987 ("CPA") was introduced partly in order to satisfy the UK's obligations under the EEC Product Liability Directive, and partly to tighten up the regulatory regime governing product safety.

Part 1 of the CPA is not, strictly speaking, a regulatory control but because it introduced a new basis of liability under English law of considerable potential significance to those involved in commercialising technology it is briefly discussed here. It imposes strict liability on producers (and certain others) where any damage (death, personal injury or damage to property for private use) is caused wholly or partly by a defect in a product. A product is defective if its safety is not such as people are generally entitled to expect. Such liability is in addition to any liability that may exist under contract or in negligence. Apart from the producer of the defective product, anyone who imports the product into the EEC, or who attaches his name or mark to the product is potentially liable, as is a supplier who fails to disclose the source of the product.

Producers should take accordingly especial care in marketing and packaging their goods, and particularly in wording instructions. Improperly worded warnings may lead to extensive potential liability, (which might not otherwise arise) because of the way that a defective product is defined by relation to a consumer's expectations. A supplier of component parts of goods destined for private use or of raw materials, may be liable as a "producer," and should attempt to obtain appropriate indemnities from his customer, the end-product manufacturer. Suppliers of component parts should also try to get themselves into a position to take advantage of the defence of complying with the end-product manufacturer's instructions. Another defence is the "development risks"

defence. This enables liability to be avoided if at the time of supply the state of scientific and technical knowledge was not such that the defect might be expected to have been discovered.

Part II of the CPA reenacts earlier provisions as to consumer safety and in addition imposes criminal sanctions on those who supply or stock consumer goods which fail to comply with "the general safety requirement". The requirement is not met if the goods are not reasonably safe having regard to a number of specified circumstances. Goods are not regarded as failing this test provided they comply with safety regulations established by the Department of Trade and Industry. Examples of such regulations are those dealing with the safety of electrical equipment. Breach of such safety regulations is also a criminal offence and is actionable as a civil wrong as a breach of statutory duty. The Act can also be brought rapidly to bear on consumer goods not the subject of safety regulations as the Department of Trade and Industry can also issue prohibition notices in respect of unsafe goods and notices obliging warnings about unsafe goods to be distributed.

### 2.2.2 Industry-specific Controls

A number of industries, in addition to being subject to general regulatory controls such as those outlined above, are subject to their own regulatory control generally under a particular Act, although in some cases industry-specific control is effected by regulations made under a particular Act of general application, such as the Health and Safety at Work etc. Act. In this section some of the more important constraints of this nature from the point of view of technology industries are outlined; accordingly this is but a glimpse of the entirety of regulatory control, and makes no reference to extremely important controls such as those in relation to foods, as to which for example the preparation, composition, labelling and sale is governed by the Food Act 1984 and the extensive regulations issued under it.

#### 2.2.2.1 Pharmaceuticals

These are primarily regulated under the Medicines Act 1968. Under this Act various types of licences may be required for various activities in relation to "medicinal products". These products are basically any substance or article which is administered to human beings or animals for a medicinal purpose or an ingredient thereof but excluding an instrument, apparatus or appliance.

A Product Licence is required in order to sell, supply, export, procure the manufacture or assembly of, import or procure the import of any medicinal product. One also requires a Manufacturer's Licence in order to manufacture or assemble any medicinal product and a Wholesale Dealer's Licence in order to sell or offer for sale any medicinal product by way of wholesale dealing.

When reviewing an application for a Product Licence, the licensing authority (the Department of Health) concentrates upon the safety and efficacy of the medicinal product itself and, where the products are imported, various undertakings and assurances are obtained from the manufacturer. In relation to a Manufacturers Licence, the authority concentrates upon the operations, the premises, the equipment, the qualifications of the persons supervising manufacture and the arrangements for keeping adequate records of products manufactured.

#### 2.2.2.2 Telecommunications

Apart from dealing with the reconstitution of British Telecom (BT) as a preliminary to its privatization, the main effects of the Telecommunications Act 1984 were to create an entirely new regulatory regime for the running of telecommunication systems together with the administrative machinery required to oversee their operation. With limited exceptions there is a general prohibition on the running of telecommunication systems in the UK unless they have been licensed by the Secretary of State.

The provision of what are known as "fixed links" for public telecommunication services is, at least until 1990, limited to BT and Mercury Communications Limited (MCL), a wholly-owned subsidiary of Cable & Wireless plc. The provision of voice and basic telex services is similarly the preserve of BT and MCL (with the limited exception of the City of Hull).

The conditions embodied in licences of public telecommunication operators are generally more onerous than those of other persons licensed to run systems, although licensees under class licences such as those for Value Added and Data Services and their individual equivalents are also

subject to tight controls if they fall within the definition of Major Service Providers under those licences.

Fair trading rules are written into certain individual telecommunication licences, particularly those of public telecommunication operators. These include prohibitions on undue preference and undue discrimination, prohibitions on tie-ins or "linked sales," prohibitions of certain exclusive dealing arrangements and restrictions on the anti-competitive use of intellectual property rights.

The Director General of Telecommunications appointed under the 1984 Act is responsible for ensuring observance and enforcement of all telecommunication licences and has also assumed certain functions of the DGFT under the Fair Trading Act 1973 and the Competition Act 1980. In the event of contravention of a licence, the Director General can issue a compliance order and if the default remains unremedied the licence may be revoked whilst at the same time third parties may have a consequent cause of action.

Telecommunication licences require that the apparatus comprised within the licensed system is duly approved for connection to public systems. Certain minimum safety, quality and transmission standards normally must be met where public system connection is involved. The approvals regime laid down under the 1984 Act is run under the authority of the Director General's Office of Telecommunications (Oftel).

The manner in which the various controls under the 1984 Act may be applied in relation to services and apparatus is discussed in more detail (in connection with commercialising technology) in Section 4.7.2.

#### 2.2.2.3 Cable Television

This is governed by the Cable & Broadcasting Act 1984 which prohibits the provision of certain cable programme services without a licence. Licences are granted by the Cable Authority, which is set up under the Act. In order to be a licensable service, the service must consist wholly or mainly in the sending of sounds or visual images for simultaneous reception, otherwise than by broadcasting, in two or more places in the UK.

The Act has stringent restrictions on the nationality of persons, or shareholders of companies, who may hold a licence. Any non-EEC person is effectively prevented from holding a licence. These provisions mirror similar restrictions contained in the Broadcasting Act 1981, which governs the constitution of the independent programme contractors of the IBA.

Several licences have now been granted, typically on an area by area basis to cable programme service providers. The licence will typically require certain broadcast services to be included in the cable programme service, in particular the four major UK channels, and the major BBC radio services and local independent radio services.

#### 2.2.2.4 Pesticides

Until recently statutory control on pesticides (insecticides, fungicides and herbicides) was limited to that under the health and safety legislation and, in a few cases, the Poisons Act 1972. Pesticide "approvals" were given under the Pesticides Safety Precaution Scheme (PSPS), a self regulatory scheme to which government and all of the pesticide industry were parties and which established two levels of clearance. In addition there was the Agricultural Chemicals Approval Scheme, a further, voluntary, scheme whereby pesticides were submitted to the Ministry of Agriculture Fisheries and Food for official approval.

Part III of the Food and Environment Protection Act 1985 now provides Ministers with power, by regulation or order, to control the import, sale, supply, storage, use and advertisement of pesticides and to approve pesticides. The Control of Pesticides Regulations made under the new Act replace the old PSPS with statutory powers to approve pesticides. It is now an offence to sell, supply, store, use or advertise an unapproved pesticide.

To deal with the transition to the new controls, products which had both Commercial Clearance under the PSPS and current approval under the Agricultural Chemicals Approval Scheme were given Full Approval under the new regulations whereas those with only Commercial Clearance

or Provisional Commercial Clearance under the PSPS were given Provisional Approval. The other "approval level," Experimental Permit, does not allow any commercialisation.

2.2.2.5 Biotechnology

When work in genetic engineering began there were in certain countries special regulations for the manipulations and release of genetic materials into the environment, which were enacted because of fears that research with such materials might produce "monsters." However it was subsequently found that such dangers were overestimated and the regulations relaxed.

In the UK there is no one single piece of legislation relating to biotechnology. Regulation is split between that under the health and safety legislation (under which a number of specific regulations have been made) and which govern the manner in which research development and manufacture in the biotechnology field is conducted and that as to the application or uses to which genetically engineered materials can be put. The Health and Safety (Genetic Manipulation) Regulations require that the Health and Safety Executive be notified of an intention to carry out genetic manipulation. As to end use, apart from the general position as to product safety, the controls regulating the particular field of application (such as pharmaceuticals, pesticides, agriculture or foods, or more specialised fields such as that governed by the Biological Standards Act 1975) should also be considered.

2.3 Other Constraints

The rights of third parties such as their intellectual property rights or their contractual rights can of course provide a further constraint on the exploitation of technology. The position under the registered rights, such as patents, can to a large extent be established by having searches of various public registers conducted. Establishing the position under unregistered rights and contractual rights involves investigating the background to one's own technology to satisfy oneself that it has not been appropriated from elsewhere.

The right of third parties to bring product liability suits under the Consumer Protection Act 1987 has been discussed in Section 2.2.1.6 and throughout Section 2.2 reference has been made to the rights of third parties to bring proceedings for breach of certain statutory duties imposed by regulatory legislation. However third parties may also have common law rights such as those in nuisance and negligence, and to the extent that technology or the fruits of its commercialisation are exported this may impinge on foreign laws, which, though potentially very significant in such circumstances, are outside the scope of this booklet.

# BRINGING THE IDEA TO THE MARKET-PLACE

## 3. FINANCING TECHNOLOGY

### 3.1 Sources

There are many sources of financing for technology projects in the UK. Their suitability in a particular case will depend upon the type of technology (some investors tend to concentrate in certain areas), the extent of its development, the amount involved (some investors will not look at funding proposals of less than a certain amount), the degree of outside investment considered satisfactory by the founders or managers of the enterprise and exit routes sought by the investing institutions. On the latter point, if only seed or start-up finance is required this will considerably narrow the field of potential investment, whereas if development capital (ie for the development of an existing invention or prototype to the production stage) is involved this can open up a much broader range of interested parties as the degree of risk may be significantly lower.

The basic types of financing available are as follows:

(a) Subscription by managers and employers
(b) Venture and development capital
(c) Business expansion scheme (BES) funding
(d) Stock market, including the Unlisted Securities Market (USM), the Third Market and the Over the Counter (OTC) Market.
(e) Bank lending
(f) UK Government and EEC Grants
(g) Other, eg joint ventures or mergers, or charitable foundations

Management buy-outs and other forms of participation by management and/or employees (e.g. rights issues, or share option schemes) are increasingly popular forms of funding, particularly of technology companies. These need not necessarily require huge capital resources on the part of the employees, as financial institutions are usually involved in providing loans or making equity subscriptions which may be redeemed depending on the success of the company's operations.

Venture and development capital is now available from those institutions having either their own funds to invest (eg 3i, BTG) or managing funds on behalf of investment trusts or pension funds.

BES funds are made available through individual investment or through the medium of managed funds. In each case there is a real tax incentive in that, provided the company qualifies for BES purposes and provided the individual investor is UK tax resident and not "connected" with the Company, then within certain limits tax relief is offered to the individual investor by way of giving relief against *income*, at the highest marginal rate of tax, for the *capital* sum invested in either the funds or the Company itself.

In advance of a BES share issue it is advisable that the Company should supply to the Revenue sufficient information for an opinion to be formed as to whether both the Company and its trade will qualify under BES. When the Company has issued the shares which it is hoped will be eligible for such relief (and has carried on a qualifying trade for four months) it then applies to its local Inspector of Taxes for tax relief certificates for its shareholders. It is only at this stage that the Inspector *has* to decide whether the shares qualify for BES.

These tax concessions carry with them certain corresponding restrictions. Both the Company and the trade carried on by the Company have to satisfy certain statutory requirements, which it is not proposed to examine in detail here. It should, however, be noted that these requirements should not only be satisfied at the date of subscription but, in general terms, continue to be satisfied for the next succeeding three years. Failure of the Company and/or trade carried on by the Company to satisfy these requirements will result in the initial relief being withdrawn.

Certain restrictions are also imposed on investors as a condition of their obtaining BES relief. The investor must be UK resident and ordinarily resident at the date on which the shares are issued. The investor and his associates must not be connected with the Company, which in this context is defined as holding more than 30% of the issued share capital of the Company or being an employee or paid director of the Company. Relief can be lost if, within five years of the issue

qualifying for BES relief, the investor disposes of the shares (other than on death), receives value from the Company, other shareholders receive a repayment of share capital or the investor or his associates become connected with the Company.

The ultimate objective of any company seeking public subscription is normally a full listing on The Stock Exchange. In practice in order to obtain a suitable sponsor a track record of at least five years and a substantial capitalisation on listing will be required as well as a minimum 25% of equity available to the public; this tends to rule out a great many recently established companies seeking investment for funding of unproven technology projects. Full listing is anyway clearly inappropriate to start-ups and venture capital propositions involving speculative risks and it is only at the development capital stage or beyond that it could become a viable option.

The USM is the Stock Exchange's secondary tier for raising new equity capital. It is available for companies which have a successful three-year trading history and whose pre-tax profits were in the region of £500,000 in their last financial year. It is clearly more attractive than full listing for the funding of development capital, but is, again, inappropriate for the financing of start-up, or speculative ventures.

The Third Market is the third tier of the Stock Exchange. Companies most likely to benefit are those in need of equity injection but too small for the USM, for example, companies with annual pre-tax profits between £200,000 and £500,000. However, there are no minimum size criteria, which makes the Third Market a more attractive potential source for the funding of start-ups and speculative ventures. Potential entrants to the Third Market should note that it is only an available option if there is a reasonable prospect of significant revenue being generated within a short time-scale of eg 12 months. One real advantage of the Third Market is that the company can raise funds from BES investors who will benefit from the personal tax concessions outlined earlier.

Companies entering the Stock Market, the USM and the Third Market must be introduced by a sponsor who will ensure suitability of the company and will perform a co-ordinating and monitoring role. Companies must adhere to the relevant Stock Exchange rules regulating their conduct. These, and the often high cost of entry, may discourage some from choosing this as a viable funding route.

The OTC Markets cover a number of privately run share dealing markets. Although attractive in the past to young companies who do not qualify for the USM, difficulty is found in their historically low level of trading and lack of clear regulation for the protection of investors. It is expected that the Third Market will increasingly satisfy the needs of such companies.

Lending from merchant banks or other institutions may have the advantage of avoiding the costs and formality of public funding. One important benefit can be the flexibility of options available. Although high-risk speculative ventures will tend to be unattractive due to the absence of security, bank lending will normally be available for development capital, either on its own or in combination with funding from venture capital institutions. Care must be taken to ensure the interest and security arrangements meet the venture's requirements and are not unduly restrictive. Thought should be given in addition to term finance and overdraft facilities, and to options such as limited recourse financing in which the Bank's only recourse is to the royalties (eg licence payments) derived from exploitation of the project technology.

It is important, in considering any technology venture, to determine whether any grants may be available from the Government Departments (typically the Department of Trade and Industry), regional development organisations (such as the Welsh Development Agency), or other public or quasi-public sources (eg British Coal). Important further considerations will be whether tax or rate incentives may apply in any particular locations. Such factors may keep down costs if not providing a direct source of funding.

Grants are also available from the EEC. The Community's budget includes a number of funds, such as the Regional Development Fund which promotes Community objectives by financing suitable projects. Community finance can take the form of grants, low interest loans or participation in contracts funded by the Community. Of particular importance to technology companies is the

Community's contract research programme, under which the cost of a particular project is typically shared between the contractor and the Community. Current well-known programmes include Basic Technological Research (BRITE), Research into Advanced Communications in Europe (RACE) and the European Strategic Programme in Information Technology (ESPRIT). Normally, restrictions will be imposed on such grants, such as the sharing of generated technology with other participating organizations.

### 3.2 Preparing a Company for Investment

So far as technology itself is concerned, it is vital that at as early a stage as possible the Company should ensure its title to all relevant intellectual property rights is firmly established. Although not always the case in practice, this should be of equal concern to the investors. Certainly if it becomes apparent at a late stage in negotiations that there are any gaps in the chain of title in such rights or that they do not fully protect the technology for the Company this could be of sufficient gravity to put off an intending investor. Problems such as these need to be identified sufficiently early for them to be resolved. If this type of appraisal and review process is not adopted it would normally be the case that suitably tailored warranties required by investors would "flush out" those rights and interests where the Company's position was not totally secure.

### 3.3 Structure

Investment otherwise than on any of the securities markets mentioned above will, typically, involve a subscription agreement being entered into between the founding shareholder and/or managers, the Company and the institutional and other investors. This agreement will cover such matters as the amount of equity share capital to be paid for by and issued to the investors, any loans or preference share capital to be issued and, particularly, variations to the equity holdings of the investors depending on the actual performance of the Company. This last feature is sometimes referred to as a "ratchet" mechanism.

Such mechanisms often lead to complicated share rights; normally these will have been referred to in principle in any offer letter issued by the investors or their lead manager. The offer letter, containing the fundamental commercial and legal terms, is therefore a critical document which should be carefully reviewed.

The manner in which the particular rights in the technology are or have been vested in the Company should also be of concern to the investors. Equally where the creators of the technology are themselves shareholders in the Company they should be particularly alert to the manner of transfer of the benefit of these rights to the Company in the first instance. What is to happen, for example, if these rights are not exploited to the full or, worse still, if the Company collapses? Is there any way that the rights could be recaptured for their originators? From their point of view, therefore, if the technology rights had merely been licensed, albeit on an exclusive basis, to the Company this would provide a means of regaining the rights in such circumstances. However, it is preferable and often essential for the Company and its investors that title to the rights in question should be vested in the Company.

### 3.4 Subscription Agreements

Agreements for share subscription entered into by investors will invariably contain undertakings from the managers of the Company on adhering to the Company's business objectives, on reporting and accounting etc. The shareholders and managers who have any significant stake in the Company and, in certain cases, directors who are of importance to the success of the business will also be required to enter into convenants restraining them from engaging in other activities, and certainly from indulging in any competitive businesses. There may also be restrictions on their disposal of shares for a "lock-in" period in order to ensure that they retain a degree of financial interest in the operation as well as commitment by means of their employment contracts.

#### 3.4.1 Warranties

The subscription agreement will almost certainly contain warranties as to the state of the Company's finances, its accounts, its business and, particularly, its technology, to be given by the founder shareholders, and sometimes the Company's directors. Warranties tend, sometimes

unnecessarily, to send a shiver down the spine of the potential warrantors. In practice with new companies these warranties tend in reality to be relatively simple and of fairly narrow scope. With more developed companies and especially those having a long or complex history, warranties take on a more important dimension and the would-be warrantors need to understand the precise scope and effect of each warranty and just as important any qualifying disclosure which should be made to the investors in the all important "disclosure letter."

Many founder shareholders understandably display a degree of resentment about being required to give any contractual warranties as to their own "creation." This attitude is often difficult to dispel but perhaps the best approach is to try to understand the problem from the investors' point of view. They simply require written confirmation of any representations or assurances they have received in negotiations; where institutions are investing on behalf of investors whose funds they are managing, it is even more essential to be able to demonstrate that they have exercised "due diligence" and have followed sensible procedures. In practice claims under warranties against individuals are very rare and, subject to the rough and tumble of contract negotiation, the contract documents will normally severely limit the warrantors' liability in terms of their duration (typically up to three years) and amount.

### 3.4.2 "Exit" Routes

The remainder of a subscription agreement will focus upon potential exit routes and in particular ways for investors to realise the disposal value of shares. It should be remembered that again this is just as important for the founding shareholders. If the business does well and the investors have made a good return on their money the subscription agreement should require that the investors will participate in a sale or listing of the Company or otherwise make some part at least of their shares available for redemption or purchase.

## 3.5 Employee Shares

Incentives to employees are often very important in technology companies; and share option schemes and other profit related methods of reward should therefore not be forgotten. Provision can be made for these, in principle at least, in the subscription agreement. If such methods of reward are, however, to represent a real incentive to the employee, some care should be taken in ensuring that the ways in which these incentives are offered do not create unwanted and ultimately discouraging tax consequences for the employee. Generally, though not universally, it is unwise to offer employees shares or options over shares outside the statutory framework of Inland Revenue approved schemes. The reason for this is that frequently the taxation consequences for an individual receiving shares or options as a result of his employment outside the scope of such a scheme are potentially extremely onerous.

## 3.6 Taxation

Taxation, as has already been seen in relation to both the BES and employee incentives in the form of equity participation, can significantly determine the nature and form of the financing of the Company. Loan stock is sometimes an attractive alternative to share capitalization in that the interest paid to investors is available as a deduction in reducing a company's taxable profits. The payment of dividends will not, of course, offer such scope and may indeed, in the early years when taxable profits are generally low, create unusable surpluses of advance corporation tax.

The form of the Company may also affect individual investors' decision as to whether to invest. Leaving aside BES scheme relief, it is frequently desirable, if possible, to keep control of the Company in the hands of five or fewer people (or in the hands of directors without limitation to their number) as such a company will be a "close" company. One of the consequences of this is that the interest on any loan raised to acquire at least 5% of the shares will be eligible for tax relief against the investor's income.

# BRINGING THE IDEA TO THE MARKET-PLACE

## 4 COMMERCIALISING TECHNOLOGY

### 4.1 Background

When considering the available options for the commercial exploitation of technology rights it is vital to scrutinise the context in which they were created and the rights of ownership which have resulted (on this see in particular Sections 1.1.1.2 and 1.1.3.2 above), including in particular the constraints, if any, imposed by previous investors or other interested parties. Each case will probably show that the contractual relationships with inventors, collaborators, authors and partners contain conditions and commitments which affect the manner, scope and financial terms of eventual commercial exploitation.

The most obvious method of commercialising a new technology is to put it into practice and to sell articles or to carry out a process which makes use of the technology. However that is not always the most practical method, particularly for a new venture, especially if it involves heavy capital expenditure.

On the other hand it is possible to make a one-off sale of the technology, and all the rights involved in it. That is likely to produce a capital sum, which will prove to have been shrewd if the technology flops. However if the technology succeeds it is likely that the sale will have realised for the seller nothing like the value which it has to the purchaser. Hence an outright sale is a gamble. That is why arrangements whereby payments made to the seller are geared to the actual use of the technology are generally preferred.

It is possible to have such geared payments, which are usually known as royalties, in exchange for the outright sale of the technology (which will normally be by an assignment of the rights). However usually it is preferable for the "seller" not to sell at all but rather to grant a licence. The advantage of a licence over an assignment is that the "seller" has the security of retaining the rights; and if the "purchaser" fails to pay his royalties the "seller" will normally be able to terminate the licence and still have his rights for further licensing. If he has assigned the rights his only remedy is to sue the "purchaser" for breach of contract.

### 4.2 Licences

#### 4.2.1 Policy and Approach

A licence is an authority or permission from the owner of an intellectual property right to do something which the owner could otherwise prohibit; a right to do something which is otherwise restricted by the very nature of the intellectual property right itself. The scope of these restrictions in relation to a patent or copyright has been explained earlier. A licence will ordinarily authorise all or certain only of such rights, subject to such conditions as the licensor may choose to impose, within the constraints of competition law requirements.

Licensing can have the advantage of permitting the licensor both to exploit the technology directly himself and at the same time have licensees who are also exploiting it and paying him royalties. This is often the case when a licensor will work the technology in his home country but will licence others abroad.

A prudent licensor will formulate his licensing policy before actually embarking on the grant of licences. He should consider the potential impact of his licence on the market, on his own activities and on those of any other licensee. But where exclusive licences are granted by reference to territory, it is common to include export restrictions intended to preserve the licensor's territory for himself and each licensee's territory for himself. Where the marketing territory is within the EEC such restrictions are best written to conform to EEC exemptions under the Treaty of Rome (see Section 4.2.3 below).

Licensing can be a two-way business. A company which is involved in licensing others to use its technology (licensing "out") may at the same time itself be a licensee in respect of, for example, special computer software which it needs to use to control that technology (licensing "in"). Indeed it may even have arrangements with the software house to permit it to sublicense this software to its own licensees. In theory there is no limit to how long a chain of sub-licensees one can

have. However the licensee wants to be sure that he will actually get the rights for which he bargained. Furthermore a sub-licensee wants to be sure that his licence will continue notwithstanding problems higher up the chain.

Sometimes one has two complementary technologies which leads to a "cross licence" between the owners so that each is authorised to use the other's technology. Cross licences are also useful for avoiding litigation between the owners of directly competing technologies.

Mixed patent and know-how licences tend to be more common than "pure" patent licences. Mixed licenses can have advantages if the strength of the patent protection obtainable is doubtful. This type of licence must in addition include the necessary secrecy provisions to protect the confidential know-how.

In theory the licensor can dictate the terms on which he will license; although if the licensee is powerful the theory can break down. However in deciding terms for licensing it is important to know exactly what rights are available for licence; in terms of the intellectual property; one can then decide on ancillary matters, like territories, licensed goods, and royalties.

4.2.2 Terms

Having determined the broad outlines of the approach to adopt the next important matter to consider is the type of licence to be granted:

'Exclusive', which means that the licensee alone can operate and even the licensor himself is excluded.

'Sole', which means that the licensor will grant no further licences so that only the licensee and the licensor can operate.

'Non-exclusive', where the licensor can grant as many further licences as he likes.

The decision as to what type of licence to offer is primarily a commercial one. It is likely to have formed part of the overall licensing strategy. But the most appropriate type of licence may vary from country to country. For example a UK company might well decide to grant non-exclusive licences (with no power to sub-licence) in the UK where it is very familiar with the market and what tolerable royalty rates would be. However, for Japan, it may prefer a single exclusive licensee, preferably a large company, who can then do its own sub-licensing and additionally deal with the leg-work of policing such sub-licensees.

The type of licence to be offered can also vary depending on the licensee. Will that licensee have sufficient finances to support the marketing operation required of him? Does he have the necessary marketing outlets and sales and support staff? Does he have an established manufacturing facility? Does he have the technical back-up to provide after-sales service and could he in any way be distracted in his sales efforts by his involvement with any competing or related products? Should he be restricted from dealing in such products?

It may be possible (subject to competition law considerations) to divide up the rights into different market sectors. Thus a licensor with a patent for a new drug could license one company for veterinary medical applications and another for human medical applications.

Licences can treat manufacture and sales in different ways. Thus quite commonly a patent licence would grant the licensee an exclusive right to manufacture in, say the UK, but the scope of the licence as to sales would be non-exclusive in all countries where patents subsist. Whilst that offers good export possibilities to the licensee he must realise that although no one else will be making in the UK he may not have the market to himself, as his fellow licensees in Italy or Holland may choose to import. Hence before granting such licences consideration should be given to the likelihood of such parallel importation; and in general to the likelihood of competition between, or from, licensees.

In a very new field, particularly if large capital investment and/or much development work is needed, a licensee may be unwilling to take a licence unless it is exclusive. He needs to feel secure in that part of the market for long enough to recoup his outlay. However there are potential problems with exclusive licences. Thus the licensor is shutting himself out of the market and this is why the licensor often requires a substantial payment on signature and royalties geared to turnover in

addition. If the licensee proves inept or indolent the licensor is in an impossible position; being unable to use the technology himself and seeing no action from the licensee. It follows that an exclusive licence must contain provisions for termination; provisions relating to minimum royalties (which help to encourage performance) and also provisions to permit exclusivity to be removed for prolonged sloth.

Licences often make provision for exchange of improvements which either party makes to the technology. Such provisions should not be so restrictive as to fall foul of EEC competition rules. Generally, this can be avoided if grant back rights are non-exclusive and royalty-free. Improvement transfer clauses should not normally be drawn so widely as to embrace products which fall outside the scope of the original licensed inventions. If there is a disparity between the research and development resources of the parties and the licensee is unlikely to be capable of furthering the technology, consideration should be given to whether such a provision is appropriate at all. The licensor in such a case may be better served by retaining his freedom to exploit his own improvements outside the existing licence arrangement.

A contentious point tends to be a request from the licensee that the licensor will actively police the rights licensed; even to the extent of commencing and financing full scale patent litigation. Usually it is better to leave such matters for discussion between the parties if and when an infringer appears. Some licensees ask for assurances that the patents are valid; a request that should be declined. But it is important for a prospective licensee to check the actual subsistence of the patents being licensed.

It is important to gear the overall terms to the rights which are being licensed. For example if a licence is to be granted under a patent, the licence should not continue after the patent expires (for there is nothing then left to licence, and to justify payment of royalties) and nor should it attempt to require the licensee to buy some other product (not patented) from the licensor or his nominees. Such "tie-ins" are regarded as objectionable under competition law. An example of the risks of attempts by the owners of intellectual property rights to try to extend the scope of those rights by licensing arises in the case of a mixed patent and know-how licence, in which when it comes to stipulating royalties it can be unwise to have a flat rate irrespective of whether the article (a) is patented but uses none of the know-how (b) uses know-how but does not fall within the patent or (c) is both patented and uses know-how. If different rates are used for these various different types of licensed products it may also be necessary to scale the targets in the minimum royalties to reflect the rates in question. One advantage of such mixed licences is that provided some know-how remains this can serve to keep a licence on its feet even if all the patents are refused. If such disaster is a real possibility rate scaling of this sort is almost vital. An alternative approach with such mixed licenses, or even sometimes with pure licenses, is to provide for an up-front payment and not to seek such a high running royalty rate. This may be particularly appropriate where the commercial life of the technology may be limited or suffer early competition from rival technologies.

### 4.2.3 Competition Law Constraints

It is in the area of intellectual property licensing where competition law is most important. This booklet does not pretend to cover such matters comprehensively; and each proposed licence agreement ought to be considered in draft from this point of view before any detailed discussions are attempted with potential licensees. Indeed it is usually found that the provisions on which the licensor's marketing executives are keenest are precisely those ones anathematised by the relevant competition authorities, be they UK, foreign or EEC!

The European Commission has taken a particular interest in patent licences, particularly those granting exclusivity. Much of European case law on this subject has been incorporated into the Patent Licence Block Exemption (see Section 4.2.4 below) and it is well worth attempting to ensure the proposed licence terms fall within its scope. However certain patent licences will not be able to take advantage of the exemption and therefore the Commission's attitude, as evidenced by the block exemption preamble and its decisions, as well as European Court of Justice judgments, will continue to influence the content of agreements. As licences of other intellectual property rights, such as

copyright, are also capable of falling foul of Article 85, by analogy certain of the views taken by the Commission in relation to patent licences may also apply to such licences.

The Commission is particularly suspicious of exclusive terms which compartmentalize the market and diminish competition between competing brands of products. The Commission will also be concerned that a licensee should not be given protection against sales of the patented goods in his territory where these were originally released on the market by the licensor or other licensees in their own particular territories. This application of the "exhaustion" doctrine has been built up through an application of Articles 30-36 of the Treaty of Rome discussed in Section 2.1.2.3 above.

Before undertaking a more detailed discussion of the Patent Licence Block Exemption reference should be made to the domestic law constraints on licensing. Thus the Patents Act 1977 prohibits certain tie-in clauses in patent licences unless justified as being technically indispensible for the achievement of the particular purpose of the agreement. It also entitles either party to a patent licence agreement to terminate once the last of the original licensed patents has expired. Such termination extends only to the particular patented invention and not, for example, to know-how supplied under the agreement. The Restrictive Trade Practices Act 1976 (see Section 2.1.1.2) can also apply to patent licences but exempted from registration are those between only two parties imposing restrictions which relate solely to the patented goods or process, which in practice takes most patent licences out of the ambit of the Act.

### 4.2.4 Patent Licensing Block Exemption

This exemption (Regulation 2349/84) applies to agreements having only two parties and which include restrictions in relation to the grant or use of patent rights, although provisions concerning know-how in such an agreement will not prevent application of the regulation so long as at least one of the licensed patents remains in force. The regulation does not apply to patent pooling arrangements, licence agreements in connection with joint ventures, reciprocal licensing or licensing in respect of plant breeders' rights.

This is not the place for a detailed analysis but passing reference should be made to Article 1 which permits exclusive patent licences and allows bans on passive export sales (responding to, but not actively soliciting, export orders) by licensees to be imposed for up to 5 years. Article 2 describes various other obligations which may be inserted in patent licences and yet preserve the exemption, such as tie-ins necessary for technically satisfactory exploitation of the licensed invention, minimum royalty obligations and field of use restrictions. Article 3 contains the so-called 'black list', which prevents reliance upon the exemption where certain 'outlawed' clauses are included such as non-contestation clauses, provisions for royalties continuing after patents and know-how have expired and grant-backs of improvements on an exclusive basis.

The block exemption also includes what is known as an "opposition procedure" in that agreements containing obligations restrictive of competition but which do not fall within its exempting provisions will still be deemed exempt provided they do not contain any of the restrictions specifically outlawed (the so called "black list" in Article 3) on condition that the agreements in question are notified and the Commission does not oppose such exemption within a period of six months.

## 4.3 Joint Ventures

Forming a joint venture company may facilitate a useful marriage of specialist contributions, for example by combining the financing and marketing experience of one company with the technological and research and development expertise of the other. Typically, a company will be formed especially for the purpose, in which equity will be apportioned in an agreed percentage. Although one party may insist on retaining control by having for example a 51% equity stake, the minority shareholders rights on transfers of shares, appointing directors to the Board and paying out dividends can and ought to be preserved in a Shareholders Agreement.

One should consider carefully the terms on which the joint venture company uses parent companies' technology. Typically, this would be by way of licence to the joint venture company, as the owner will probably be unwilling to assign its rights to the joint venture company for fear of failure of

the venture. On the other hand investors may try to insist that the company should have full ownership of these rights. It is equally important to consider who will own any rights arising in technology created by the joint venture company itself. Should these automatically vest in one of the parent companies, or should the parent companies merely have the right to a licence back from the joint venture company?

An organization intending to be involved in funding a joint venture company should of course obtain similar assurances about the transfer of the relevant technology rights to the company. It should also ensure it has a controlling say in the future of the form of any licensing out to third parties and any other terms of exploitation of the technology.

Joint ventures rarely outlive their parents and so it is essential that the question of how to terminate the joint venture and what is to happen on such termination be addressed thoroughly in the original agreements. Thus there may be different 'exit routes', each with different consequences in terms of the vesting of any intellectual property rights.

The parties to a joint venture are likely to wish to incorporate some restriction on their scope for competing with each other in the field of the joint venture or with the joint venture itself. Under UK domestic competition law such agreements risk being registrable under the Restrictive Trade Practices Act 1976 (see Section 2.1.1.2). However, there are certain exemptions which it may be possible to take advantage of, and even if this cannot be done the DGFT, recognising the economic advantages of such combinations, has indicated his rather more favourable attitude to joint venture agreements.

Article 85 of the Treaty of Rome will also be in point where the joint venture is liable to affect EEC trade. There is no block exemption for joint ventures as such unless they fall within the Research & Development Exemption (see Section 4.4.2 below) or the Specialisation Exemption (see Section 2.1.2.1. above).

### 4.4 Development Contracts

#### 4.4.1 Approach

The originator of technology rights, be he an individual or a commercial organisation, may not have the expertise or the financial resources to develop an idea to the stage where it can be evaluated for its commercial potential and further from, say, prototype stage to production model.

The problem can be overcome by contracting out the development work. In such circumstances careful consideration must be given to the protection of any existing rights in the technology but even more important (as pointed out in Section 1.3.1 above) is the need to ensure that rights in new technology created by the contract work will vest, preferably absolutely, in the commissioner of the work. Many astute manufacturing organisations have quite legitimately made vast profits out of exploitation on their own account of new products and processes developed with the assistance and technical contribution of their own customers who have commissioned them to undertake development work. At the very least the commissioner should call for a royalty in such circumstances.

To protect its position in a development contract, the commissioner will often wish to impose restrictions which might at first sight appear contrary to Article 85. The European Commission acknowledges that in order to protect the economic value of technology the owner may wish to restrict its use by a sub-contractor and has issued a notice in relation to certain sub-contracting agreements to the effect that in its view Article 85 does not apply to agreements under which one person sub-contracts work to another. The notice expresses the Commission's view that Article 85 does not apply to clauses restricting use of the technology to the purposes of the particular agreement and preventing the technology and the goods, services or work resulting from its use being made available or supplied to third parties. Certain ancillary restrictions giving reasonable protection to the technology are also regarded as not giving grounds for objection.

#### 4.4.2 Research and Development Block Exemption

Development can be conducted through the medium of a joint venture, as to which the observations above in Section 4.3 apply. Such agreements are likely however to contain restrictions

which might on their face breach Article 85. The European Commission is keen to encourage cooperation in research and development and in the exploitation of the results thereby generated and recognizes therefore that in collaboration on such projects the participating undertakings may accept certain restrictions which are justifiable within the terms of Article 85. Accordingly Regulation 418/85 extends to joint research and development or products or processes and joint exploitation of the results of that research and development. Such joint exploitation includes assignments or licensing of intellectual property rights or the communication of know-how to third parties.

This exemption applies only where the joint exploitation relates to results of the project which are protected by intellectual property rights or constitute know-how which substantially contributes to technical or economic progress and those results are 'decisive for the manufacture of the contract products or the application of the contract processes'. Various ancillary restrictions are deemed acceptable so that the benefit of the block exemption will not be lost (Article 4), these restrictions essentially binding the parties to collaborate exclusively on the particular project. However, extraneous restrictions on the parties' freedom to carry out research and development will disentitle them to claim the benefit of the exemption (Article 6), for example where following completion of the project the parties are restricted from carrying out research and development in the same or connected fields.

### 4.5 Trade and Service Marks

No monopoly in a technology can last forever. But the sensible use of trade marks when commercialising a technology can reinforce and extend that monopoly.

Trade Marks are the marks used for products so that a customer recognises the product as being of a particular manufacture. Thus the marks 'Persil' and 'Polaroid' have become household names in relation to their respective products. The best type of trade mark is an invented word which has no obvious connection with the goods. Thus 'Kodak' is a perfect mark, meaningless when introduced but now, thanks to enormous use, known world wide to identify the products of their maker. Trade marks can also include or be devices (e.g. the Bass Triangle or the Rolls Royce Silver Lady) and can also cover the presentation (or 'get-up') of the products, for example the orange and black packagings used by Eastman Kodak for 'Kodak' products.

A fundamental error often made is to assume that the trade mark should be as descriptive of the products as possible. This is quite wrong; the more descriptive a mark is the less capable it is of singling out one company's products from those of its competitors.

Although trade marks can exist independent of registration, and registration is not obligatory, it does provide considerable advantages in the event of infringement. A manufacturer or seller of the product may register the relevant mark but only in respect of the goods in which he trades or closely similar goods. A few very well known marks, (provided they are invented words) can be registered in respect of all goods. Otherwise the proprietors of, say, a mark for cars, would only be able to prevent third parties using that mark on cars and vans, but not on hamburgers or knitting wool. Until quite recently trade marks could be registered in the UK in respect of goods only; and not services. That has now been altered and service marks can be registered.

Trade marks, unlike other intellectual property rights, can exist indefinitely, although with registered marks renewal fees must be paid. Thus trade marks can come to have enormous value. Indeed the choice of a trade mark can in practice become more important than direct protection of technology, by means say of patents or trade secrets. Ideally, if one begins operations under the protection of a patent, by the time the patent expires the trade mark should be so well established that the public will simply continue buying the product. However, many marks cease to be used or to remain distinctive over a long period, and may even tend to become generic terms.

The registration of a trade or service mark permits the owner to bring an action for infringement against any third party who uses the mark, or what is termed a "colourably similar" version of the mark, on the goods. The main advantage of having a registration is that it is not necessary to prove that the owner has a reputation in the mark, as that is presumed. If the mark is unregistered, or if the infringer is using the mark on goods outside the scope of the registration then

an action for passing off can be mounted; although in this case it will be necessary to prove the reputation in the mark, and preferably show actual cases of confusion.

It is therefore prudent to seek the registration of a trade or service mark at as early a stage as possible in the public launch of a product or service. Following registration, it is vital not to put the rights conferred by registration at risk. There are stringent limitations on the assignment or licensing of trademarks. Thus, particular care must be taken if it is intended to license out the mark. Failure to provide for quality control by the owner of the mark both in the formal agreement and in practice may seriously jeopardise the owner's rights.

From a competition law point of view trade marks can be used to restrict the flow of goods within the EEC. It has been established that although the substance of a trade mark as a guarantee of origin could be jeopardised if a third party is allowed to fix the mark to a product without prior authorization, nonetheless trade mark rights should not be used to partition the markets in the EEC; accordingly, where this was discovered to be the trade mark proprietor's purpose this would probably amount to a disguised restriction on trade, prohibited by Article 30 (as to which see Section 2.1.2.3).

## 4.6 Tax

The tax implications of technology exploitation through licensing are legion; the taxation treatment in any one situation depends upon the source and nature of the rights being granted from licensor to licensee. That is, the precise taxation treatment will depend upon whether the licence is in respect of a patent, copyright, trade mark, know-how or is merely some form of merchandising which does not grant even the most limited of rights in or over any intellectual property.

There are, however, common themes which will concern both licensor and licensee in any of the above described relationships. In particular, the licensor will wish to know whether, in certain circumstances, the receipts derived from the commercialisation will be taxed in his hands as income or capital. In some cases, capital sums will be taxed as income e.g. lump sum payments for patents under s.524 Income and Corporation Taxes Act 1988 or for know-how under s.530 of the same Act. On an assignment the same principles will apply. Copyright and trade marks are not the subject of particular statutory provisions so that the taxation of receipts on the assignment or licensing of these forms of intellectual property will depend upon the actual split as between income and capital. The distinction is less significant than it used to be as capital gains in companies will in the future be taxed at income rates.

The licensee will wish to be sure that whatever payments are made will confer upon him some form of tax relief, whether by way of an allowable deduction from profits or income or some other specified tax allowance e.g. capital allowances. Both the licensor and licensee should establish whether tax should be deducted at source and paid over to the Inland Revenue in respect of any payment made under the licence and both should take account of the impact of Value Added Tax legislation in each case. In the context of cross-frontier transactions, the interaction of UK and foreign tax regimes and the use of appropriate double tax conventions, which exploit the most tax efficient cross-border flow of royalties, will also be relevant.

Finally, UK stamp duty will be payable at a rate of 1% of the consideration on an outright assignment or irrevocable exclusive licence (which most licences are not) of most forms of intellectual property.

## 4.7 Specific Topics

### 4.7.1 Computers

One of the main problems with any computer system, from the legal point of view, has been the differing nature of the two legal properties with which one is concerned in any computer system; namely the physical property that is the hardware itself, that can be bought and sold in a conventional way, and the intellectual property comprised in the software, which is almost invariably subject to what has come to be a particularly complex type of copyright licence.

One problem arises because the hardware is effectively useless without at least the operating system, or system software. Such software is specific to a particular item of hardware, or at least a particular microprocessor. With mainframe and mini computers such software has tended to

be provided by the supplier of the hardware on a licence that does not provide for its assignment by the licensee; this means that the licensee cannot sell his hardware without procuring that the purchaser obtain a new licence from the supplier (a "second user agreement") for which the supplier will charge and which further reduces the resale value of the hardware.

On the other hand applications software being less specific (or at least more easily modified to operate with various combinations of system software and hardware) can have a wider variety of sources. The consequence is that any computer system is likely to be subject to several different licences from different licensors simultaneously.

The growth of the market in microcomputers and the attendant reduction in the cost of software has brought with it problems for those licensors who have sought to retain traditional licences not only to restrict usage but to exclude liability and generally to regulate their relationship with the licensee. Where software packages are "sold" across a counter by dealers such licence agreements cannot easily be entered into, and the attendant administrative costs will usually make it unrealistic even to attempt to do so. This has led to the device of a "shrink wrap" licence by which an attempt is made to fix the user with the terms of the shrink wrap licence by his act of opening the packaging. To the extent that such a licence seeks other than to restrict the usage of the program by specifying what acts restricted by the copyright in the program are permitted to be done such a device is of dubious value under English law.

The nature of the restrictions on what can be done with a computer program are much more complex than in other examples of copyright licensing, perhaps because software is the only copyright work which can only be made use of by undertaking a restricted act: generally by copying the program into store. Thus a licensor may incorporate specific provisions preventing the use of software on multiple installations.

A further issue is that of rights in improvements, which are in the form of new releases and are a common feature of software. Copyright in software entirely written for a specific application for a specific client will belong to the software house writing it unless the contract for its development provides otherwise, as it should. But in the case of licensed software, including licensed software that has been tailored to a specific application or for a specific user, the user will usually have only such licence as the licensor grants and little or no right to prevent the use elsewhere of the software. If the licensor develops the software further the licensor will have, as is natural, rights to the improvements. But if the licensee develops the software the licensor may still want rights in the improvements. Conventional analogies with patent licensing would suggest that the licensor should take no more than a royalty-free non-exclusive licence back with a right to sub-license. Anything more is on the patent licensing block exemption "black list." But here the analogy breaks down. An improvement in software cannot be separated from the original software; the licensee cannot exploit an improvement in isolation and if the licensor does not obtain full rights to an improvement his scope for establishing full title to and commercialising the improved work and proceeding against infringers is limited.

A further problem is of concern to users. As software licensors will generally support and maintain their product, and to discourage copying it, they will supply it in the form of "object code" understandable to the computer but only with difficulty to humans, rather than the "source code" higher level computer language in which it is written. The source code, being comprehensible, is vital for maintaining the software. However, if the software supplier ceases to support the software or goes bankrupt the user, without access to source code, is left in a difficult situation. The "escrow agreement" has been introduced in an attempt to deal with this. The source code and documentation is left for safekeeping with some third party who releases it to the user on the happening of some specific occurrence. Such agreements should make provision for the source code to be updated and occasionally checked but the extent to which they can be enforced on insolvency has yet to be determined.

### 4.7.2 Telecommunications

The controls over those who would wish to provide telecommunication services are applied not through restrictions on the provision of services as such but, as explained in Section

2.2.2.2 above, rather through licensing the running of telecommunication systems and, in such licences, authorizing or precluding the provision of specific services over those systems. Thus either through individual or class licences, and subject to the preservation of voice (other than mobile telephony) and basic telex services to BT and MCL as explained above, the provision of various services over systems and the networks composed of such systems has been permitted, most significantly in two class licences, the Branch Systems General Licence (BSGL) and the Value Added and Data Services ("VADS"). Value added services can be provided by means of systems run under either of these class licences, depending on the precise circumstances; such services tend to involve processing of messages in the course of their transmission, storing and forwarding and protocol conversion, as in electronic mail.

There is a blanket restriction in all licences on the provision of simple resale services, it being the current policy of the Government, to be reviewed in 1989, that such services, involving the use of a public switched fixed network at each end of a private circuit in order merely to convey messages, should be barred. As private circuit tariffs are gradually re-balanced to make them more reflective of costs, this policy will become less and less tenable and it is widely anticipated that the 1989 review will result in the abandonment or substantial dismantling of restrictions on resale of capacity over public networks.

As to telecommunication apparatus supply anyone can now do this provided the apparatus has been duly approved for connection to public networks. The approvals regime is discussed in Section 2.2.2.2. Telecommunication apparatus may however only be installed by contractors approved under the Telecommunications Act, whilst maintenance of such apparatus, subject to any relevant private contractual arrangements, is governed by the general conditions applicable to all licences granted under the Act. These conditions require that work on call routing apparatus, such as a PABX, or wiring connected to that apparatus and comprised in the system may only be carried out by a "designated maintainer." Such maintainers are either public network operators or persons approved under the Act to maintain the type of apparatus in question.

4.7.3 Biotechnology

The nature of the rights being exploited is addressed in Section 1.3.3, and as will have been apparent from the discussions on the problem of description, deposit and self-replication in Section 1.3.3.2 if one is licensing, say a cell line, then as soon as the licensee has obtained a sample he has got the key to the technology in question. This means that licences of cell lines or of microorganisms need to be handled rather differently from either know-how licences or patent licences; as effectively once the sample has changed hands virtually all control over the technology is lost.

# DEFENDING TECHNOLOGY RIGHTS

## 5. INTELLECTUAL PROPERTY LITIGATION

One feature common to all forms of Intellectual Property is that they rely on the owner of the rights to enforce them; and no action will normally be taken by other authorities, e.g. by Government or the Patent Office, to enforce them on behalf of the owners. An important exception to this principle in the UK is that of copyright; under the new Act trading in articles known (or reasonably suspected) to be infringing articles is a criminal offence. However the appropriate authorities have to be alerted to the situation, and this is often best done through industry coordinating bodies such as FAST (the Federation Against Software Theft) who can also cooperate with Trading Standards officers in using the Trades Description legislation against counterfeit articles. The new Act has also made the fraudulent application or use of a trade mark a criminal offence.

In order to enforce rights in intellectual property in England and Wales it is normally necessary to bring an action in the High Court to prevent infringement. Actions for copyright infringement and breach of confidence can be brought in the County Courts but this is only rarely done because of the low level of damages that can be awarded. The new Act provides powers to give certain County Courts the right to hear actions for patent infringement and design infringement up to higher financial limits than the usual County Court ones. In Scotland, actions to enforce intellectual property rights are usually brought in the Court of Session.

However the mere commencement of the action will not necessarily mean that the infringer ceases to infringe. He can, if he wishes, (and unless the plaintiff applies for and is successful in obtaining an interlocutory injunction) continue until after the trial of the action, which can typically take anything from one to three years to take place. If infringement is established at trial then further infringement will be prevented by a permanent injunction breach of which can be a contempt of Court punishable by a fine and imprisonment. The plaintiff will also be entitled to seek damages to compensate him for the past infringement, including the period from the issue of the writ up to the trial of the action.

### 5.1 Interlocutory Injunctions

#### 5.1.1 General Principles

The plaintiff is often not prepared to permit the alleged infringer to continue his activities until trial and what he would like is an immediate injunction to prevent further infringement. This can sometimes be obtained by the grant of what is called an interlocutory injunction. However this can only be obtained where the Court considers that it would otherwise be impossible to do full justice after the trial of the action. This is normally held to happen when the plaintiff can show that he will have suffered unquantifiable (in money terms) or irremediable damage in the meantime.

In the field of intellectual property rights this often means that such injunctions will not be obtainable in respect of patent infringement. This is because provided that the scale of the defendant's continued infringement is ascertainable (which can usually be achieved by the keeping of accounts) then the damage done to the plaintiff can relatively easily be calculated after the trial, using the normal technique of trying to fix a notional royalty. The position may be different if there are special circumstances such as the patent approaching the end of its life.

However if the action is for infringement of trade mark, passing off or disclosure of trade secrets an interlocutory injunction can often be obtained because there is no way to measure the damage done to the plaintiff by dilution of the distinctiveness of his trade mark, nor to estimate the value of a trade secret which will by the trial have long ago passed into the public domain.

Interlocutory injunctions are intended for emergencies and speed is of the essence. If a competitor starts using a similar trade mark it is no good waiting for 5 or 6 months before doing something; usually an application must be brought within a couple of months or the Court will conclude that it cannot really be sufficiently damaging to the plaintiff. But really the application should be brought much sooner than that.

Because interlocutory injunctions are granted on a superficial view of the facts they carry

with them what is called a cross undertaking in damages. This means that if at the trial of the action the plaintiff fails and the interlocutory injunction is dissolved then the Court will conclude that the interlocutory injunction was improperly granted and that the defendant should be recompensed in damages by the plaintiff for the damage caused by the injunction.

5.1.2 Special Interlocutory Injunctions

The usual type of interlocutory injunction is an injunction to stop someone doing something (e.g. using a certain trade mark) until full trial of the action. In most cases this will provide the plaintiff with sufficient protection. With some defendants there is a strong risk of them leaving the country, moving assets abroad or destroying evidence which should be disclosed on discovery in the ordinary course of proceedings. The Courts have developed a range of interlocutory orders suited to these eventualities and which are granted in addition to restraining injunctions.

One of these is the *Mareva* injunction, which can prevent assets being dissipated or transferred abroad. Another is the *Anton Piller* order ("the dawn raid"), under which the defendant is ordered by the Court to give the plaintiff's solicitors access to his property for the purpose of searching for, and taking into safe keeping, infringing articles and relevant documents. It is common in *Anton Piller* orders for the defendant also to be ordered to disclose the identity of his suppliers and his customers. *Anton Piller* orders may be particularly appropriate in the case of computer software piracy, because of the ease of erasing the evidence.

The aim of such an order would be lost if the plaintiff lost the element of surprise and the defendant had notice of it before it was executed. Thus such orders are made "ex parte," that is on the application of the plaintiff alone. In a case with several defendants each the subject of such an order or where there are further potential defendants, an order preventing the defendant the subject of an *Anton Piller* order from communicating the existence of the order to anyone other than his lawyers for a certain period is also necessary for maintaining the secrecy.

As on such an ex-parte application the Court can only hear one side of the case, a heavy duty is placed on the plaintiff and his advisers to tell the whole story, "warts and all" to the Court, and not just to advance such of the evidence and the arguments as are in the plaintiff's favour. Failure to be candid can mean that on a subsequent application at which both parties produce evidence (which is therefore called "inter partes") the Court may refuse to grant a further restraining interlocutory injunction and may discharge any such injunctions previously granted.

5.2 Remedies

The main aim of most intellectual property actions is to stop the infringer and to reestablish one's monopoly. Thus the most important remedy sought at the full trial of an action is an injunction against continued infringement. But unless the infringer has previously stopped, either voluntarily or as a result of an interlocutory injunction, he is likely to have benefited as a result of infringing prior to the full trial and so damages, or an account of profits, and interest on these sums, will, if the plaintiff is successful, also be awarded against the defendant.

5.3 Costs

An important feature of all High Court litigation is the rules on legal costs. If a party commences an action he will incur legal costs, and will cause the other side to incur legal costs too. Normally a party who wins at the trial of the action will also be awarded his "costs" which means that the loser will have to contribute to the winner's legal costs. In practice the winner does not obtain reimbursement of all his legal costs, but only about one half to two-thirds. Nevertheless it means that a party to litigation is risking not only his own costs but also risks making a substantial contribution to the costs of his opponent.

There are exceptions to this rule on costs, for example, when a Court awards the plaintiff no more than the defendant has previously formally (though at the time of the trial unbeknownst to the Court) offered; then although the plaintiff has technically won, the Court clearly considered that he should have accepted the offer. In these cases the winner will not usually get his "costs," as the award of costs is always at the discretion of the Court, and may depend on the nature of the claim and the way in which it has been prosecuted. In the example of the offer that should have been accepted,

the plaintiff would usually get his costs up to the date of the offer, but would have to pay the costs of the defendant after that date.

The legal costs of fighting an intellectual property action all the way to trial are substantial and can place a considerable strain on the resources of a young enterprise. Insurance cover for these liabilities can be obtained (naturally before one knows of an infringement) and it is well worth taking out such cover at the same time as applying for a patent.

### 5.4 Patent Actions

#### 5.4.1 The English High Court

In the case of infringement of a patent the patentee can start proceedings in the High Court to prevent infringement and also to recover damages for past infringement. Usually damages are assessed on the notional basis of a royalty which would have been paid by a willing licensee to a willing licensor for a licence under the patent.

Patent infringement actions are almost always met by two defences; firstly that what the defendant is doing is not an infringement (in the sense that for some reason or other the product or process does not fall within the scope of any of the claims) and/or secondly that the patent is invalid. In order to decide a patent action the judge (who has some technical background) has firstly to decide what the claims of the patent actually cover. Usually the drafting of the claims will have been done in such a way as to try to capture the essence of what has been invented rather than tying the inventor down to the precise ways of carrying out the invention which he has described. Often this question of deciding the scope of the claims is not easy and requires expert evidence to assist the judge in deciding what certain technical terms might mean.

Once the judge has decided the scope of the claims he then has to decide whether the alleged infringement, working on the meaning of the claims which he has decided, is in fact an infringement. He also has to consider the question of the validity of the patent. Unless all these hurdles are successfully negotiated by the patentee his action will fail.

#### 5.4.2 The European Patent Office

Since 1978 there has been an additional potential complication in patent actions in the UK. This is because as explained above in section 1.2.2.2 it is possible to obtain UK patents either by the domestic route or by application to the EPO in Munich. If the European route is chosen then, after the grant of the patent, there is a period of 9 months during which the EPO can entertain oppositions to the grant of the patent. The EPO is competent thus to determine the validity of the patent it has granted, in the sense that it can either revoke the patent, require amendements or maintain the patent. The jurisdiction of the EPO in this regard over-rides that of the national court in the UK. However the EPO has no jurisdiction to deal with matters of infringement.

At the moment it is not clear exactly how parallel proceedings in Munich and London will be treated; although so far the indications are that an action in London will not be stayed pending the outcome of the Munich proceedings. Neither is it clear to what extent the Court in London would regard a finding by the EPO (on opposition) that a patent was valid as binding upon the Court.

### 5.5 Trade Mark Actions

Trade mark actions are on the whole rather simpler than patent actions, and usually depend on the plaintiff persuading the judge that the defendant is using a mark which is confusingly similar to his registered trademark. In passing off actions the plaintiff must also establish reputation in his unregistered trademark. In the absence of direct evidence of confusion market research surveys may have to be done, although the English Courts have demonstrated a variety of approaches in determining the weight to be accorded such survey evidence. The validity or scope of the plaintiff's registration can be challenged in a trademark action.

An important new power has been given as a consequence of an EEC directive to trade mark owners which permits them to alert Customs and Excise to the import of counterfeit goods (originating outside the EEC) which bear a false trade mark. The Customs and Excise will then impound the counterfeits pending any determination in court as to whether they do indeed infringe a trade mark.

## 5.6 Copyright Actions

Copyright actions are in theory the most straightforward intellectual property actions. The plaintiff's first task is to find the original copyright works (not always as easy as it might sound) and establish the identity of the author (which can be difficult particularly if many people have been involved in a series of amendments to a computer program or drawing). After that it may be necessary to obtain assignments of the legal title in some or all of the copyright works. All too often what appears to be a straightforward copyright action can founder when the plaintiff runs into problems in proving that he owns the copyright. The plaintiff must also establish that there was an opportunity for the defendant to copy. This will exist where the plaintiff's copyright works (or, in the case of design copyright, articles manufactured in accordance with the plaintiff's copyright works) have been available before the defendant prepared the alleged copy. Then, usually, provided that there is a certain objective similarity between the alleged copy and the copyright work, the burden of proving that it is not a copy in effect passes to the defendant.

## 5.7 Confidential Information Actions

The main problem with confidential information actions is in adequately defining what the confidential information actually is or comprises; when reduced to writing, technically significant "know-how" can suddenly look very thin. It is necessary to show that it has been kept confidential and that the defendant has broken, or threatens to break, this confidentiality or to use this information. An additional problem with such actions if brought against ex-employees is the reluctance of the Courts to prevent a man earning his living. Thus they take a restricted view of the confidential information that can be protected after (as opposed to during) employment.

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This booklet has been a whistle-stop tour of some of the sights, surroundings and intricacies of the world of technology law and regulation. We found preparing it a stimulating exercise; we hope our clients and friends find it useful and thought-provoking.