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Awaiting the 'Bilski' ruling with bated breath

By John A. Squires and Duane R. Valz

Never before have both the old and new economies anticipated a patent law decision as intently as *Bilski v. Kappos*, forthcoming from the U.S. Supreme Court.

Implicated in *Bilski* are technologies ranging from bioinformatics, anti-terrorist financing and signal transmission to software — virtually everything touched in our modern lives.

Specifically, *Bilski* was heard by the Supreme Court to address the scope of patent-eligible subject matter under 35 U.S.C. §101, last squarely addressed in 1981 when the invention at issue was a computer-implemented process for determining the cure time of an industrial rubber mold. Today, the invention at issue concerns a so-called "pure business method" and puts into question what kinds of inventions may be too abstract or diffuse to qualify for patent protection under U.S. law.

Subtle, plentiful and complex, the key issues presented in *Bilski* go to the heart of the very purpose of the country's Patent Act, both as originally authorized under the U.S. Constitution and as amended by Congress periodically over the years.

Dating back to the 19th century, the Supreme Court has generally allowed that inventions incorporating or applying abstract concepts, such as mathematical formulas, may be patent eligible as long as the invention, as claimed, has a sufficiently practical, ascertainable impact in the real world. But any such application must be distinct enough so that the idea itself is not foreclosed from use by others for pure research or additional, unique applications.

In its most recent cases involving §101, going back to the 1970s and early 1980s, the Supreme Court developed a "judicial gloss" as a shorthand test to determine patent eligibility: A process is patent eligible if it (1) is implemented using a machine, or (2) transforms a substance or an article into a different state or thing (the "machine-or-transformation" or "MOT" test). This gloss also permitted scrutiny over whether the claimed application was distinct enough so as not to foreclose other unique applications of the abstract concept. In the 19th century, these criteria mapped rather well to the industrial technology of that time since processes implemented by the mechanical devices of that era, and those used to create new chemicals or articles of commerce, typically involved a limited number of steps.

In the 20th century, the emergence of mass communication technologies, electronic computational systems and, more recently, the Internet and gene-based therapies, have yielded process inventions that challenge the fundamental bases of the MOT test. The Supreme Court applied its test to software inventions on just three occasions, finding patent eligibility only in one instance where it was clear that an industrial process and machine were involved. In *Diamond v. Diehr*, 450 U.S. 175 (1981), the court determined that use of the already known Arrhenius equation to analyze temperature data and determine rubber mold cure times met the MOT test. Still, for many years afterward, software became an analytical stumbling block.

The language of software programming involves abstract concepts and the resulting functionality — what is actually worth claiming — is itself abstracted from the physical processes in hardware giving rise to that functionality. This reality of electronic computing technology simply does not lend itself well to principled scrutiny under the machine-or-transformation test. In respect of software and computer implemented business methods, a key concern is whether and how using a so-called "general purpose computer" should factor into an eligibility analysis.

Given these and other challenges, the Federal Circuit tried a number of alternatives, landing in 1998 on the concrete, useful, tangible ("CUT") test in the landmark case of *State Street Bank*. Under this relatively straightforward test, a process is patent eligible if it leads to a concrete, useful and tangible result. In the last few years, however, the Federal Circuit and USPTO each faced criticism that the CUT test was too lax. Ultimately, in its 2008 *Bilski* decision, the Federal Circuit effectively overruled its own CUT test and declared the MOT test as the "exclusive" test for subject matter eligibility.

Bilski thus brings us back full circle to the nagging questions left over after the *Diehr* decision. In the post-Internet, post-Genome era of the early 21st century, is the MOT test still sufficient to separate the patent worthy from the patent ineligible?

The conundrum now facing the U.S. Supreme Court is how to balance principle with simplicity. Perhaps the most interesting issue to watch in the pending proceedings is how, if at all, the high court will seek to resolve these tensions.

Another key issue to watch — closely related to the test or set of principles to

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be embraced by the high court — is how restrictively or broadly the term "process" will be interpreted as it is used in the language of §101. In relevant part, §101 defines as patent eligible the invention or discovery of "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." A key question is whether the MOT test should command eligibility outcomes possibly not intended by Congress or required under the plain language of the statute.

Heading toward the Supreme Court's forthcoming decision, at least five unique approaches to determining the patent eligibility question exist:

• Technology Restrictive Approach. "Process" under the Patent Act does not include most software and certainly not pure business methods. Machine-or-transformation is an inexact and possibly inadequate test. (See, for example, the Supreme Court *amici* briefs of the Computer and Communications Industry Association; and of Professors Peter Menell and Michael Meurer.)

• Federal Circuit Approach (current status quo). Meeting the machine-or-transformation test is a necessary, but not sufficient, requirement for subject matter eligibility. Processes, including software, relying on general purpose computers, on computers to perform mere extra solution activity, or on the transformation of data abstracted from real world objects, also may not be patent eligible. (See *In re Bilski*, 545 F.3d 943 (2008).)

• Federal Government (USPTO) Approach. Meeting the machine-or-transformation test is necessary, but basic uses of machines and electronic transformation of data are sufficient. Only purely abstract concepts, entirely mental steps and entirely behavioral activity — unconnected to any machine or not effectuating a physical transformation of some kind — are patent ineligible. (See the USPTO's Supreme Court merits brief; the *amicus* brief of Microsoft, Philips and Symantec; and the *amicus* brief of IBM.)

• New Test Approach. The Yahoo approach, in one form, builds on the CUT test: A process is patent eligible if it leads to a concrete, useful and tangible result and the steps of the process as claimed are sufficiently stable, predictable and reproducible. (See, for example, the *amici* briefs of Yahoo Inc.; and of Robert Sachs and Daniel Brownstone.)

• Broad Interpretation Approach. Congress commanded extremely broad eligibility for new inventions. The classical, judicial gloss exceptions to patent eligibility would still apply and be "informed" by the other statutory provisions. (See, for example, the *amici* briefs of Regulatory Data Corp., American Express, Palm, Rockwell Automation and SAP; and of Accenture and Pitney Bowes.)

At a high level, *Bilski* challenges our conception of technology, its relationship to pure science, business and other useful endeavors, and the proper boundaries we must draw between patent-eligible and ineligible ideas. We anticipate that the court will be loathe to take a strong position on the term "process" and whether it really excludes certain areas of endeavor categorically. However, we also think the court will reaffirm that its classical exceptions to subject matter eligibility still hold, and that some test or set of principles must be applied to understand whether or not a claimed invention leveraging laws of nature, natural phenomena or abstract ideas is doing so in a sufficiently distinct and practical manner. Whatever the particulars, we do anticipate that "pure business methods" and processes comprised entirely of human conduct or mental steps will not survive the court's decision. Until then, we wait. ■