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Trends

EC SOFTWARE PATENT PROPOSAL'S IMPACT

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The European Commission on Feb. 20 issued a Proposal for a Directive on the Patentability of Computer-Implemented Inventions, designed to lead to harmonization of national patent laws and practice in the European Union with respect to computer-implemented inventions. The proposal is a significant development in Europe, and if adopted it will also have important ramifications in other countries, including the United States.

In the United States, an invention implemented on a computer is patentable if it produces a useful, concrete and tangible result. [FN1] For example, the transformation of data by a computer through a series of calculations, producing a result that represents a quantity such as a share price, is in principle a type of invention that may be patented in the United States. [FN2] Thus, computer-implemented methods of doing business are patentable in the United States. [FN3] A computer-implemented invention may be claimed as a process, as a machine programmed to execute a program, or as a product containing or storing a computer program. [FN4]

The situation is considerably more complicated for the Member States of the EU, [FN5] partly because of the interplay among the national laws of the Member States, the laws of the EU, and the European Patent Convention (EPC). [FN6] The national laws, courts and administrative practice of each Member State of the EU govern whether and how a patent is enforced in that Member State; for example, through litigation of patent infringement claims or challenges to patent invalidity.

However, a dual system regulates the patent application process in the Member States. An applicant may submit an application separately to the national patent office of each Member State to obtain a patent in that Member State. An applicant can thus prosecute a patent application separately in each Member State. Of course, such a process is costly, since filing, prosecution and counsel fees need to be paid separately in each Member State where patent protection is sought.

Alternatively, an applicant may file a "European patent application" with the European Patent Office (EPO) and designate each of the Member States in which she desires a patent. The applicant need only deal with the EPO in prosecuting the patent: Once the EPO grants the patent, the applicant will effectively have a patent that may be enforced separately in each of the designated states. [FN7] This route is almost always less expensive and less

complicated than the separate national filings, because it basically requires a single application with a single set of filing, prosecution and counsel fees.

This dual system for patent prosecution has, however, led to variations in the standards for patentability among the national patent offices of the Member States and the EPO. This has occurred despite the enactment of national laws in the Member States that are substantially similar to the provisions of the EPC, because each of the national patent offices separately interprets the provisions of its national patent law.

The European Patent Convention as interpreted by the EPO sets forth the substantive rules governing whether the invention claimed in a European patent application is patentable. For example, the EPC states that "programs for computers" are not inventions for which a patent can be obtained, [FN8] but only to the extent that the claimed invention relates to computer program- related subject matter "as such." [FN9] The Technical Board of Appeal of the EPO, which is the body within the EPO that hears appeals of rejections of patent applications, has in the past interpreted this "as such" clause to mean that a patent may not be granted for a product such as a diskette on which a computer program is recorded. However, the EPO board subsequently changed its interpretation of the prohibition from patentability of computer programs "as such." The EPO board currently requires a computer-implemented invention to make a "technical contribution," whether or not the invention is a product or a process. [FN10] More specifically, the board has required that, to be patentable, an invention must cover activities that solve a technical problem, have a technical result or involve technical considerations, as opposed to covering only subject matter having an abstract or mental nature. [FN11] Additionally, the board has required that the technical contribution made by the invention be nonobvious in light of the prior art. [FN12] On this basis, the board has held that a claim to a "method for digitally filtering data" is not patentable because it involves abstract data and mere mathematical manipulation of such data. However, the board has implied that a claim directed to a technical process in which such filtered data are used-for example, digitally processing images by representing them with data arrays-may be patentable. [FN13]

The requirement in the EPO that an invention make a "technical contribution" is more rigorous than the standard in the United States, which requires that the invention produce a useful, concrete and tangible result. [FN14] Moreover, unlike the current practice of the EPO board, there is no requirement in the United States that the useful, concrete and tangible result contribute to the nonobviousness of the invention. In other words, in the United States and in contrast to Europe, the useful, concrete and tangible result may be part of the prior art or may be obvious in light of the prior art, as long as the invention as a whole (e.g., the way of achieving the result) is novel and nonobvious in light of the prior art.

In Europe, patent offices and courts of the Member States have not uniformly adopted the standard for the patentability of computer-implemented inventions currently in use at the EPO. For example, in the United Kingdom, a computer program-related invention that is merely a method for doing business may not be patentable, even if a technical contribution is made. [FN15] In Germany, on the other hand, a computer-implemented business method that has a technical aspect may be patented, even though the contribution the invention makes is nontechnical. [FN16] Additionally, the U.K. Patent Office, like the EPO, will issue a patent on a computer program, as long as it satisfies the other requirements for patentability, including the requirement that the program make a technical contribution. It does not appear, however, that patent offices of other Member States are willing to

grant patents on computer programs, even if they satisfy the technical contribution requirement.

One proposed solution to this disparate treatment of computer-implemented inventions is to enact EU-level legislation designed to force each of the Member States to adopt uniform laws with respect to the patentability of these inventions. The Feb. 20 proposal of the European Commission would do precisely that.

The Proposal for a Directive

The chain of events leading to the proposal includes a 1997 Green Paper on the Community Patent and the Patent System in Europe, and a round of consultations launched by the commission in 2000 after intense public debate regarding the patenta-bility of software-related inventions. Both before and after these consultations, the open-source software community lobbied heavily for greatly diminished patent protection for software.

The Feb. 20 proposal comprises an explanatory memorandum and a proposed directive. If enacted after consideration by the European Parliament and the EU Council, the proposed directive would force each of the Member States of the EU to pass legislation adopting into its national law the rules recited in the proposed directive. The explanatory memorandum: (a) discusses the efforts to harmonize patent laws and practices regarding computer-implemented inventions within the EU; (b) states that this harmonization should correct the direct and negative effect that the current legal regime has on the proper functioning of the internal market of the EU; and (c) provides an article-by-article discussion of the provisions of the proposed directive.

The proposal sets forth a standard for patentability for computer-implemented inventions that is consistent with the current practice of the EPO board. As explained above, this requires that a computer-implemented invention make a nonobvious technical contribution to the art. In taking this approach, the proposal refuses to further liberalize the legal regime concerning the patentability of computer-implemented inventions, and thus rejects harmonization with U.S. law and practice in this area.

Because of the continuing requirement that the invention make a technical contribution, the proposal also effectively refuses to extend patent protection to most computer-implemented business methods. Thus, the proposal refuses to harmonize European patent law with the more liberal regime in the United States for business-method patents, which has often been criticized by European commentators.

The proposal differs from the current practice of the EPO board in one important area-with respect to claim language that may be used in software patents. The EPO board currently allows a claim to a computer-program product or to a storage medium like a compact disc storing a computer program, as long as the corresponding invention makes a "technical contribution." The proposal, however, appears to limit product claims to programmed computers, programmed computer networks, or other programmed "apparatus." Thus, it is likely that the proposal, if enacted, would not allow a claim to a computer program by itself, or to a computer program embedded within a storage medium (unless the computer program could be considered to be "programmed" into an "apparatus"), even if the technical contribution requirement were otherwise satisfied by the corresponding invention. [FN17] This differs not only from the current practice of the EPO board, but also from U.S. practice, which permits patents on media storing otherwise patentable computer programs. [FN18]

The proposal states that patent protection for computer-implemented inventions is complementary and cumulative to copyright protection that already exists for computer programs. Additionally, Article 6 of the proposed patent directive explicitly states that acts permitted under EU

Directive 91/250/EC 'on the legal protection of computer programs by copyright] shall not be affected through the provisions of the proposed patent directive. Acts permitted under the copyright directive include making a backup copy of the software, and decompiling the software for the purpose of ensuring its interoperability with other software. Thus, under the proposed patent directive, patentees will not be able to force licensees or purchasers of patented software to relinquish either their right to make a backup copy of the software or their right to decompile software for purposes of ensuring interoperability with other software. Moreover, backing up or decompiling permitted by the copyright directive will not constitute patent infringement under the proposed patent directive. This contrasts with the situation in the United States, where making a back-up copy of patented software without authorization from the patent owner could be an act of patent infringement.

The proposal would also require the European Commission to monitor the impact of the proposed directive so that any negative consequences to innovation and competition-both within Europe and internationally, and on European businesses, including e-commerce-could be monitored and corrected.

The proposal further finds that small and medium-sized enterprises in Europe have little or no awareness of the patent system, and are unaware of the possibilities of using patents as a source of technical information and as a means of protecting their products. In its preliminary discussion, the proposal suggests that patent offices of the Member States evaluate whether educational initiatives should be undertaken to better communicate the possibilities for patenting computer-implemented inventions in Europe.

Analysis

A. Effects of Passage of the Proposed Directive Within Europe

The greatest impact of the proposed directive, if enacted, will likely be felt in the courts of the Member States in cases to enforce software patents that have already issued. The EPO's current practice of granting patents for computer-implemented inventions achieving an appropriate technical contribution will continue after enactment of the proposed directive. In contrast, the national patent offices and courts of the Member States would be forced to change from their current practices and adopt the substantive law on patentability set forth in the proposed directive. Consequently, the courts of a Member State that may have been less willing to recognize and enforce software patents will likely be more willing to do so after the proposed directive is reflected in national law. This should lead to more frequent enforcement of software patents in the Member States. On the other hand, the fact that the proposed directive would exclude claims to computer programs "as such," even if the corresponding invention otherwise makes a technical contribution, will likely mean that the scope of effective protection for software will be narrower in EU Member States than in the United States. [FN19]

B. Considerations for U.S. Businesses

If enacted, the proposed directive will provide U.S. businesses more guidance within the EU Member States regarding the possibility of obtaining and enforcing patents on computer-implemented inventions (including computer-implemented business methods). Thus, a U.S. applicant for a patent at the EPO or in an EU Member State will have some assurance that an application covering a computer-implemented invention may in principle be granted and enforced in each Member State of the EU, as long as the technical contribution and other requirements for a patent are satisfied. However, an applicant will also be assured that she will not be able to obtain a patent

on products containing computer programs, other than claims to a programmed apparatus.

Under these circumstances, it may not be worthwhile for a software developer to file patent applications in the EU covering software where sale of the software (or "sale" of a license) would be the commercially significant act of infringement. For example, the developer of innovative spreadsheet software intended for wide distribution to large segments of the population and sold at a low price per unit may not find much use in obtaining patent protection within the EU. This is because the proposed directive effectively limits patent protection to computer-implemented processes, meaning that only end users of the software-i.e., people who actually used or executed the patented processes-could be sued for direct infringement. In particular, effective protection against commercially important infringers such as distributors of infringing software does not appear to be available under the directive. [FN20]

On the other hand, it may be worthwhile to file European patent applications for inventions covering software where use of the software would be the commercially significant act of infringement. For example, there may be a benefit in seeking and obtaining European patent protection covering innovative software for use by companies in determining the value added by new products or services, because effective and commercially valuable protection could be available against users of the software.

The proposal is a long-awaited development that has great significance for the protection of software-related intellectual property in Europe. Although enactment of the Proposal by the EU, and its adoption in each of the Member States, is at least several years away, the Proposal will undoubtedly affect public debate about the role of the patent system, and may well influence how countries in and outside of Europe consider and act on patents and patent applications for computer-implemented inventions.

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[FN1] State Street Bank v. Signature Financial Group, 199 F.3d 1368, 1373 (Fed. Cir. 1998), cert. denied, 525 U.S. 1093 (1999). The invention would still need to meet the other requirements for patentability including novelty, non-obviousness and disclosure. See 35 U.S.C. 102, 103, 112.

[FN2] Id. The Patent Code provides that a patent may be obtained for a new and useful machine, article of manufacture, process, composition of matter or improvement to any of these types of inventions. 35 U.S.C. 101.

[FN3] State Street Bank, 199 F.3d at 1373, 1375; AT&T Corp. v. Excel Communications Inc., 172 F.3d 1352, 1358 (Fed. Cir. 1999), cert. denied, 528 U.S. 946 (1999).

[FN4] In re Beauregard, 53 F.3d 1583 (Fed. Cir. 1995) (The Federal Circuit dismissed the appeal after the Patent and Trademark Office dropped its objection to such product claims and moved to dismiss the case.)

[FN5] At the time this article went to print, the Member States of the EU were Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland,

Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden and the United Kingdom.

[FN6] Convention on the Grant of European Patents, Oct. 5, 1973, 1065 U.N.T.S. 255 (10th edition of January 2000 available at http://www.european-patent-office.org/legal/epc/e/index.html).

[FN7] Once the EPO grants a European patent, the applicant may obtain corresponding patents from the national patent offices of the designated states through what is essentially a clerical procedure that may involve submitting translations of the European patent to the national patent offices in the respective local languages. In the United Kingdom, a European patent designating the United Kingdom is treated as a patent granted in the United Kingdom after publication in the European Patent Bulletin. Patents Act 1977, 77(1).

[FN8] Article 52(2)(c), EPC.

[FN9] Article 52(3), EPC.

[FN10] T 208/84 VICOM/Computer-Related Invention, EPO Technical Board of Appeal (1986).

[FN11] T 833/91 IBM, EPO Technical Board of Appeal (1993). To be patentable, the technical contribution must also meet the other requirements for patentability, including novelty and "inventive step" (a requirement in European practice analogous to the non-obviousness requirement under U.S. law).

[FN12] T 0931/95 Controlling Pension Benefits System, EPO Technical Board of Appeal (2000). In other words, an invention that is novel and not obvious as a whole in light of the prior art but that involves technical considerations that are obvious in light of the prior art is not patentable.

[FN13] T 208/84 VICOM/Computer-Related Invention, EPO Technical Board of Appeal (1986).

[FN14] State Street Bank v. Signature Financial Group, 199 F.3d 1368 (Fed. Cir. 1998), cert. denied, 119 S. Ct. 851 (1999).

[FN15] Merrill Lynch's Application '1989] R.P.C. 561 (Court of Appeal 1989).

[FN16] Sprachanalyseeinrichtung, BGH decision of May 11, 2000, X ZB 15/98.

[FN17] The proposal specifies that the inquiry regarding the technical contribution would be part of the analysis of whether the invention achieved an "inventive step" over the prior art (corresponding to a nonobviousness analysis in the United States).
The EPO previously had assessed the technical contribution of an invention as part of an analysis of its industrial applicability (corresponding to a utility analysis in the United States). In both the EU and the United States (and other countries), an invention is not patentable unless it is novel in light of the prior art.

[FN18] In re Beauregard, supra n.4.

[FN19] Claims to computer programs or to media containing computer programs that had been previously issued by the EPO could also be rendered unenforceable.

[FN20] Although a suit for contributory infringement may be available in some jurisdictions, contributory infringement is generally harder to prove than direct infringement.
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