Navigating the software and business method maze

Recent decisions in the US and Europe concerning the patentability of software and business methods may have provided greater clarity, but they have not brought further harmony. This has significant implications for portfolio management strategies

By John Collins

The patenting of software and business method inventions has received much attention over recent years because of the commercial significance of such inventions and the lack of international harmony and clarity. Important recent cases in the US and Europe in this contentious field have recently been decided. The wish was for clarity and for some optimists the hope was for more harmony of international law. While we may a little more clarity, we certainly do not have any harmony.

Europe moves to clarify first

Patent protection for inventions is available in Europe via two different routes: national patents administered by national patent offices or European patents administered by the European Patent Office (EPO). The procedures vary in the national offices, but the substantive law is aligned with the EPO. Although European patents are granted centrally by the EPO, they comprise a bundle of national patents for countries including both EU members and non-EU members. There is no unitary EU patent system yet, despite attempts since the 1960s to implement a Community patent system.

In 2002, the European Commission published a proposed EU directive on the patentability of computer-implemented inventions. In the commentary accompanying the proposed directive, the divergence of approach in the EU member states to the interpretation of the matter excluded from patentability was acknowledged. Differences between the UK and German courts were particularly highlighted. The conclusion of the Commission was that there was a need to harmonise the laws of the member states of the EU and to make the conditions of patentability more transparent and less ambiguous.

However, although the proposal started out by following the approach of the EPO, at the end it was threatened by far-reaching amendments. The opponents of the proposed directive were held out as the saviours of small business and of freedom in the software development arena. The debate raged for more than three years, with a significant amount of misunderstanding and misinformation.

In the summer of 2005, the proposed directive was abandoned. This has left the EU member states with no common interpretation of their national laws, which were meant to have been drafted so as to be common in principle with the European Patent Convention (EPC).

The directive aimed to clarify and unify the law within the European Union, and was necessitated by a seeming divergence of practice in the member states, particularly the UK. Although the law in the UK appeared to move towards the EPO approach for a period, in a 2006 decision of the UK Court of Appeal (the combined cases of *Aerotel v Telco* and *Macrossan's Application* [2006] EWCA Civ 1371), the court decided that the EPO approach was unclear and declined to follow it. Instead, it defined a new four—step test which is now applied by

The EPO approach to assessing software and business method patentability

The current approach of the EPO in identifying patentable subject matter is firstly to consider whether the invention is excluded from patentability. The EPC includes a list of things which are excluded from patentability, including computer programs and business methods, but only to the extent that the invention relates to that thing as such. If no technical means is involved in the claimed invention, the application fails to meet this first hurdle.

If technical means are involved – for example, a computer system – the approach is then to go on to consider the novelty and inventiveness of the claimed invention. Inventiveness is assessed using a so-called problem and solution approach. The problem must be a technical problem and the solution must be a technical solution. So, in this approach the differences over the prior art are identified. Next, the problem addressed by these differences that is not addressed in the prior art must be identified. Is this problem technical? To assist in this assessment, the field of the skilled person that would be

the UK Intellectual Property Office and is more restrictive than the current EPO approach, discussed in the box above.

On 22nd October 2008, the President of the EPO referred the issue of software patents to the Enlarged Board of Appeal of the EPO. The referral took the form of questions based on decisions of the Technical Boards of Appeal which were considered to diverge in their interpretation of the law. On 12th May 2010 the Enlarged Board decided (G₃/08) that the referral was inadmissible because there was no divergence in the decisions of the Technical Boards of Appeal. The decision identified that there had been a legitimate development of the case law and supported the current approach of the Technical Boards of Appeal, which it considered to be consistent.

In effect, the decision of the Enlarged Board of Appeal has confirmed that software is patentable under certain circumstances in Europe, but has shut the door for business method patents. The national courts should take due consideration of this decision as they are obliged to align their interpretation of the law with that of the EPO. However, in the UK, the courts are bound by the *Aerotel* decision until it is overturned. Hence, it concerned with this problem should be considered. In the solution of this identified technical problem, only technical features can be considered to provide a technical solution; non-technical features are disregarded. Further, in this approach, these identified nontechnical features are deemed given to a person skilled in the technical arts for the solution of the technical problem. If the claimed invention does not provide a technical solution to a technical problem, the claimed invention is deemed unpatentable for lack of technical inventiveness.

For software inventions, the impact of this approach is that inventions are patentable if the software solves a technical problem. The software is inherently technical and will thus provide a technical solution so long as there is a technical problem.

For a business method, the impact of this approach is that unless there is something inventive about the implementation of the business method in technology, ignoring all aspects of the business process, it is not patentable.

remains to be seen how effective the Enlarged Board of Appeal decision will be in harmonising the laws of some of the member states.

The US struggles to bring clarity

Over the years the US courts and the USPTO have struggled with the issue of business method patents. Following the *State Street* decision (*State Street Bank & Trust Co v Signature Financial Group Inc*, 149 F 3d 1368 (Fed Cir 1998), in which the US Court of Appeals for the Federal Circuit (CAFC) decided that there was no statutory exclusion for the patentability of business methods, there was a huge increase in the number of business method patents filed. Since *State Street*, it has generally been considered that the US looks favourably on the patenting of business methods.

However, in October 2008 in the *Bilski* case (*In re Bilski*, 07-1130 Fed Circuit 2007), the CAFC decided that for a process invention to be to directed to statutory patentable subject matter, it must either be tied to a machine (ie, involve the use of a machine in a non-trivial manner) or transform an article. This is termed the machine or transformation test. The *Bilski* invention related to a method of hedging risks in commodities trading and the claimed process involved no machine and

was not considered to cause a transformation of an article. However, Bilski successfully petitioned the Supreme Court to review the decision and on 28th June 2010 the Supreme Court issued its long-awaited decision.

The Supreme Court reversed the CAFC's clamp down on business method patents to keep the door open. The justices decided that the machine or transformation test for process or method inventions is just one useful and important clue or investigative tool in the determination of whether a process invention is statutory. Inventive processes may be patented so long as they are not abstract. Business methods are not precluded from being patented.

Building a portfolio

For companies wishing to build a portfolio of patents that relate to software and business methods, such as financial transaction, internet business and advertising systems, it is important to understand the differences in law internationally (see box on page 75). The application of only a local understanding of the law will result in missed opportunities or wasted effort and costs.

An international understanding will give the company realistic expectations for the protection of its business and enable it to focus efforts and budget in areas where a return on the investment is most likely. For example, understanding the positioning of countries in the legal spectrum will enable a company to make sensible commercial decisions such as pursuing a software or business method invention in the US, but not in Europe; or even drafting a modified patent specification for Europe focused more narrowly on the details of the technological implementation of a business method if it is considered that this will provide worthwhile protection.

Drafting of the patent in a form to give the applicant the best chance in each country of interest is critical: this is often termed the international patent specification. It requires an attorney with the technical knowledge and the legal experience of prosecuting this type of invention in multiple jurisdictions. The draftsman must have an eye for how the law may develop in the future – that is, how future interpretations of the law may develop.

For some inventions, it may not be possible to draft a single patent specification which will have a good chance of success in both the US and Europe, for example. The description of the software or business method invention that is patentable in the US may not assist in obtaining a patent in Europe and, in fact, may act against you, since

Protecting software and business method inventions in the US

The same day as the *Bilski* decision was handed down by the Supreme Court, the US Patent and Trademark Office issued interim guidelines for its examiners. These guidelines instructed the examiners to continue to use the machine or transformation test as a tool for determining whether the claimed invention is a statutory patentable process invention. If the invention fails the test, the applicant is required to explain to the examiner what in the claimed invention is not abstract. This approach shifts the burden to the applicant, while it is business as usual for examiners. Hence, the machine or transformation test remains.

So what does this mean in practice? Most business method inventions are

the business method (non-technical features) is deemed given to the skilled person in the technical arts in the determination of whether there is an invention in the technical implementation of the method. Hence, to improve the chance of success in Europe, it may be advantageous to redraft the specification with more technical implementation details if the protection of such details would be useful to the company.

It must be appreciated that some inventions are not patentable in some restrictive jurisdictions, such as Europe and China, no matter how well the patent is drafted. However, some patentable inventions may fail to be allowed in these jurisdictions if the patent is not drafted so as to bring out the technical features which provide a technical solution to a technical problem.

For patent protection in Europe to try to protect a business method, the key is to try to identify whether there is any inventive merit in the implementation of the business method in technology (eg, the computer system). It may be possible to protect the only commercially useful way of implementing the business method in a computer system and hence effectively protect the business method.

Another issue to consider in building a portfolio is the filing strategy. Patent applications should, of course, be targeted at the commercially important countries for the company. However, for software and business method inventions, there is the added complexity of the variations in allowability of patents for the inventions. The ease with which patents can be obtained and the strength of the patent obtainable in each country need to be implemented on some sort of computer system or involve some physical items. It should therefore be possible to protect most business method inventions effectively by including mention of the computer system or physical items in the claims. In this way, the claimed process invention cannot be abstract, as it involves a machine or realworld items. Thus, in reality, broad patent protection for business method inventions is available in the US.

Software inventions are patentable in the US. The *Bilski* decision related only to a business process invention. Software will clearly be implemented on a machine and should hence pass the machine prong of the *Bilski* patentability test.

The international patentability spectrum

The differences between the law in the US and in Europe are by no means the only differences in the law internationally. There is a broad spectrum. Each country applies its own law and the application of the law in each country can be considered to lie along the spectrum between the extremes of the US and Europe. The US is the most favourable. Australia aligns itself closely to the US. Japan steadfastly stays in the middle ground. Europe and China are the most restrictive (China has modelled much of its law on the EPC). Many countries lie along the continuum and many struggle to decide upon their positioning.

For example, in Japan, a statutory invention is defined as: "The creation of technical ideas utilising natural laws." Patents can be granted when the invention is achieved through the concrete use of hardware resources. In practice, this means that if the invention is a business method implemented on a computer, the invention is patentable so long as the specification and the claims define the invention with reference to hardware resources (eg, memory, processor(s), networks and so on). The data being manipulated can be purely nontechnical (eq, financial data). Inventions for pure business methods, such as a scheme for selling shares, which do not use concrete

considered. For example, France is a member state of the EPC, but also provides for granting of national patents by a simple registration system. Hence, where there is concern as to whether the invention will pass the EPO patentability test, one strategy for obtaining patent protection in France for a software or business method invention is to file a national application which will simply be registered without examination. The issue of allowability can then be fought out later if contentious proceedings are likely. In any case, the French patent office is an easier venue to fight this point than at the EPO, as the decided cases to date in France indicate a lower technical threshold.

Managing a portfolio

The management of a patent portfolio relating to software and business method patents requires the usual management considerations of any patent portfolio, which includes regularly reviewing the portfolio to determine whether all of the patents need to be maintained, or whether some are no longer relevant to the technical resources, are not allowable. This approach is consistent with the *Bilski* decision in that the process invention must define the hardware resources used in the process: the machine prong of the machine or transformation test.

In Canada, historically the law in the US had been followed, until a decision of the Commissioner of Patents in May 2009 (Amazon.com Inc, 2009 CD 1290). Nontechnological subject matter was considered to be not statutory. The form and substance of the claimed invention must not be directed to excluded subject matter. In arriving at this decision, the Commissioner made reference to the decision of the UK Court of Appeal in the Aerotel case. Following this decision, business methods are excluded subject matter and are hence unpatentable in Canada. This decision is, however, being appealed and hence the position in Canada is still to be resolved.

In Australia, there is no specific exclusion for business method patents. Patentable subject matter comprises a mode or manner of achieving an end result which is an artificially created state of affairs of utility in the field of economic endeavour (*NRDC v Commissioner of Patents* [1959]). This enables broad protection for business method inventions.

company's business. Surplus patents can be licensed or sold — for example, using companies that specialise in such transactions.

In addition to such usual management, a software and business method patent portfolio requires consideration of developments in the law. The law in the US and in Canada has tightened recently and the company's patent portfolio may contain patents that are invalid. For example, a few years ago the US Patent and Trademark Office was allowing business method patents to be granted with process claims with little or no technology (machine features) defined. Hence, the validity of the patents in the portfolio needs to be reviewed as the law develops internationally. Decisions then need to be made as to whether to hang on to the patents, abandon them or apply to amend them to conform to the new interpretation of the law.

Exploiting and defending

The exploitation of a company's software and business method patent portfolio does not differ greatly from the exploitation of any type of patent portfolio. There is, however, a need to keep an eye on developments in the law so that validity issues are fully understood when looking to transact (license or assign) or litigate patents in the portfolio.

Similarly, when a company is in a defensive position, the validity of patents in a competitor's portfolio should be considered carefully, having regard to the developments of the law internationally for software and business method patents. One option is to threaten to or initiate proceedings in patent offices internationally to revoke the competitor's patents based on an argument that the patents relate to non-statutory subject matter following developments in the law. This can enhance the company's negotiating position.

Spot the difference

The law on the patentability of software and business method patents in the US and Europe appears settled, but at opposite ends of the patentability spectrum. However, the law in the US has only just settled and the law in other countries is unsettled. Therefore, companies need to be aware of the difference and developments in the law internationally to maximise their intellectual property in a cost-effective and efficient manner. **iam**

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