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LATEST SOFTWARE PATENT LAW DEVELOPMENTS IN THE US AND EU

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Abstract

This article briefly summarises the current key developments in the area of patenting with a particular emphasis on patenting of software. The focus embraces the potential advances particularly in the United States and European Union.

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1. The American Landscape

The famous patent case of *Bilski v Kappos*¹ has been the subject of lively debate and commentary² both within and outside the USA – and for good reason. Although the main issue is the boundaries of patentability concerning business methods in the United States, it also addresses the criteria for subject-matter eligibility of software patents claimed as process pursuant to § 101 of the US Patent Code.

The Court of Appeal for the Federal Circuit (CAFC) in *Bilski v Kappos*³ declined to follow its own precedent, holding that the “*useful, concrete and tangible result*” test established in its earlier decision in *State Street Bank & Trust Co v Signature Financial Group Inc*⁴ is not a sufficient yardstick by which to exclude subject matter from patentability. Without altering the fact of patentability of business methods, the Federal Circuit held that the decisive criterion was to be found in the classic *machine-transformation test* articulated by the Supreme Court of the United States (US SC),⁵ pursuant to which “[a] claimed process is surely patent-eligible under §101 if 1) it is tied to a particular apparatus or 2) it transforms a particular article into a different state or thing.”

The patent application of Mr Bilski (related to a business model that hedged the risks of price fluctuation in commodities trading) having been rejected by CAFC in the same vein as the earlier cases, the matter was appealed further and granted *a certiorari* by the Supreme Court. On 28 June 2010, the Supreme Court overturned the decision of the Court of Appeals that the machine-transformation was the *exclusive* test for constitution of a process within §101. Instead, the Supreme Court held that the claims of the petitioners were attempts to patent not processes, but abstract ideas, which are and have been excluded from patentability as a matter of statutory *stare decisis* going back 150 years.

Another patent case, *Prometheus Laboratories v Mayo Clinic*⁶ may also prove to be of interest, as it follows in the wake of *Bilski*. *Prometheus* concerned a method of “optimizing therapeutic efficacy” by first administering a particular drug to a subject and then using the metabolite level of the subject to adjust future drug doses. The Federal Circuit held that a diagnostics claim satisfied the machine-or-transformation

¹ *Bilski et al v Kappos*, Under Secretary of Commerce for Intellectual Property and Director, Patent and Trade Mark Office, 561 US Supreme Court No. 08-964 (28 June 2010).

² See e.g. R Ballardini, “Some Lessons from *In Re Bilski*” (2009) 78 *Nordiskt Immateriellt Rättsskydd* 364-371; S Fusco “Is *In re Bilski* a Déjà Vu?” (2009) 13 *Stanford Technology Law Review* 1-4, available at <http://stlr.stanford.edu/pdf/fusco-bilski-deja-vu.pdf> (accessed 9 Jul 2010); M Schuster, “Predictability and Patentable Processes: The Federal Circuit’s *In Re Bilski* Decision and Its Effect on the Incentive to Invent” (2009) 11 *Columbia Science and Technology Law Review* 1-40, available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1353604 (accessed 9 Jul 2010).

³ *Re Bernard L Bilski and Rand A Warsaw*, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (Fed Cir 2008).

⁴ *State Street Bank & Trust Co v Signature Financial Group, Inc*, 149 F.3d 1368 (Fed Cir 1998).

⁵ The test can be traced back to *Cochrane v Deener* US Supreme Court, 19 March 1877, 94 US 780, at 788 and is found, for example, in USSC landmark software patenting cases: *Gottschalk v Benson*, 409 US 63 (1972); *Parker v Flook*, 437 U.S. 584 (1978); *Diamond v Diehr* 450 U.S. 175 (1981).

⁶ *Prometheus Laboratories, Inc v Mayo Collaborative Services and Mayo Clinic Rochester*, CAFC 2008-1403, 16 September 2009.

test enunciated in *Bilski*, but although essentially concerning a therapeutic method, the application may cast light on further requirements to be met by method patent applications. The Supreme Court granted the petition for *a certiorari* on 29 June 2010, and then summarily vacated the decision with a remand to the Federal Circuit to reconsider the case “in light of *Bilski*.”⁷

Although *Bilski v Kappos* is a highly visible case, other winds of change may be blowing in the United States. Since there has been no major overhaul of the current patent statute since its inception in 1952, the growing divergence between statute and practice in certain areas, together with a number of perceived shortcomings, calls for its revision. Problems include, among other things, forum shopping resulting in a concentration of patent cases in certain Federal district courts, and difficulties caused by the estimation of damages in excess of those actually suffered. Consternation has also been caused by the backlog of cases in the United States Patent Office (USPTO) regarding computer-implemented inventions (CII), the questionable quality of patents granted for such inventions, and the increase of litigation – in regard to both CII and business model patents.⁸

After two influential reports observed that the weaknesses of the current legislation necessitated its amendment, a first attempt at an overhaul took the form of the *Patent Reform Act of 2005*.⁹ As is often the case with comprehensive and controversial bills, the initiative lapsed at the end of the two-year term of the US Congress, which provides only a small window of opportunity in which to pass legislation. The motion was revived immediately in the *Patent Reform Act of 2007*, but it faced the fate of its predecessor. At the time of writing,¹⁰ a third try in the *Patent Reform Act of 2009*¹¹ is being debated in the 111th Congress, but it is yet unclear as to whether it will result in a comprehensive renewal of the US Patent Code, and to what extent different subroutines of the competing proposals will succeed or fail.

The reasons for uncertainty are obvious. Some of the proposed amendments are so extensive and radically new to the USA that they as a matter of course invoke opposition. This is in part a result of rational analysis, in part due to lobbying by the incumbents and various interest groups, and in part because of the natural inertia of human nature.

The proposals for substitution of the first-to file system in place of first-to-invent are an anathema for many overseas. Moreover, the opinion of the business sector in regard to the merits of the proposed amendment is divided between the large corporations and SMEs on the one hand, and various branches of industry on the other. Some sectors such as pharmaceuticals and the chemical industry feel that there

⁷ See <http://www.supremecourt.gov/orders/courtorders/062910zr.pdf> (accessed 9 Jul 2010).

⁸ The number of litigious claims has increased in absolute terms; however, the relative increase in litigation is dubious, in view of the simultaneous marked increase of granted patents in these sectors.

⁹ Both *Patent Reform Acts of 2005 and 2007* had their respective original and competing bills both in the Senate and House of Representatives, and they can be easily be tracked, eg from Wikipedia or official US sources.

¹⁰ At the outset, March 2010.

¹¹ The set of proposals introduced in the 111th United States Congress for changes in United States patent law initially included S 515, S. 610 and HR 1260. Subsequently, a so-called *Patent Reform Act of 2010* (amendment to S 515) to substitute S 515 emerged in the Senate as one of the contenders.

is little need for change, while many entrepreneurs in information and communications technology are not happy with *status quo*. This divergence may well indicate that the process of innovation and development as well as downstream commercialisation differ among these industries.¹²

The debate in both houses of the Congress is likely to continue on this key patent law reform. Anyone with a vested interest, whether it be academic, business, professional or otherwise, had better keep a keen eye on it since the global impact of US technology, trade and politics is notorious and reflections of the main legal advances including patents will certainly be noticed also in Europe.

2. The European Scene

The European development of patent law keeps abreast with the pace of its transatlantic counterpart. After efforts to complete the European Patent Litigation Agreement (EPLA) backfired, an initiative by the EU, in the form of the Unified Patent Litigation System (UPLS), will attempt to create a uniform court structure, devoted judiciary and streamlined patent litigation procedure.

On 24 March 2009, a recommendation of the European Commission contained framework provisions for the UPLS for discussion by the Council on the 28-29 May of the same year. On 4 December 2009 the Competition Council reached a consensus on the overall structure of the UPLS. Remarkably, the Competition Council also agreed on a new approach to another, long-term initiative, the EU patent, formerly known as the Community patent. It was agreed that the perennial sticking points of language and translation should be separated from the substantive issues of the Community patent, and that these should be addressed in two separate Regulations.¹³

Specifically touching on software patenting issues in Europe, the retiring President¹⁴ of the European Patent Office (EPO) referred a set of questions¹⁵ to the Enlarged Board of Appeal concerning the application of Article 52 of the EPC¹⁶ excluding patentability of computer programs *as such*. Pursuant to European Patent Convention

¹² D Burk and M Lemley, *The Patent Crisis and How the Courts Can Solve It* (Chicago: University of Chicago Press, 2009), at 143-144, 156-158. See also, by the same authors, "Is Patent Law Technology-Specific?" (2002) 17 *Berkeley Technology and Law Journal* 1155-2002, at "Conclusions" (1207-1208); B Kahin, "Patents and Diversity in Innovation" (2007) 13 *Michigan Telecommunications and Technology Law Review* 389-399.

¹³ On both aspects, see the Competition Council conclusions: [http://documents.epo.org/projects/babylon/eponet.nsf/0/2577CA3C51E347CCCC125768600441059/\\$File/conclusions_enhanced_patent_system_en.pdf](http://documents.epo.org/projects/babylon/eponet.nsf/0/2577CA3C51E347CCCC125768600441059/$File/conclusions_enhanced_patent_system_en.pdf) (accessed 9 Jul 2010).

¹⁴ The French candidate, Benoît Battistelli, received the required qualified majority of the cast votes for presidency of EPO at an Extraordinary Meeting of the Administrative Council on 1 March. His five-year term as President is scheduled to commence on 1 July 2010.

¹⁵ Referral G-3/2008 to the EPO Enlarged Board of Appeal, 22 October 2008.

¹⁶ Article 52 (2) and (3) go as follows: (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* (italics added).

(EPC) Article 112 1(b), in the event that two Boards of Appeal have given different decisions on a question, the President of the European Patent Office may refer a point of law to the Enlarged Board of Appeal.¹⁷ According to the President, these divergent decisions created uncertainty, and it was necessary to have answers to four questions for further harmonious development in the field to occur.

The Enlarged Board of Appeal (EBoA) found the referral inadmissible.¹⁸ It acknowledged that some of the cases mentioned in the referral were “different”¹⁹ as regards the first question, but characterised the distinction as a legitimate development of the case law. As only one strain of the case-law and not the other had been followed, there was no divergence that would make the referral admissible. The Enlarged Board identified plainly, in passing, the category that was in its opinion to be followed.²⁰ The remaining questions, also declared inadmissible, were given short shrift.

In the national courts within the EU, the 2009 decision of the German Supreme Court (BGH)²¹ in *Steuerungseinrichtung für Untersuchungsmodalitäten* also touches directly upon patentability of computer programs. Both the German Patent and Trade Mark Office (DPMA) and Federal Patent Court in that case rejected a patent application on “method for processing medically relevant data”. The BGH, on the other hand, found that the steps of processing, storing and transmitting data by employing a technical apparatus²² demonstrate the required technicality of the computer program embedded in a larger system. The software in question directed procedures of examination and measurement of a patient by different devices such as a CT scanner, thereby solving a concrete problem by technical means. The Supreme Court remanded the case back to the Federal Patent Court for consideration of novelty and inventive step.

3. Conclusion

Both the USA and Europe face the ongoing development and reformation of patent law in general and aspects concerning computer programs or CIIs in particular. This

¹⁷ Some of the cases have already been touched upon, see e.g. the famous UK decision *Aerotel Ltd v Telco Holdings Ltd & Ors* Rev 1 [2006] EWCA Civ 1371 (27 Oct 2006) where the Appeal Court found that the decisions of the EPO Boards of Appeal are mutually contradictory and suggested that the time has come for matters to be clarified by an Enlarged Board of Appeal reference under Art 112. There is also an annex to the case analysing the relevant EPO Board of Appeal decisions. See, further, P Virtanen, “EPC, Software Patents and Heffalumps” (2008) 77 *Nordiskt Immaterialt Rättskydd* 108-121.

¹⁸ Opinion of the Enlarged Board of Appeal, G-03/08, 12 May 2010.

¹⁹ The opinion G-03/08 mentions explicitly cases T-1173/97 (*IBM*) and T-424/03 (*Microsoft*) as “different”.

²⁰ The any technical means, or “any hardware” approach mentioned in the claims to escape the exclusion of computer programs as such to be found from *Microsoft* appears to prevail. It stems from earlier decision T-258/03 (*Auction methods/Hitachi*) mentioned also in the decision of the EBoA.

²¹ Bundesgerichtshof (Federal Court of Justice, BGH): *Steuerungseinrichtung für Untersuchungsmodalitäten* (Controlling device for examination modalities), X ZB 22/07, 20 Jan 2009; J Lang, “Computer implemented inventions – The German View” [2009] *Intellectual Asset Management* 93-96.

²² Compare the parallel reasoning with the EBoA decision and particularly the cases mentioned therein.

will come about as a result of technological change and development, an increasingly globalised and networked marketplace, and of the political will and aspirations of dominant societal power structures. Also part of the process are the efforts of inventors, entrepreneurs, financiers, practitioners, academics and the like to improve the quality of patent law, particularly in the area of computer programs.

This industry, a vital part of the broader ICT segment, is still relatively new and, together with other novel industries including biotechnology and nanotechnology, struggles with the basic concepts and practices related to patenting. Patenting practice works, after a fashion, as a bridge between the law and technology and reflects the interplay between the two.²³ Such endogenous efforts to build upon existing doctrine in order to update and refine the legal system belong to the “natural evolution”²⁴ of patent law.

It remains to be seen whether and how forthcoming case law and legislative proposals mentioned above will contribute to this process. *Semper paratus* is an appropriate guideline for all patent law practitioners and others interested in software patenting: it pays to remain informed. Will these developments lead to substantial changes in the landscape or will they, to put it in a Shakespearean way, be much ado about nothing?

²³ On various aspects of interplay between law and technology, see eg A Cockfield “Towards a Law and Technology Theory” (2004) 30 *Manitoba Law Journal* 383-414, at 383; A Cockfield and J Pridmore, “A Synthetic Theory of Law and Technology” (2007) 8 *Minnesota Journal of Law, Science and Technology* 475-513.

²⁴ On the terms ‘law’ and ‘evolution’ as used together, see eg M Zamboni “From ‘Evolutionary Theory and Law’ to a ‘Legal Evolutionary Theory’” (2008) 9 *German Law Journal* 4, 515-546, at 520-522.