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# PATENTING SOFTWARE AND BUSINESS METHOD INVENTIONS IN THE U.S. AND EUROPE

By

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Are software and business method inventions patentable in the United States and Europe? The 1998 *State Street*<sup>1</sup> decision answered this question in the United States, as it held that business method inventions were patentable. This followed prior developments in U.S. law which made software inventions patentable. While the law is settled, the actual process of obtaining a software or business method patent in the United States is not a trivial task, especially given the examination procedures being used by the U.S. Patent Office. This LEGAL BACKGROUNDER provides an overview of the practical considerations involved with patenting software and business methods in the United States.

Despite some reports to the contrary, the defeat in July 2005 of the EU Directive on Computer Implemented Inventions did not eliminate software patents in Europe. Most types of software remain patentable in Europe. The Directive's intent was to harmonize the software patenting rules among the EU member states, not to liberalize the patenting of software and business method inventions to the extent of the United States. This article also provides an overview of the state of the law in Europe on patenting software and business methods, given the defeat of the Directive.

***The Current Situation in the United States.*** Software is patentable in the United States. More precisely, the functionality embodied by software is patentable. Software itself (i.e., the code), the expression of the functionality, is not patentable. One may protect the code via copyright. It is not unusual to use both patents and copyright to protect software, although if a choice must be made, patents are preferred as they provide the greater protection.

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<sup>1</sup>*State Street Bank and Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 47 USPQ2d 1569 (Fed. Cir. 1998), *cert denied*, 119 S. Ct. 851 (1999).

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Patent protection of software in the United States takes many forms. One way is to protect the combination of software and hardware — for example, to protect software as implemented in a computer. This is typically achieved by using "system" or "apparatus" patent claims. Another way is to protect the steps performed by software running in a computer via "method" or "process" patent claims.

One of the best options is to protect a "computer readable media" having software stored thereon. A real world example of this is software stored on a CD or distributed over the Internet. This protection option, achieved via the "computer program product" claim format, is desirable because it impacts most, if not all, of the parties involved in the development and commercialization of a software product. All of these parties, at some point in their respective operations, "make, use or sell" software stored on CDs, or distribute software over the Internet. These parties have the potential to directly infringe computer program product claims corresponding to the software invention. In contrast, at least some of these parties might not "make, use or sell" software running in a computer, and thus probably would not directly infringe system, apparatus, or method claims.

While certainly patentable, software is sometimes a challenge to protect since it can be widely dispersed and involve many parties. This is often the case with Internet applications. Care should be taken to draft claims that focus on combinations of the invention that map to the activities of a single potential infringer. Also, given the worldwide nature of the Internet and other technologies, consideration should be given to the country in which the activities are taking place.<sup>2</sup> Preferably, any given patent claim is drafted to cover the activities in the United States of a single potential infringer.

While the law is settled that software is patentable in the United States, for the last few years the U.S. Patent Office has been rejecting certain software inventions as not being directed to the "technological arts." These "technological arts" rejections are based on the non-precedential decision *In re Bowman*,<sup>3</sup> where the Board of Patent Appeals and Interferences upheld the patent examiner's rejection that the claims were not directed to statutory subject matter. The Board argued that the claims were directed to nothing more than an abstract idea because they did not recite the use of a computer or other technology. Whether or not such rejections by the Patent Office are proper in view of current law established by *State Street* and other decisions is a question that is currently being battled. For companies who need patent protection immediately, one can avoid or overcome technological arts rejections by reciting some hardware in the patent claims.

Like software, business methods are patentable in the United States provided they have "practical utility" and produce a "useful, concrete, and tangible result."<sup>4</sup> In practice, however, it is more difficult, time consuming, and expensive to obtain a business method patent, than a software patent. This is the case for a number of reasons, not least of which is the heightened scrutiny afforded business method patent applications by the U.S. Patent Office. The Patent Office uses an additional level of review for business method inventions. Before a business method application is allowed, it must be

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<sup>2</sup>This was an issue in the recent case between NTP and Research In Motion involving RIM's Blackberry technology. *NTP, Inc. v. Research In Motion*, No. 03-1615 (Fed. Cir. Aug. 2, 2005). RIM argued that it did not infringe NTP's patents because one component of the Blackberry system was located in Canada (the rest was located in the United States). The Federal Circuit held that RIM did not infringe the method claims, holding that a method claim in a U.S. patent can only be infringed if all the method steps are performed in the United States. However, this panel of the Federal Circuit used different reasoning in deciding that RIM infringed the system claims. The panel held that the system claims were infringed because, although part of the system was located in Canada, both control and beneficial use of the Blackberry system were located in the United States.

<sup>3</sup>*In re Bowman*, 61 USPQ2d 1669 (BPAI 2001).

<sup>4</sup>*State Street Bank*, 149 F.3d at 1375.

approved by both the patent examiner and a “second pair of eyes,” who is an approved Patent Office reviewer knowledgeable in the business method arts.

Statistics demonstrate that business method inventions are harder to patent. Under 15% of all business method patent applications are allowed by the Patent Office. This is significantly lower than the Patent Office's average allowance rate of 65%. Also, it takes longer to get a business method patent than other types of patents (over 40 months versus about 25 months from filing to issue or abandonment).<sup>5</sup>

***The Current Situation in Europe.*** In July 2005, the EU Directive on Computer Implemented Inventions was defeated. The Directive was intended to harmonize the law on patenting software among EU member states. With its defeat, the law in the EU remains as it has been for some time — software is generally patentable, but there are important exclusions.

European patent law excludes from patentability certain specific types of subject matter; these include "schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers." However, inventions are only unpatentable to the extent that they relate to any of the excluded subject matter "as such." The "as such" clause was intended to narrow the scope of the exclusion, so that inventions should not be excluded merely because they involve some software component, or have some utility in business.

The scope of the statutory exclusions is far from precise, but the European Patent Office has developed various tests for applying them in practice. It is clear that the exclusions cannot be avoided merely by including, in a claim to otherwise excluded subject matter, an additional feature that is not excluded subject matter. For example, a business method when carried out using conventional computer systems or office equipment is still a business method. Instead, the invention must make an inventive "technical contribution" over the prior art. In other words, the overall inventive effect of the invention must lie in a technical area, not just in a new business method or computer program.

In assessing the "technical contribution" of the invention, it is the substance of the invention, not the form of the claims, that is important. In the *IBM* decisions<sup>6</sup> in which this point was decided, claims were subsequently granted to a "computer program comprising computer program code means adapted to perform [the claimed method] when said program is run on a computer."<sup>7</sup>

Although the same tests for exclusion are applied to software and business methods, the outcome can be very different. In practice, most software-related inventions are not excluded and are, thus, patentable. In contrast, most business method-related inventions are excluded and not patentable. The reason for this is that software is usually intended to achieve some new technical effect beyond just operating in a different way, and therefore satisfies the "technical contribution" test. This technical effect may even be internal to the device executing the software, such as an improvement in speed.

Most new business methods, almost by definition, are intended to achieve an effect in the field of business and therefore involve a non-technical contribution. The exception is those business methods that involve new and inventive apparatus. In that case, the apparatus itself can be patented. Many new business methods rely on new software or computer systems, but these are usually excluded from

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<sup>5</sup>Recent statistics of Group 3620, the U.S. Patent Office's group assigned to examine patent applications involving electronic commerce.

<sup>6</sup>T 1173/97 and T 935/97.

<sup>7</sup>See claim 20 of EP 457 112 B and claim 7 of EP 767 419 B.

patentability because the sole contribution of the software or system lies in implementing the business method. In the recent *Hitachi* decision,<sup>8</sup> a computer system for implementing a Dutch auction was excluded for this reason.

During the "dot com" boom, many business method patent applications were filed in Europe in the hope that the statutory exclusions would be removed to bring European patent law more in line with the U.S. This hope has not been fulfilled. In the last revision of the European Patent Convention, which was agreed upon in 2000 but has not yet been implemented, the statutory exclusions were left intact.

More recently, the above-mentioned EU Directive on Computer Implemented Inventions was intended to harmonize the statutory exclusions among EU member states. The Directive was never intended to remove the exclusions altogether. Also, no draft of the Directive would have made business method inventions patentable.

Prior to its defeat in July 2005, the European Parliament proposed various amendments to the Directive which would have extended the scope of the exclusions. If passed, the amended Directive would have further restricted the patenting and exploitation of software-related inventions. With its defeat, the *status quo* remains, with most software-related inventions being patentable, albeit with the law varying somewhat between EU member states. If one wishes to pursue patent protection for a software invention in select EU countries, consideration should be given to the applicable laws in those jurisdictions as some may be more or less favorable to software patenting than others. Given that the EPO and the national patent offices provide alternative routes to patents in Europe, one might develop a hybrid filing strategy involving, for example, an EPO filing combined with direct filings in select national patent offices.

**Conclusion.** In the United States, business decision makers should not hesitate to seek patent protection for software and business method inventions. It is well established that both are patentable in the United States. While the patenting process sometimes offers challenges, such as with pure business methods and software inventions claimed abstractly, there is no doubt that substantial patent protection is available.

In Europe, it is important to take account of the statutory exclusions at an early stage. A decision not to file in Europe should not be made merely because the invention is software-related. On the other hand, there is no point filing in Europe for a business method that has no realistic chance of being granted. When in doubt, advice should be sought from a European patent attorney familiar with the subject matter of the invention. The attorney may even be able to redraft the case prior to filing in Europe so as to emphasize the technical contribution of the invention, but this is not possible when entering the European regional phase of a PCT application. Preferably, the European patent attorney should be consulted at the PCT filing stage.

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<sup>8</sup>T258/03.