

Conclusion

Restrictions on the patentability of software in Europe are already very limited in practice. And in the very near future they are likely to be reduced further. The trend is likely to shift to an analysis of whether other requirements, such as novelty and inventive step, are satisfied. This presents significant opportunities for e-commerce and financial services businesses to patent new and

inventive technology, allowing the development of new areas of exclusive commercial activity. Given the lengthy monopoly that patentees enjoy (20 years), it should also increase the incentive to invest in research and innovation. That is of course the very purpose of patents.

The law in the United Kingdom on exactly what is patentable in this field, and what

constitutes infringement, is not settled.

But that should not discourage those who are investing significant sums in the development of new ideas from seeking as strong a level of protection as they can against unauthorised use of their results.

Patenting those results may well be the answer.

Can Patents for Software and Business Systems be Enforced?

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European patent law prohibits the patenting of computer programs and business methods "as such". Yet thousands of patents have been granted here for computer programs and computerised business systems. Many more are in the pipeline and it is becoming easier and easier to obtain patents in that field.

But, can they be enforced? Owners of patents for such technology face uncertainty. Can such patent protection be easily circumvented by siting a software server outside the jurisdiction and allowing access over the internet? Users of the patented invention will also face uncertainty. If patents for such technology are not easily enforceable or not enforceable at all, do they need to worry, or can they ignore them? This article considers these questions in an e-commerce context, highlighting the issues involved in determining how patented e-commerce inventions might be infringed in the United Kingdom.

First, however, we look at why patents in these sectors have become so important to businesses in recent years.

The patentability of programs for computers and business methods

It had been thought previously that business methods and computer programs were not patentable. Articles 52(2) and 52(3) of the European Patent Convention (EPC) exclude patent protection for computer programs and

business methods "as such":

"Article 52 - Patentable Inventions"

- (1) European patents shall be granted for any inventions which are susceptible of industrial application, which are new and which involve an inventive step.
- (2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:
 - (a) discoveries, scientific theories and mathematical methods;
 - (b) aesthetic creations;
 - (c) **schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;**
 - (d) presentations of information.
- (3) The provisions of paragraph 2 shall exclude patentability of the subject-matter or activities referred to in that provision only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such."

The interpretation of the "as such" requirement has been the subject of complex case law in the United Kingdom and in the Boards of Appeal of the European Patent Office (EPO). Under that EPO case law, Articles 52(2) and

52(3) have been held to exclude only subject-matter which lacks 'technical character'. The jurisprudence of the EPO focuses mainly on programs for computers. However, as business methods and computer programs have in some cases been combined, EPO decisions on programs for computers also provide a useful indication of the stance which the EPO is likely to take in relation to the other exclusions.

This approach is also close to that adopted by the President of the EPO in relation to patentability in a paper dated 19 May 2000, forming part of a Trilateral Study by the Japanese Patent Office and the United States Patent Office involving feedback from the EPO. The study proposes that computer-implemented business methods should be examined as if they were computer implementations. However, 'abstract' business methods (which do not have a computer or other technical implementation) would not be patentable.

Because the case law on 'technical character' and the interpretation of the exclusions under Articles 52(2) and 52(3) had resulted in the exclusion being applied very narrowly by the EPO, applicants have used the opportunity to file greater numbers of applications for software and business system patents. Thousands of patents have already been granted for software related inventions; and numbers will increase further as e-commerce and financial businesses become familiar with, and

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accept the advantages of, patenting such technology.

And it is likely to become even easier to obtain a patent for a software or business system invention. The exclusion on computer programs - even though it is very narrow in practice - is viewed as a hindrance on European competitiveness, as compared to the United States. Proposals for the abolition of the exclusion on computer programs will be considered at a Diplomatic Conference in November this year. It is likely that the blanket prohibition will be removed and replaced with a more general requirement for technical character. It is unclear, at this time, whether the exclusion on business methods will be retained, but it is thought that its removal is not as widely supported as that of the computer program exclusion.

The deletion of some of the exclusions in Article 52(2) would ensure that the wording of Article 27 of the Trade-Related Intellectual Property (TRIPs) treaty is reflected more closely in the EPC. That Article provides that:

"... patents shall be available for all inventions, whether products or processes, in all fields of technology ..."

Whilst Article 27 of TRIPs is not strictly speaking applicable, it has recently influenced the thinking of the Boards of Appeal of the EPO.

Practically, these changes mean that businesses will have not only to consider which of their own new and inventive technologies are suitable for patent protection, but also whether their own commercial activities are hindered by the patents of others. In the past, it may have been possible to consider patents as being largely irrelevant to the financial and software fields. This is no longer the case. Businesses will also wish to be aware of applications by others in relevant fields, so that any necessary steps to challenge specific patents can be taken. In short, e-commerce and financial businesses are having to adopt business strategies that have been in use in other more patent-rich fields for some years.

Can patents for software and business systems be enforced effectively?

For a financial institution or an e-commerce business, obtaining a patent for a software or business system invention is only the first step. To be of real value, the owner must also be able to enforce it, or be able to persuade a potential licensee that it provides an effective means of preventing unauthorised competition. Conversely, a user of a particular patented technology will want to know whether a licence is required in all circumstances.

The infringement of European patents is dealt with by national law. In the United Kingdom, infringement is governed by Section 60, Patents Act 1977. In each case the acts complained of have to be infringing acts, and those acts must also take place "... in the United Kingdom ...". Directly infringing acts are set out in Section 60(1):

60.- (1)

Subject to the provisions of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he **does any of the following things in the United Kingdom** in relation to the invention without the consent of the proprietor of the patent, that is to say -

- (a) where the invention is a **product**, he **makes, disposes of, offers to dispose of, uses or imports** the product or **keeps** it whether for disposal or otherwise;
- (b) where the invention is a **process**, he uses the process or he offers it for use in the United Kingdom when he knows, or it is obvious to a reasonable person in the circumstances, that its use there without the consent of the proprietor would be an infringement of the patent;
- (c) where the invention is a **process**, he disposes of, offers to dispose of, uses or imports any **product obtained directly by means of that process** or keeps any such product whether for disposal or otherwise.

The application of these provisions in the context of e-commerce can be unclear. For example:

- a web-based trading system might be implemented using a server in the United States, with customer access in Europe via the internet. That access might be using an internet browser or proprietary software. Does use of the system from the United Kingdom infringe a UK patent? Is it an infringement of the UK patent to make the system available via the internet?
- a patented financial computer system might be implemented in the United States and its execution would be on a system in the United States. However, results from the execution might be made available in Europe via the internet. Does the act of importing results into the United Kingdom, or indirect use of the invention on a server outside the United Kingdom, infringe a UK patent?

The following paragraphs consider some issues raised by these examples and what - if any - activities carried out in relation to the invention are actionable infringements in the United Kingdom. The acts mentioned might also constitute infringement of a corresponding United States or other foreign patent but these aspects are outside the scope of this article. It should be noted that the above examples are not the only ways of using software and business system inventions in ways different from traditional patented inventions, and that further provisions in the Patents Act govern indirect or contributory infringement.

Importation of locally executable software into the United Kingdom

The details of the cases described above may vary considerably. For example, the execution of software via the internet may involve local execution (and therefore "use") of a component of the software. If that component is patented in the United Kingdom, the importation of that component into the United Kingdom, and its use in the United

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Kingdom, will constitute actionable infringing acts in the United Kingdom.

Such importation and local use might be found if the patented software component is contained in a Java applet, an ActiveX program, or a Flash Macromedia script. It might also be the case if the patented software is contained in a custom software component downloaded from the server and executed locally in the United Kingdom. These cases are in principle relatively straightforward and, although there is no case law on this point yet, there should be little if any impact on a patentee's ability to enforce its patent both against the person importing the invention into the United Kingdom and the person using it in the United Kingdom. A user of such technology is likely to require a licence for use, unless there are strong grounds for doubting the validity of the patent (certain issues regarding validity are highlighted later in this article).

Using an invention remotely from the United Kingdom

Can the user of a patented software or business system product located and executed on a server in the United States, but accessed anywhere in the world over the internet, infringe a UK patent?

If the answer is "no", almost any patent for a computer program could very easily be circumvented by locating the program outside the United Kingdom and making it accessible via the internet. As the assumption is that there is no importation, the most likely category of infringing act under Section 60(1)(a) is "use". There is no definition of "use" in the Act for the purposes of Section 60. However, if the meaning of the word "use" includes making practical use of the invention (which seems likely), and if that activity takes place in the United Kingdom with the aid of internet and other facilities available in the United Kingdom, it can be seen that such use could be held to fall within Section 60(1)(a).

For a user, this would mean that a licence to use the technology is likely to be required, unless there are grounds for doubting the validity of the patent (as

highlighted later in this article). However, for a patentee, an infringement action may well be costly due to the need to at least show in some detail - in the absence of existing case law on this point - how "use" in the United Kingdom takes place. Furthermore, because the users of the technology would in any case be likely to be the potential customers of the patentee, it might be preferable to the patentee to focus instead on any potentially infringing acts being committed by those distributing the invention over the internet. This is considered next.

Making a patented invention available on the internet for use from the United Kingdom

A patentee will be concerned if its invention is made available on the internet from a location outside the jurisdiction in which the patent for the invention is effective, regardless of whether the invention is made available free of charge or in exchange for payment. In these circumstances, the economic power that a patent gives - a monopoly limited in time - will be undermined or completely circumvented. Clearly, once an invention is being made accessible by someone other than the patentee, the patentee will wish to have the option of preventing such activities at their source, rather than focusing on individual users of the invention in the United Kingdom.

The starting point must be that for infringement under Section 60 to be actionable in the United Kingdom, it must occur in the United Kingdom. Courts in the United Kingdom have recognised the jurisdictional limits set by the Act in the case of products of a more physical nature (for example, CDs in *Pioneer v Warner* [1997] R.P.C. 757). Similarly, in the area of copyright - which has similar territorial restrictions built into its provisions governing infringement - it is clear from *Pearce v Ove Arup* ([1999] 1 All ER 769 at 798), that an action cannot be brought in England for the infringement of UK copyright by acts done outside the United Kingdom (see Section 16(1), Copyright, Designs and Patents Act 1988). It would be surprising if this did not also apply to patents in e-commerce.

Once this principle is appreciated, it is

relevant to ask whether and in what circumstances making a patented invention available on the internet might nevertheless constitute an infringing act in the United Kingdom. For example, because material made available on the internet is accessible throughout the world, can such an act be classified as - for example - importation of the invention into the United Kingdom, or an offer to dispose of the product in the United Kingdom (both actionable infringements under Section 60(1))?

As regards offers, both the offer and subsequent disposal must take place in the United Kingdom: *Kalman v PCL Packaging* [1982] FSR 406. However, this merely shifts the analysis to a slightly different question: is an offer to dispose of a patented invention, made on the internet accessible throughout the world, also made in the United Kingdom?

Case law on the jurisdiction of English courts over UK patents on the internet will no doubt develop as patents in this area proliferate. In the meantime, there are potential parallels that might be drawn from cases involving other areas of relevance to e-commerce, such as trade marks. This is considered below.

Using a UK trade mark on the internet

Under Section 9 of the Trade Marks Act 1994 (TMA), the proprietor of a registered UK trade mark has exclusive rights in the trade mark which are infringed by "use" of the trade mark "in the United Kingdom" without consent. This is further refined in Section 10, under which a registered trade mark is infringed by a person if he "uses" a sign which falls within the prohibited classes of signs specified in that Section. Whilst there is some elaboration in the TMA on the meaning of "use", it is not focused on the issue of making trade marks accessible on a world-wide basis on the internet and whether this constitutes "use" in the United Kingdom.

In *800 Flowers TM* [2000] ETMR 369 (12 December 1999), Jacob J stated

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that use on the internet did not necessarily amount to use in the United Kingdom:

"For trade mark laws to intrude where a web site owner was not intending to address the whole world but only a local clientele and where anyone seeing the site would so understand him was absurd ... the mere fact that websites can be accessed anywhere in the world does not mean, for trade mark purposes, that the law should regard them as being used everywhere in the world. It all depends on the circumstances, particularly the intention of the website owner and what the reader will understand if he accesses the site."

However, this was in the context of considering whether the mark '800 Flowers' could have United Kingdom reputation, and not in the context of a potentially infringing use of a sign.

Infringing use was considered next in *Euromarket Designs Inc v Peters & Anor* (25 July 2000, LTL 21/8/2000), an application for summary judgment. Jacob J approved his earlier ruling in *800 Flowers TM*, and held that a registered UK trade mark was not infringed by an advertisement in a United Kingdom magazine and on a website where the defendant's target market was in Eire rather than the United Kingdom. It was held that the defendants had not actively sought trade in the United Kingdom, because - according to the determination of the court - the website related to a shop in Ireland. While it was acknowledged that the trade mark was used on a website accessible from the United Kingdom, that was not enough because it was held that it is relevant to enquire what the purpose and effect of the use is. In *Euromarket*, the "use" complained of was "advertising" under Section 10(4)(d) TMA.

The "use" of a mark, in the context of the reputation of that mark, is clearly concerned with the *purpose of use in relation to a market* and the *effect that use has on a market*. If the use is not directed to a market - perhaps because it is clear that the mark is used only in

connection with goods to be sold elsewhere - then use of a mark will not have a material effect on the market for trade mark purposes. Similarly, from *Euromarket* it appears that, in the context of infringing use of a sign, what is relevant is the *purpose of use in relation to a market* and *effect the use has on a market*. If the use affects a market, then it is "used" in that market. In both contexts, the simple fact that a website is accessible world-wide including from the United Kingdom does not mean that it is "used" in the United Kingdom.

It should be noted that in *Euromarket* the claimant also claims infringement of a Community Trade Mark (CTM). That aspect was not subject to the summary judgment application, and it might be that the outcome in relation to the CTM at trial will be different from the present findings regarding the UK trade mark, since a CTM has unitary effect throughout the Community.

Applying trade mark principles to patents

Is the "use" of a trade mark in the two senses described above similar to the use, importation, offering for disposal or other prohibited acts in relation to a patent? While for UK trade marks the extent of the use is determined by the purpose of use in relation to markets and the effect of use on markets, it is not clear that similar principles apply to acts in relation to patents. For example, because a patented product could be "used" without reference to the markets in trade mark use analysis is not applicable to it. However, it is less clear whether the concepts established for trade marks might be applicable to importation and offers to dispose of the patented product, since these activities may be directable at specific markets. This possibility was not excluded by Jacob J in *800 Flowers TM*, when he said that:

"In other fields of law publication on a website may well amount to a universal publication, but I am not concerned with that."

An interpretation that making a patented invention available on the internet in a

manner directed at the United Kingdom, constitutes infringement (either importation into the United Kingdom or offering to dispose of the invention in the United Kingdom), would help safeguard patentees' economic rights. Practically, infringement action to restrain the distribution of patented inventions using the internet may of course be difficult to take due to problems with enforcing judgments outside the United Kingdom where no treaties for the enforcement of judgments abroad apply.

Provided that elements of patent infringement taking place in the United Kingdom are found, if the court discerns that damage has been caused to United Kingdom property (such as UK patents), it will not shy away from asserting jurisdiction over such acts. This can be seen in *Mecklermedia Corp and Anor v DC Congress GmbH* [1998] 1 All ER 148, an action by Mecklermedia in the United Kingdom against use by DC - in Germany and Austria - of certain marks claimed to constitute passing off in the United Kingdom. Jacob J held that:

"It is to be noted that all the activities of DC take place in Germany and Austria—none take place within the territorial jurisdiction of this court. But I cannot think that matters so far as the English law of passing off is concerned. To do acts here which lead to damage of goodwill by misleading the public here is plainly passing off. To do those same acts from abroad will not avoid liability. Whether the court can assume jurisdiction (in the sense of become seised of an action) over a defendant abroad, is another matter. That depends upon the extent to which the court has the power to make a person abroad party to an action." (emphasis added)

Further emphasising the point, Jacob J stated that:

"So far as the English tort of passing off is concerned, the harm is to the goodwill in England, to the effect on the reputation in England. That is

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a direct effect on the plaintiffs' claimed English property ... All the components of liability of the tort take place in England. A trial would require proof of goodwill, misrepresentation and damage in England. It would not matter whether or not what DC were doing in Germany was, so far as German law and facts was concerned, lawful or not."

The approach taken by the English courts in relation to the internet use of trade marks is in certain respects similar to that taken in courts in the United States, whose more plentiful internet jurisprudence may also guide the analysis of issues by the English courts in relation to patent infringement (although, as will be seen, the courts in the United States may in practice be quicker to hold that particular activity on the internet is directed at the United States). They may also guide the way in which future internet trade mark case law develops in the United Kingdom. We therefore look next at some of the cases decided recently in the United States (however, a detailed consideration of complex United States legal issues on jurisdiction is outside the scope of this article).

Using a US trade mark on the internet

In the United States, internet cases have raised issues connected with the personal jurisdiction of United States courts (that is, jurisdiction where there is no continuous and systematic contact between the defendant and the state of the relevant court, giving the court general jurisdiction). Standards established by the US Supreme Court regulate the personal jurisdiction of state courts: one of these is that the defendant must have had sufficient "minimum contacts" with the state, and that traditional notions of fair play and substantial justice are not offended. It appears that the minimum contacts test may be satisfied when the defendant has purposefully availed himself of the privilege of conducting activities in the state, invoking the benefits and protections of the laws of that state.

Minimum contacts may be established under the "effects doctrine", which holds that personal jurisdiction over a defendant is proper when the defendant's intentional tortious actions (including infringements of intellectual property rights) expressly aimed at the forum state cause harm to the plaintiff in the forum state, and harm the defendant knows is likely to be suffered: *Calderv Jones*, 465 U.S. 783 (1984). Harm may be found, for example, in the state of the plaintiff's principal place of business in trade mark cases: *Bunn-O-Matic* (1998 U.S. Dist. LEXIS 7819).

Minimum contacts may also be found using the "sliding scale" analysis, as described by the District Court for the Western District of Pennsylvania in *Zippo Manufacturing Company v Zippo Dot Com Inc* (952 F. Supp 1119):

"At one end of the spectrum are situations where a defendant clearly does business over the Internet. If the defendant enters into contracts with residents of a foreign jurisdiction that involve the knowing and repeated transmission of computer files over the Internet, personal jurisdiction is proper. E.g. Compuserve, Inc. v. Patterson, 89 F.3d 1257 (6th Cir. 1996)."

In *Patterson*, jurisdiction was found in Ohio after computer files had been repeatedly transferred onto computer systems in Ohio. The transfer of computer files or data to computers in a jurisdiction was recently also held to confer jurisdiction on the transferee state by the United States Court of Appeals for the Tenth Circuit: *Intercon Inc., v Bell Atlantic Internet Solutions, Inc.*, (No. 98-6428, 205 F.3d 1244). This is not dissimilar in some ways to what might take place if a patented software invention is accessed over the internet.

The District Court in *Zippo* then went on to say that:

"At the opposite end are situations where a defendant has simply posted information on an Internet Web site which is accessible to users in foreign jurisdictions. A passive Web site

that does little more than make information available to those who are interested in it is not grounds for the exercise [of] personal jurisdiction. E.g. Bensusan Restaurant Corp., v. King, 937 F. Supp. 295 (S.D.N.Y. 1996)."

In *Bensusan*, the use of trade marks on websites without more - i.e. the mere act of establishing a website which includes a specific trade mark - was held not to be sufficient to trigger jurisdiction. The District Court in *Zippo* concluded:

"The middle ground is occupied by interactive Web sites where a user can exchange information with the host computer. In these cases, the exercise of jurisdiction is determined by examining the level of interactivity and commercial nature of the exchange of information that occurs on the Web site. E.g. Maritz, Inc. v. Cybergold, Inc., 940 F. Supp. 96, 1996 U.S. Dist. LEXIS 14976 (E.D.Mo. 1996)."

Under *Maritz*, trade mark infringement may be possible to establish if the mark is used on a website which is maintained for the purpose of access and use by all internet users. Increasing local contact through advertising in local newspapers can also give the required minimum contact in trade mark cases: *Heroes Inc v Heroes Foundation* (958 F. Supp. 1).

The reasoning in *Zippo* was approved by the United States Court of Appeals for the Fifth Circuit in *David Mink v AAAA Development LLC and David Middlebrook* (No. 98-20770, 190 F.3d 333). The Court of Appeals concluded that:

"In this case, the presence of an electronic mail access, a printable order form, and a toll-free phone number on a website, without more, is insufficient to establish personal jurisdiction. Absent a defendant doing business over the Internet or sufficient interactivity with residents of the forum state, we cannot conclude that personal jurisdiction is appropriate."

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These cases indicate that, both in the sliding scale analysis and under the effects doctrine, it is relevant to examine whether use on the web is directed towards a specific jurisdiction. Once direction is found, it may be difficult for a defendant to avoid other pieces in the jurisdictional puzzle falling into place.

However, whilst at first sight it appears that the criteria on which at least jurisdiction in relation to trade mark matters is based, are similar in the United Kingdom and in the United States, it is instructive to contrast the different outcome of the United States component of the *Euromarket* litigation with its United Kingdom counterpart. As mentioned above, Jacob J held in the United Kingdom that there was no infringement of a UK trade mark by the use of the *Crate & Barrel* mark, because the relevant website and publications were directed at Eire.

The United States District Court for the Northern District of Illinois in *Euromarket Designs, Inc. v Crate & Barrel Limited, Miriam Peters and Point Blank Multimedia* (No. 99 C 6926, 96 F. Supp. 2d 824) (16 May 2000), began by indicating that it was willing to apply laws concerning trade marks to new situations including internet marketing:

"Cyberselling is here to stay. The Internet makes it possible for persons worldwide to buy, sell and ship goods to or from anywhere in the world from their own living room using a computer and an Internet hook-up. Courts and legislatures must keep pace with the ever changing world of cyberspace. This opinion addresses the issue of whether an Irish retailer with an interactive website allowing Illinois residents to order goods from Illinois for shipment to a foreign address can be sued in Illinois by an Illinois company for violation of the Lanham Act [United States Federal trade mark legislation]."

In its discussion of whether there had been use of the relevant United States trade mark "in commerce", the United States court stated that:

"[Crate & Barrel] Limited has actually entered into a sales contract with at least one Illinois customer over the Internet using the Crate & Barrel trademark. By anyone's definition of commerce, entering into a sales contract, wherever the goods may be shipped, constitutes use in commerce."

In contrast to the judgment by Jacob J on UK trade mark infringement (which addressed a different set of facts), the United States court found - relying on sales having been made in Illinois - that trade had been directed towards Illinois and that:

"In this case, Defendant's activities demonstrate that it deliberately established minimum contacts with Illinois and purposefully availed itself of the privilege of conducting activities in this forum under both the traditional effects doctrine and the sliding scale analysis developed for Internet activities in trademark infringement suits."

The United States court, relying on the plaintiff's base being in Illinois, and on sales having been made in Illinois, ruled that under the effects doctrine:

"Applying the law to this case and taking all jurisdictional allegations in the complaint as true, [Crate & Barrel] Limited's alleged tortious actions establish personal jurisdiction over [Crate & Barrel] Limited under the effects doctrine for three reasons: 1) if the Crate & Barrel's trademark has been infringed, the injury will be felt mainly in Illinois; 2) [Crate & Barrel] Limited intentionally and purposefully directed its actions toward Illinois and Crate & Barrel, an Illinois corporation, allegedly causing harm to Crate & Barrel in Illinois; and 3) [Crate & Barrel] Limited knew that harm would likely be suffered in Illinois."

Under the sliding scale analysis, the

result was the same:

"[Crate & Barrel] Limited's website clearly falls into the first category of interactive websites which allow a defendant to "do business" and "enter into contracts with residents of a foreign jurisdiction over the Internet." [Crate & Barrel] Limited purposefully and deliberately designed and now maintains a website with a high level of interactivity, enabling customers to browse through an online catalog and place orders via the Internet. The website actively solicits all users, including residents of Illinois, to purchase goods. Defendant clearly is doing business over the website."

In the United Kingdom, the ruling had given some weight to a changeover of the website currency from United States dollars to Irish pounds. This was thought to be irrelevant in the United States, where instead the fact that the United States could be specified as the destination country for a web-based order was significant. In contrast to the position in the United Kingdom, and perhaps because of the sales made to Illinois, the United States court had no difficulty in finding that the website was directed at its jurisdiction:

"Defendant's assertion that it is not conducting commerce in Illinois when it only ships to the Republic of Ireland is unpersuasive. [Crate & Barrel] Limited bills Illinois customers, collects revenues from Illinois customers, and records sales on goods ordered from Illinois."

As can be seen from the above differences in findings of fact by the courts in the United States and the United Kingdom, issues of *res judicata* might be expected to assume greater importance in parallel internet-based litigation. This was not a bar to United States proceedings:

"In this case, there is no conflict between proceeding in American courts litigating United States and Illinois

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claims, and proceeding in Irish and British courts litigating Irish and British claims. A judgement in one forum may or may not raise issues of res judicata because, although the same parties are involved; different laws are being applied in all three forums. In addition, should judgment be rendered in one of the foreign forums, it is highly unlikely that courts in this country would find that enforcing the judgment conflicts with the strong public policies of the United States. Should that be the case, it can be addressed when the time comes."

Clearly, the principles applied in the courts in the United States to date involve more developed distinctions as regards the type of conduct being carried out on the internet. These distinctions may be considered relevant by English courts, but it is likely that the development of complex rules which restrict the ability of the court to judge each case on its facts will be resisted. Nevertheless, in general the principles are similar to those applied in the United Kingdom in *800 Flowers TM* and *Euromarket*, and the above analysis as regards patents made available on the internet thus holds even in light of the United States case law discussed above.

The principles from the United States case law are founded on United States state, federal and constitutional principles and thus the rules developed in the United States are unlikely to be adopted wholesale in the United Kingdom, where a different statutory framework prevails.

Use of the results of execution in the United Kingdom

Turning to another potentially infringing act mentioned above, we look at the case where only the *results* of the execution of the program (if anything at all) are transmitted to the individual's system in Europe. Does the import of such results into, or use of such results in, the United Kingdom infringe?

Under Section 60(1)(c), if the patent is for a process, and if the results of the

execution in the United States constitute a "product" obtained directly by means of that invention, then the use in, and importation of that product into, the United Kingdom will infringe. In the case of e-commerce inventions, the "product" obtained using the invention would typically be information or a financial transaction.

There is no definition of "product" in the Act for the purposes of Section 60(1)(c). In *Pioneer v Warner*, the product obtained from the application of the patented process for CD manufacturing was a physical product. Pending case law which explains whether numbers, data or information obtained directly by means of an invention could constitute a "product" for the purposes of Section 60(1)(c), the law is uncertain. If such a classification is accepted by the courts, users of financial information services, data services and computer programs will need to ensure that appropriate protection is obtained against patent infringement actions should it be the case that the information they receive is held to be such an infringing product.

It is of interest in this connection to note software patentability requirements in the United States. The US limitations on patentability stem from the requirements of 35 USC § 101 that the subject matter of the patent must be a "process, machine, manufacture, or composition of matter" and must be useful. As held by the US Supreme Court in *State Street Bank & Trust Co. v. Signature Finance Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998) (approved in *AT&T Corp. v. Excel Communications Inc.*, F.3d, 50 USPQ2d 1447 (Fed. Cir. 1999)), these requirements are fulfilled if a method produces a "concrete, useful and tangible" result. In *State Street*, that result was a set of US dollar quantities. Conceivably, such a result might also be a "product" for the purposes of Section 60(1)(c).

The above analysis on infringement has focused on the liability of a single primary infringer. However, patent law in the United Kingdom also recognises joint liability for 'collaborative' infringements. A claim based on joint liability may in certain cases provide a more flexible solution for a claimant.

These issues are explored briefly next.

Joint liability

If it is not an infringement of a UK patent to make a patented invention available from outside the United Kingdom via the internet to persons in the United Kingdom, it may still be possible for that act to be an actionable tort in the United Kingdom, for example by forming part of a common design to infringe the UK patent. It is established that a party who is jointly liable may be located outside the United Kingdom (see, for example, *Unilever plc v Gillette (UK) Ltd* [1989] RPC 583). However, the question is whether the making of the invention available on the internet is *sufficient involvement* for there to be a joint liability.

As regards the degree of involvement required, the Court of Appeal (Dillon LJ) explained in *Mölnlycke v Procter & Gamble (No 4)* [1992] 4 All ER 47 (at 52) that:

"The relevant law has recently been further developed. For a very long time there has been a dichotomy applied between 'procuring' and 'facilitating' an infringement of a patent: see Townsend v Haworth (1875) 12 Ch D 831, Dunlop Pneumatic Tyre Co Ltd v David Moseley & Sons Ltd [1904] 1 Ch 164, 612 and Belegging -en Exploitatiematschaappij Lavender BV v Witten Industrial Diamonds Ltd [1979] FSR 59 at 65, where Buckley LJ said: 'Facilitating the doing of an act is obviously different from procuring the doing of the act.' A person who merely facilitated but did not procure the infringement was not a joint tortfeasor with the infringer and so was not liable if, for instance, he sold articles which could be used for infringing or non-infringing purposes even though he knew that they would probably be used and were intended to be used for the infringing purposes. "

However, as Dillon LJ pointed out, the concept of joint liability has developed

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since those cases:

"More recently however a new concept has been developed. Parties will be regarded as joint tortfeasors if on the facts they had a common design to market in the United Kingdom articles which in truth infringe a UK patent. The first appearance of this doctrine seems to have been in Morton-Norwich Products Inc v Intercon Ltd [1978] RPC 501; a decision of Graham J. There the common design was shared by a Dutch company, which wanted to market in the United Kingdom infringing goods for which it had no licence from the patentee, and the Dutch company's English distributor. This common design, which the Dutch company had furthered by its acts, rendered the Dutch company liable as a tortfeasor in the English courts, although the Dutch company's own acts in furtherance of the common design had all taken place abroad and the plaintiff patentees had chosen not to sue the English distributor."

A common design may embrace tacit agreements to carry out an infringing act, if the parties combine to do acts which in the event prove to be infringements: *Unilever v Gillette*, as stated by Mustill LJ ([1989] RPC 583 at 609):

"I use the words "common design" because they are readily to hand, but there are other expressions in the cases, such as "concerted action" or "agreed on common action" which will serve just as well. The words are not to be construed as if they formed part of a statute. They all convey the same idea. This idea does not, as it seems to me, call for any finding that the secondary party has explicitly mapped out a plan with the primary offender. Their tacit agreement will be sufficient. Nor, as it seems to me, is there any need for a common design to infringe. It is enough

if the parties combine to secure the doing of acts which in the event prove to be infringements.'

In the context of e-commerce inventions being used on the internet, it may well be that agreements to provide access to patented inventions over the internet to users of those inventions in the United Kingdom are enough for a common design to be found. A patentee would, of course, be well-advised in any infringement action to include defendants outside the jurisdiction both as participants in a common design and as infringers under Section 60, if that is possible in the dispute concerned.

If a common design or other joint liability is found, the patentee may find it more commercially effective to seek to enforce a remedy against those making the invention available via the internet in the United Kingdom. The patentee has the right to choose which party to a common design to enforce judgment against, as stated in *Mölnlycke* ([1992] 4 All ER 47 at 58):

"It is long-established that a plaintiff who has been injured by a number of joint tortfeasors can choose which he will sue. He does not have to sue all of them. But the defendants have no right whatsoever to dictate which the plaintiff shall sue or to make the choice for him. If at the trial the plaintiffs succeed in establishing infringement and common design they will be entitled to judgment for damages for infringement against GmbH as well as against the first and possibly second defendants. They will be able to choose which to enforce the judgment against."

Under conventions providing for the enforcement of judgments outside the United Kingdom, this may be realistic. However, where a judgment cannot be automatically enforced outside the United Kingdom the patentee will find enforcement a complex and unreliable process. Whilst a user might not expect to have an infringement suit brought against it, assuming perhaps that the patentee will go instead for the key distributor located outside the United

Kingdom, the ability of the patentee to choose whom to enforce against may well be a concern for a user when enforcement against the distributor is difficult.

Objections based on non-patentable subject-matter, lack of novelty or inventive step

It will usually be open to a defendant in the United Kingdom to challenge the validity of any patent asserted against it. In this context, defendants will no doubt have in mind - for example - the interpretation of the scope of Articles 52(2) and 52(3) EPC. For an explanation of developments in this area, see for example Laakkonen and Jones, *Managing Intellectual Property*, September 2000, page 39.

The Community patent proposals

An additional layer of complexity is introduced by recent proposals for the introduction of a Community patent, which may include a court structure under the European Court of Justice for the resolution of disputes relating to such patents. The jurisdictional limits placed on such disputes are as yet unclear but will be instrumental in defining the limits of Community patents.

If and when a Community patent is introduced by Community legislation, general principles of interpretation relevant to Community laws will be relevant. For the purposes of infringement, it will of course be necessary to understand when certain conduct can be viewed as taking place in the Community or otherwise subject to the scope of the rules on infringement. Community law already has an "effects" based doctrine for the extra-territorial application of Community laws. For agreements, the analysis hinges on whether the agreement is "implemented" in the Community: *Ahlström Osakeyhtiö v Commission* (C89/95), but the analysis also has extended to concentrations when it is foreseeable that a proposed concentration will have an immediate and substantial effect on the Community: *Gencor Ltd v Commission* (1999). As more details of the proposed

Community patent legislation become available, the application of such principles will become clearer.

Conclusion

The prohibition on patents for software in Europe is already interpreted very narrowly, and it is likely to be further restricted, or eliminated altogether very soon. The trend is likely to shift to an analysis of whether other requirements, such as novelty and inventive step, are satisfied. This presents opportunities for e-commerce and financial businesses to patent new and inventive technology, allowing the development of new areas of exclusive commercial activity.

However, complexities in the application of laws unsuited to e-commerce environments leave the determination of infringement in most commercially useful systems unclear. In particular, if national courts do not assert jurisdiction

over activities involving patented inventions over the internet, it will become very easy to circumvent the patent monopoly granted to the patentee. However, signs that case law is developing to keep pace with developments on the internet have already been seen in relation to trade marks and copyright, in particular in the United States. For their part, the English courts have been quick to recognise the special nature of dealings on the internet and appear willing to take account of those features in the cases they decide. This promises a pragmatic approach in relation to internet software and business system patents in the United Kingdom, making the jurisdiction attractive to patentees with patents for new and inventive systems who wish to curtail infringement quickly using the newer, faster litigation procedures available here.

Jurisdiction and the Internet

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1. Introduction

"Persons outside of Minnesota who transmit information via the internet knowing that the information will be disseminated in Minnesota are subject to jurisdiction of Minnesota Courts for violations of state, criminal and civil laws".

This statement was made by Attorney-General Hubert Humphrey III of Minnesota in 1995.

In reality, if this attitude towards jurisdiction over conduct engaged in using the internet was adopted throughout the world then in effect every nation or state would be imposing the laws of its jurisdiction on all persons throughout the world. The concept of jurisdiction and the

Internet presents some major challenges for e-commerce.

This article considers the:

- concept of jurisdiction;
- the unique features of the Internet which create difficulties applying traditional jurisdictional principles to cyberspace;
- both the United States and the Australian position in relation to Internet jurisdiction;
- the distinction between civil and criminal conduct;
- the preliminary draft *Convention on Jurisdiction and Foreign Judgments in Civil and Commercial Matters*; and
- some practical measures to minimise the risks of remote jurisdiction (in other words, being hailed into court in a

foreign jurisdiction).

In addition this article attempts to answer the following questions:

- If I operate a website in Australia and do something that is legal in Australia, can I be sued outside of Australia, if the action is illegal in another place?
- If I enter into an Internet transaction via the Internet with someone outside of Australia, can I be sued there/ or can I sue the other person here?
- In either of the above, which countries' or states' law will apply?

2. The Internet

The Internet is global and non-national¹. It is global because of its nature in transcending