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E-patents in the UK and in Europe

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On 10 May 2000, the Financial Times reported that Halifax plc were applying for patent protection for an internet banking service (which, it is reported, would feature setting off loan interest against savings). The Financial Times suggested that the concept of patenting business methods and computer programs would "... *in principle be most undesirable.*"

But whatever one's views may be on its desirability, the fact is that it is becoming easier to obtain patents for inventions involving computer programs and business

methods in the United Kingdom and the rest of Europe. As a consequence, patents can no longer be ignored by financial institutions, internet and e-commerce businesses.

This article explains what the relevant criteria are for obtaining patents in this area, explains why such patents are likely to become easier to obtain and also considers the scope of the protection they confer.

The patentability of software and business methods

Under Article 52 of the European Patent Convention (EPC) patents should not be granted for business methods or computer programs "as such". The interpretation of this exclusion has been the subject of complex case law in the United Kingdom and in the Boards of Appeal of the European Patent Office (EPO). The guidance provided by these cases will be considered below. The cases reveal a trend towards greater flexibility in applying the criteria, and display the development of the 'Technical character' requirement applying to inventions in this area.

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However as important (if not more), is the fact that some of these prohibitions on patentability are likely to be abolished very soon. They are seen as placing European industry at a competitive disadvantage, and (as discussed in a recent Trilateral Study by the EPO and the United States and Japanese Patent Offices) at least the software exclusion will probably go following a Diplomatic Conference in November this year to be replaced with a more general requirement for technical character.

In the meantime, and even after the change, the following guidance from the decided cases will be relevant.

Patentability in the EPO

Courts in England take account of decisions of the Boards of Appeal of the EPO. So it is important to understand the EPO's position in order to comment on the position courts in the United Kingdom are likely to take.

In an early - but influential - case *VICOM*

(T208/84), the Boards of Appeal of the EPO set out the general principle that:

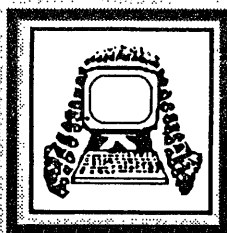
a claim directed to a *technical process* which process is carried out under the control of a program (whether by means of hardware or software) cannot be regarded as relating to a computer program *as such*

Business systems *combined with* computer systems can also be patentable. The Board of Appeal accepted in *SOHEI* (T769/92) - a central decision in the EPO's approach to business systems - that there can be a technical element in a computer system in a business context. The system in *SOHEI* was for use as a business system; and it has now been confirmed that no importance should be attached to the use of the system as a whole. Solving a technical problem took the invention outside the exclusions in Article 52. The invention was patentable. It was important that *SOHEI* involved a computer

system for a business method: as suggested in the Trilateral Study, an 'abstract' business method without a technical implementation is unlikely to be patentable.

Following the above cases, an invention will fall outside the exclusions in Article 52 - in other words, it will in principle be patentable - if the invention solves a technical problem or has a 'technical effect'. This was further refined in *Computer Program Product II/IBM* (T0935/97), where the Boards of Appeal added that the requisite 'technical effect' can be a *potential* technical effect. That technical effect must be more than the ordinary effect obtained by running a program on a computer: a 'further' technical effect must be present. Whilst these concepts might also apply to a business method, the President of the EPO has expressed the view that the reasoning in *Computer Program Product II/IBM* was "very special" and does not lend itself to abstract business methods.

EPO case law also recognises that inventions



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can consist of a mix of technical and non-technical elements. Can an invention consisting of a computer program with only a known 'further' effect be patentable? It seems now that the answer is "yes" in respect of the exclusion in Article 52 provided that the invention also satisfies the basic requirements for patentability, i.e. it is new and involves an inventive step. The case law does allow an invention to be patentable when the basic idea underlying the invention resides in the computer program itself. These developments have substantially narrowed the exclusion for patents on computer programs. The focus is now likely to move to novelty and inventive step, as for other types of inventions.

Patentability in the United Kingdom

Whilst the same basic principles apply in the United Kingdom, the English courts have in practice applied the rules more strictly, finding that many software and business method inventions are not patentable. For example, in *Fujitsu's Application*, a seminal case in the United Kingdom, the Court of Appeal held that the relevant invention (a computer system for the design of synthetic crystal structures) was not patentable, even though it accepted that in principle discoveries and ideas that have a technical aspect or make a technical contribution were patentable. The court appears to have been influenced by the fact that the only advance was that the computer program automated something that was, or could have been, previously done manually. A similar principle exists in the EPO. The court held that the invention did not make a "technical contribution".

The English courts have also emphasised the requirement that inventions be *practical applications* of discoveries, not discoveries as such and that a patentable invention must consist of something more than simply a conventional computer and a computer program.

Infringement of e-patents in the United Kingdom

Obtaining a patent is only part of the story. The real value in a patent is the ability it gives the owner to prevent others infringing it. The key question, therefore, for a financial institution or an e-commerce business which has obtained a patent for its technology, will be whether it can enforce it effectively, and in respect of what sort of activities.

The infringement of European patents is dealt with by national law. In each case the acts complained of have to be infringing acts, and, to infringe a UK patent or a European patent having effect in the UK, must be carried out here. The effect of this provision 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 via an internet browser or proprietary software. In such a case, does the use of the invention from the United Kingdom infringe? (The use of such systems from the United Kingdom might also constitute infringement of a corresponding United States patent, but we will not consider that possibility further here.)

If the invention resides wholly in a computer program (such as a Java applet or an ActiveX program) which is downloaded by the individual's browser while accessing the website, then the execution of the program occurs locally in the individual's computer system. Similar considerations will apply if a proprietary program is used for accessing the website. In such cases, it seems that the invention will have been imported into or used in the United Kingdom; both acts could infringe.

What if only the *results* of the execution of the program (if anything at all) are transmitted to the system in Europe? 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 relevant legislation but it is of interest to note the software patentability requirements in the United States. One of the relevant questions is whether the invention has a practical application in the technological arts, for example by producing a concrete, useful and tangible result. Conceivably, such a result might be a "product".

Even if the result of the execution of the computer program outside the United Kingdom were not a "product", would the remote use of the program from the United Kingdom infringe? 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. Courts in the United Kingdom have recognised the jurisdictional limits set by the Act in the case of products of a more physical nature. E-patents will however present a slightly different challenge to the courts for the reasons mentioned above.

An additional layer of complexity is introduced by recent proposals for the introduction of a Community patent, which may include a pan-European court structure for the resolution of disputes relating to such patents. The jurisdictional limits placed on such disputes will be instrumental in defining the limits and the usefulness of Community patents in e-commerce. While Community patents are likely to eliminate jurisdictional borders within the EC, limitations on jurisdiction in more global disputes (such as the scenario described above) are as yet unclear.

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