No. 08-964

IN THE
Supreme Court of the United States

BERNARD L. BILSKI AND RAND A. WARSAW,

Petitioners,

v.

DAVID J. KAPPOS, UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR, PATENT AND TRADEMARK OFFICE,

Respondent.

On Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

BRIEF OF SOFTWARE & INFORMATION INDUSTRY ASSOCIATION (SIIA) AS AMICUS CURIAE IN SUPPORT OF RESPONDENT

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BRIEF OF SOFTWARE & INFORMATION INDUSTRY ASSOCIATION (SIIA) AS AMICUS CURIAE IN SUPPORT OF RESPONDENT

STATEMENT OF INTEREST OF THE AMICUS CURIAE[1]

Amicus, the Software & Information Industry Association ("SIIA"), is the principal U.S. trade association of the software and digital content industries. It comprises business divisions for software, financial information services, online content, and education technology. SIIA's collective membership sits at the crossroads of the issues raised in this case, as well as the ongoing debate surrounding software and "business method" patents generally. SIIA members have benefited from owning thousands of patents in these fields, and licensing and enforcing them. Yet they also rely critically on appropriate boundaries to patent protection. These boundaries, too, preserve their ability to innovate, and avoid market inefficiencies created by patents of questionable validity.

SIIA has grappled with important intellectual property issues in the software and content

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[1] Pursuant to this Court's Rule 37.6, *amicus* affirms that no counsel for a party authored this brief in whole or in part and that no person other than *amicus* and its counsel made a monetary contribution to its preparation or submission. The parties' letters consenting to the filing of this brief have been filed with the Clerk's office.

industries for many years. SIIA is the nation's oldest and largest association representing software and content companies.[2] Its members range from start-up firms to some of the largest and most recognizable corporations in the world. SIIA member companies are leading providers of, among other things:

- software publishing, graphics, and photo editing tools
- corporate database and data processing software
- financial trading and investing services, news, and commodities exchanges
- online legal information and legal research tools
- protection against software viruses and other threats
- education software and online education services
- open source software
- and many other products and services in the digital content industries.

A list of the more than 500 SIIA member companies may be found at http://www.siia.net/membership/memberlist.asp.

The real world, every day experiences of SIIA and its membership in working within the existing

[2] The Software Publishers Association ("SPA") was founded in 1984. The increasing convergence of the software and information services industries led to a 1999 merger between SPA and the Information Industry Association ("IIA"), creating the SIIA.

patent system uniquely positions SIIA to offer a practical view – a view informed by the business realities inherent in a regime that now includes many thousands of existing software and business method patents, and thousands more applications. Moreover, SIIA is an active participant in patent reform discussions being considered by the executive and legislative branches, and is intimately familiar with industry concerns regarding patent quality and interpretation of the existing Patent Act.

SIIA favors neither an expansive nor restrictive interpretation of patentable subject matter. Rather, SIIA urges a rational, predictable application of the statute consistent with established principles of patent law, within constitutional limits. In essence, that means that most software will be patentable subject matter; some business methods will not.

INTRODUCTION AND SUMMARY OF THE ARGUMENT

In the years following the Supreme Court's opinion in *Diamond v. Diehr,* 450 U.S. 175 (1981), the Federal Circuit decided a line of cases that confirmed the patent eligibility of software or computer implemented inventions, including software that carried out "mathematical algorithms" or "business methods." *See, e.g., In re Alappat,* 33 F.3d 1526 (Fed. Cir. 1994) (*en banc*); *State St. Bank & Trust Co. v. Signature Fin. Services Group, Inc.,* 149 F.3d 1368 (Fed. Cir. 1998); *AT&T Corp. v. Excel Communications, Inc.,* 172 F.3d 1352 (Fed. Cir. 1999). The U.S. software and information industries have matured in this legal regime of patent availability, and the patent standards under *Alappat, State Street, AT&T, et al.* have played a meaningful role in this success. The companies in these industries, and those that invest in them, have relied heavily upon the availability of software patent protection, among other legal protections, in formulating their intellectual property and business strategies. Material change in the application of section 101 to computer software inventions would be contrary to settled law, and detrimental to the software and information industries.

The Federal Circuit's attempts in these cases, however, to distill a single, predictable "test" for patentable subject matter have proven troublesome and confusing. The present case appears to perpetuate this confusion, even though the appellate court (and the Patent and Trademark Office)

ultimately reached what SIIA believes to be the correct result. SIIA thus urges the Court to affirm the result below, rejecting Petitioner's patent application, but also to clarify the legal standard for patentable subject matter in a way that is faithful to Supreme Court precedent.

Specifically, abstract ideas, mental processes, and natural phenomena and laws may not be patented. As this Court has stated repeatedly, an individual may not "preempt" all uses of a fundamental principle. But while the "machine or transformation test" is useful in identifying an unpatentable abstract idea, it is not the single, dispositive test for eligibility. If a claimed invention does not transform an article to a different state or thing, nor is tied to a particular machine or apparatus, then it presumptively is an abstract idea or mental process. Barring a compelling showing otherwise, it should be rejected as preempting practice of the fundamental principle, rather than an application thereof. But the "machine or transformation" test is not necessarily conclusive in every conceivable case. For example, a patent claim to heating an ice cube to make water would transform the article to a different state, and thus satisfy the test. But without more, this claim simply seems to embody a natural phenomenon or law and should be unpatentable as such. Many similar examples can be imagined.

Part I in the Argument below explains that software related inventions have been patentable under a variety of different "tests" applied by the Federal Circuit, including the "useful, concrete,

tangible result" test apparently discarded in the *en banc* opinion below. Regardless of the ultimate linguistic formulation of the test, software inventions should and must remain patentable subject matter. That result is consistent with longstanding precedent, and enormously significant, settled expectations within the industry.

Part II asserts that the language and history of the Patent Act supports requiring an invention to have some connection to machines, articles of manufacture, or compositions of matter. However, the Federal Circuit erred in announcing the "machine or transformation test" as the single, dispositive standard for patentable subject matter. The test is, among other things, a useful construct for determining whether an invention is a mere abstraction or mental process. A claim that fails the test would be presumptively unpatentable. But even a claim that passes the test still would require analysis of whether the claim preempts all uses of a natural phenomenon or natural law.

Part III concludes that Petitioner's claim 1 is not directed to patentable subject matter. The claim does not encompass a "useful process" as that term has been interpreted by the courts, but rather claims an abstract idea.

ARGUMENT

I. THE COURT SHOULD NOT DISTURB SETTLED LAW AND EXPECTATIONS REGARDING THE PATENTABILITY OF SOFTWARE

The dubious patent application at issue in this case invites an opinion emphasizing the constraints of patent law. Indeed, the proliferation of lawsuits asserting patents of questionable validity has made patent quality one of the most pressing issues of the day for the technology industries. *See, e.g.,* Written Comments of Software & Information Industry Association, Federal Trade Commission Public Hearings Concerning the Evolving Intellectual Property Marketplace (February 5, 2009), http://archive.siia.net/govt/docs/pub/Comments_on_FTC_Hearings_and_Evolving_IP_Marketplace.doc (hereinafter "SIIA Comments to the FTC (2009)"). Proper interpretation of section 101 is an important part of the equation for improving patent quality and, as explained in Parts II and III herein, requires rejection of Petitioner's patent claim. The Patent and Trademark Office, and a near-unanimous Federal Circuit, reached the correct result in this case. But in affirming that result, it is equally important that the Court not establish new legal standards disturbing the established premise that software inventions are patentable subject matter.

Petitioner's patent claim does not involve software. However, dicta in the Federal Circuit's *en banc* opinion, and the arguments of some *amici* here, question whether software would be patentable

subject matter under the Federal Circuit's holding and various other tests proposed. SIIA submits that software has long been considered patentable subject matter, and that the Court should not disturb these precedents and the enormous, critical investments built around them.

A. Patent Eligibility of Software is Well Established

For nearly two decades, perhaps longer, U.S. courts have consistently held software inventions to be patentable subject matter. The Federal Circuit's 1994 opinion in *In re Alappat* often is cited as ushering in the "modern" age of software patenting. Reviewing the case *en banc* to determine whether software was capable of patent protection, the court held, "programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software." *Alappat*, 33 F.3d at 1545. Many thousands of U.S. patent applications have been filed and granted on software inventions, with many of these licensed and enforced, since the *Alappat* decision.

Subsequent decisions clarified that software implementing business methods, functional algorithms, memory characteristics, and other processes and characteristics were patentable subject matter. *See State Street.,* 149 F.3d at 1372-73 (holding that there is no "business method

exception" to otherwise-statutory subject matter);[3] *AT&T*, 172 F.3d at 1354-55 ("the judicially-defined proscription against patenting of a mathematical algorithm, to the extent such a proscription still exists, is narrowly limited to mathematical algorithms in the *abstract*") (emphasis added); *In re Lowry,* 32 F.3d 1579, 1583 (Fed. Cir. 1994) (claim to "functional characteristics of [ ] memory," namely data structures, is statutory subject matter). The Federal Circuit also confirmed more than a decade ago that protection of software inventions can be obtained in various patent claiming formats. *See AT&T,* 172 F.3d at 1357-58 ("we consider the scope of section 101 to be the same regardless of the form – machine or process – in which a particular claim is drafted").

The Federal Circuit's interpretation of section 101 was consistent with obligations in a contemporaneously completed treaty advocated by the U.S. government. Extensive negotiations in the Uruguay Round produced the World Trade Organization (WTO) and its 1994 Agreement on Trade Related Aspects of Intellectual Property ("TRIPS"). TRIPS imposes a number of basic patent

[3] As Respondent explains in its brief (at 6, 40, 48), *State Street* included dicta suggesting that any process yielding "a useful, concrete and tangible result" is patentable subject matter. Some have interpreted the case to establish a nearly boundless standard for patenting business methods and other processes. But the oft-cited passage was not the holding. Indeed, the patent claim at issue in the case was not even a method or process. It was a "means plus function" claim reciting various computer hardware components. *See State Street*, 149 F.3d at 1371. In other words, it was (as the court observed) "a machine." *Id.* at 1372.

law obligations upon member states, including scope of patentable subject matter:

> Subject to [exceptions involving health, safety and biology] patents shall be available for any inventions, *whether products or processes, in all fields of technology*, provided that they are new, involve an inventive step and are capable of industrial application.

Agreement on Trade Related Aspects of Intellectual Property, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Article 27 (emphasis added).

The Federal Circuit's endorsement of software patenting in the 1990s was particularly fortuitous, and inventors' growing reliance on patents necessary, because during the same time period other courts appeared to narrow *copyright* protection for software. *See, e.g.*, *Apple Computer Inc. v. Microsoft Corp.*, 35 F.3d 1435 (9th Cir. 1994) (effectively limiting scope of protection for Apple's graphical user interface); *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807 (1st Cir. 1995) (denying copyright protection to aspects of a user interface that the court deemed functional), *aff'd per curiam by an equally divided Court,* 516 U.S. 233 (1996); Daniel W. McDonald, *et al.*, *Intellectual Property & Privacy Issues on the Internet*, 79 JOURNAL OF THE PATENT & TRADEMARK OFFICE SOCIETY 31, 49 (1997) (after the *Apple* and *Borland* decisions, "[i]t is better to seek patent protection if you are concerned about protecting anything other

than the expressive elements in the [computer] program."). With large amounts of capital flowing into software development and software companies, it was critical that new innovations be accompanied by a promise of some return on that investment, in the form of exclusive rights.

As Respondent correctly observes (Resp. Br. at 37), the patentability of software *per se* is not directly raised in this case, despite dicta in the Federal Circuit's *en banc* opinion. Petitioner's claim 1 does not recite software, nor does it require a computer to implement the claimed steps. Moreover, the precise holding below – that a process must be tied to a machine or transform an article – would not appear to materially change the landscape of patenting software (which at some point must be executed on a machine). Dicta in the opinion, however, calls into question whether the court changed the scope of section 101 as related to software and computer inventions. After holding that implementation on a machine generally is sufficient to satisfy section 101, the court stated:

> We leave to future cases the elaboration of the precise contours of machine implementation, as well as the answers to particular questions, *such as whether or when recitation of a computer suffices* to tie a process claim to a particular machine.

In re Bilski, 545 F.3d 943, 962 (Fed. Cir. 2008) (*en banc*) (emphasis added).

In the months following this decision, some lower courts may have interpreted this passage as a bell-weather call for narrowing software patent protection, and have rejected claims that may have been eligible for patent protection before *Bilski*. *See, e.g., Cyber-Source Corp.* v. *Retail Decisions, Inc.*, 620 F. Supp. 2d 1068 (N.D. Cal. 2009); *Ex Parte Godwin,* No. 2008-0130, 2008 WL 4898213, at *2 (BPAI Nov. 13, 2008). Similarly, some *amici* call for the Court to use this case as a vehicle for substantially narrowing software patent eligibility under section 101.

In SIIA's view, a holding that upsets the long held expectations and case law that software generally is patentable subject matter would be unwarranted, and may have dire economic consequences.[4] The Court has been mindful of this concern in other patent cases. *See, e.g., Festo Corp.* v. *Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 739 (2002) ("Courts must be cautious before adopting changes that disrupt the settled expectations of the inventing community."); *cf. Warner-Jenkinson Co.* v. *Hilton Davis Chem. Co.*, 520 U.S. 17, 32 (1997) ("[W]e should be extremely reluctant to upset the basic assumptions of the PTO without substantial reason…."). This case should be no exception.

[4] Whether the novelty and nonobviousness requirements of the Patent Act properly have been applied to software and business method inventions in recent years is a different question, not at issue in the case before this Court.

B. The Software and Information Industries Have Continued to Grow and Thrive in the Age of Software Patenting

The prevailing interpretation that section 101 encompasses software inventions has not given rise to circumstances justifying a change. To the contrary, the U.S. software and information industries thrive more than a decade after the Federal Circuit's decisions in *Alappat, State Street* and *AT&T*.

Revenues generated by the nation's software and information industries reached $564 billion annually by 2005, up by more than 10 percent since the beginning of this decade. *See* Software & Information Industry Association, *Software and Information: Driving the Knowledge Economy* (January 24, 2008) at 7-8, http://www.siia.net/estore/globecon-08.pdf (hereinafter "*Driving the Knowledge Economy*"). It is now the fourth largest industry in the U.S., behind transportation equipment, hospital care, and chemicals manufacturing. *See id.* The software and information industries employed more than 2.7 million Americans in 2006, up 17% from 1997. *See id.* at 8. This increase added more than 400,000 American jobs. *See id.* And the Bureau of Labor Statistics predicts there will be more than two million additional openings in software and information occupations between 2006 and 2016. *See* U.S. Bureau of Labor Statistics, *National Industry-Specific Occupational Employment and Wage Estimates,* http://www.bls.gov/oes/current/oessrci.htm#51 (last modified Oct. 24, 2007).

The functionality, and practical utility, of software have made it a ubiquitous and integral tool in almost every U.S. industry. Software programs "allow[ ] organizations to fundamentally re-engineer processes," lower barriers to entry, reduce various costs, improve customer service and product delivery, and ultimately better meet market demands." *Driving the Knowledge Economy* at 14. Moreover, the integration of software with information services such as databases and financial research has resulted in new and useful functionality – and ultimately a more convenient, more productive, and better user experience. *See id.* at 14-17. Innovations have spawned entirely different paradigms, such as the growing "software as a service" ("SaaS") offerings, which themselves have triggered further software-related innovation. *Id.* at 5, 19. One cannot predict the future path of innovation and what forms "software" might take. It is important that the law not constrain that path, and that the same principles apply regardless of such form.

The financial services industry has benefited tremendously from software inventions. Indeed, "[p]erhaps no sector of the 'old' economy has been more directly affected by IT [information technology, including software] than the financial-services sector." *Driving the Knowledge Economy* at 14. New functions enabled by computer technology have "powered [the] transformation" of the industry, resulting in "superior offerings," "new distribution channels," "easier [ ] consumer[ ] access," and more competition and consumer choice in the decade

following *State Street*. *Id.* at 14-15. In short, "software and information have become essential to financial services." *Id.* at 15. In 2007, the banking sector alone invested over $240 billion worldwide in computer, software, and IT services. *See* Gartner, Inc., *Forecast: Banking IT Spending, Worldwide, 2005-2010*, http://www.gartner.com/DisplayDocument?id=501396&ref=g_sitelink (February 20, 2007). Similarly, software and related technology have substantially driven innovations in the health care, education, and other industries. *See Driving the Knowledge Economy* at 14-16. And in turn, financial capital has flowed into software development, further fueling the engine of innovation in the software industry. *See, e.g.,* Organisation for Economic Co-Operation and Development, *Measuring the Information Economy* (2002) at 11, http://www.oecd.org/dataoecd/16/14/1835738.pdf.

Participants in the software and information industry rely on the existing patent regime as an important foundation to justify and validate their investment in new innovation. *See, e.g.,* Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CAL. L. REV. 1, 5 (2001). Patent protection is now well entrenched as an important part of the U.S. software industry. *See, e.g.,* U.S. Congress, Office of Technology Assessment, *Finding a Balance: Computer Software Intellectual Property, and the Challenge of Technological Change, OTA-TCT-527* (Washington, DC: U.S. Government Printing Office, May 1992). Thousands of new patents are acquired in this industry each year, and thousands of licenses

on computer and software-related inventions currently are in force.[5] There may have been a time long ago when the patent-eligibility of a computer or software related invention was in question, the value debatable, and pursuit thereof rare. But that is no longer the case or practice in the industry.[6] A decision by this Court that puts into question the patent eligibility of software inventions would thus invite disastrous effect on these now longstanding practices.

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[5] Moreover, related licenses provide the legal framework for other significant protection measures, relied upon by a variety of industries. One example is the licensing paradigm used in some digital rights management (DRM) implementations. *See, e.g.,* Bruce G. Joseph & Scott E. Bain, *Copyright in the Digital World: Basics, Law and Policy*, BRIEFLY, NATIONAL LEGAL CENTER FOR THE PUBLIC INTEREST (Vol. 9 No. 12, December 2005) at 74-80, http://www.wileyrein.com/resources/documents/pu2292.pdf (discussing licensing mechanism underlying the encryption technology "CSS" that protects motion pictures on prerecorded DVDs, and other technical protection measures).

[6] To the extent some observers have expressed concern that the software and information industries may become ensnared in a thicket of patents, this concern highlights the need for continued, diligent enforcement of the novelty (§ 102), nonobviousness (§ 103), and definiteness (§ 112) standards by the U.S. Patent and Trademark Office and the courts. The U.S. Congress also is considering ways to improve patent quality, as part of ongoing patent reform discussions. A radical judicial narrowing of section 101 is not the wise course for improving patent quality in the software and information industries, or any other industry.

II. THE "MACHINE OR TRANSFORMATION" TEST IS A USEFUL PRESUMPTION OR CONSTRUCT, BUT IS NOT THE SOLE TEST FOR PATENTABLE SUBJECT MATTER

Construing the meaning of the subject matter provision of the Patent Act, 35 U.S.C. § 101, begins with the language of the statute. *See Diehr,* 450 U.S. at 182. Section 101 states:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new or useful improvement thereof, may obtain a patent therefore, subject to the conditions of this title.

35 U.S.C. § 101. As Petitioner has argued, the statute on its face recites "*any*" new and useful process. On its literal terms, that would include any series of steps.

But the Court has held that the meaning of "process" as used in section 101 is narrower than its ordinary meaning. *See Parker v. Flook,* 437 U.S. 584, 588-89 (1978) ("The holding [in *Benson*] forecloses a purely literal reading of § 101."). Specifically, a claim is not a patent-eligible "process" if it preempts all practice of a "law of nature, natural phenomenon, [or] abstract idea." *Diehr,* 450 U.S. at 185; *Flook,* 437 U.S. at 589; *Gottschalk v. Benson,*

409 U.S. 63, 67 (1972). Such fundamental principles are "part of the storehouse of knowledge of all men, free to all men and reserved exclusively to none." *Funk Bros. Seed Co. v. Kalo Inoculant Co.,* 333 U.S. 127, 130 (1948); *see also Le Roy v. Tatham,* 55 U.S. (14 How.) 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."); *O'Reilly v. Morse,* 56 U.S. (15 How.) 62, 112-113 (1854); *Rubber-Tip Pencil Co. v. Howard,* 87 U.S. (20 Wall.) 498, 507 (1874) ("An idea of itself is not patentable, but a new device by which it may be made practically useful is.").

The historical context of the Patent Act also supports a narrower than literal reading of the word "process." The categories of patentable subject matter, and their meaning and limits, derive from the constitutional grant of authority and early patent laws. *See, e.g., In re Comiskey,* 499 F.3d 1365, 1374-75 (Fed. Cir. 2007); *see also In re Nuijten*, 500 F.3d 1346, 1352 (Fed. Cir. 1997); *id.* at 1358 (Linn, J., concurring-in-part and dissenting-in-part). Article 1, Section 8, clause 8 of the Constitution merged proposed provisions authorizing copyrights and patents, respectively. *See* S. REP. NO. 82-1979 (1952), *reprinted in* 1952 U.S.C.C.A.N. 2394, 2396. It states:

> The Congress shall have Power ... To promote the Progress of Science and useful Arts by securing for limited Times to Authors and Inventors the exclusive Right to

> their respective Writings and Discoveries.

U.S. CONST. art 1, § 8, cl. 8. The terms "useful Arts," "Inventors," and "Discoveries" refer to the patent authority. Thus, the first and subsequent patent laws have been "acts to promote the useful arts." *See* S. REP. NO. 82-1979, 1952 U.S.C.C.A.N. 2394, 2398, 2409-10. And indeed, the first Patent Act of 1793 allowed patents on "any new and useful art…." *Bilski,* 545 F.3d at 966 (Dyk, J., concurring). This phrase carried through subsequent revisions, until the word "art" was replaced by "process" in the 1952 Patent Act. The term "process" is understood to have the same meaning as "art" in the prior incarnations. *See Comiskey*, 499 F.3d at 1375.

In the late 18th century, "art" referred to "[t]he power of doing something not taught by nature and instinct"; "[a] science"; "[a] trade"; "[a]rtfulness, skill, dexterity." *Nuijten*, 500 F.3d at 1361 (Linn, J., dissenting-in-part) (citing contemporary dictionary). This understanding is relevant to the scope of today's statute. *See, e.g.,* ESKRIDGE, WILLIAM JR., DYNAMIC STATUTORY CONSTRUCTION 323 (Harvard University Press 1994) (when construing a statute, "consider dictionaries of the era in which the statute was enacted"); *McNally v. United States*, 483 U.S. 350, 370 (1987) (consulting dictionaries of the time of the act). Moreover, the Founders included the limits in the patent clause with particular purpose, in part to prevent the kinds of general business monopolies previously granted by the English Crown. *See Comiskey*, 49 F.3d at 1375.

The historical context suggests that the constitutional authority and the original scope of the statute, specifying processes (arts) as patent eligible, were not meant to encompass any and all series of steps that had some beneficial use. *See also* Giles S. Rich, *Principles of Patentability*, 28 GEO. WASH. UNIV. L. REV. 393, 393-94 (January, 1960) (not all useful processes are patentable subject matter). Accordingly, in cases interpreting the phrase "useful process" in section 101, it has been constrained by the Framers' conception of "useful arts." *See, e.g., Diehr*, 450 U.S. 175. The Court's guidance on statutory interpretation supports this construct. *See, e.g., Public Citizen v. U.S. Dep't of Justice,* 491 U.S. 440, 466 (1989) ("It has long been an axiom of statutory interpretation that where an otherwise acceptable construction of a statute would raise serious constitutional problems, the Court will construe the statute to avoid such problems unless such construction is plainly contrary to the intent of Congress.") (quotations omitted); *Clark v. Martinez*, 543 U.S. 371, 380 (2005) (adopt the construction that would avoid constitutional problems).[7] Finding literally any useful process to be patentable subject

[7] Parties urging an unlimited reading of section 101 sometimes assert that the 1952 Act legislative history states that the Act should protect "anything under the sun that is made by man." S. REP. NO. 82-1979, at 5; H.R. REP. NO. 82-1923 (1952). But Congress used that phrase only in describing machines and manufactures. *See* S. REP. NO. 82-1979, at 5 ("A person may have 'invented' a machine or manufacture, which may include anything under the sun that is made by man, but it is not necessarily patentable under section 101 unless the conditions of the title are fulfilled."); H.R. REP. NO. 82-1923 (same).

matter arguably exceeds the constitutional authority in the patent clause.

The Federal Circuit has recognized this history in prior rulings, and in this case correctly rejected the literal reading of "process" as suggested by the Petitioner. But the court erred in ruling that the sole test for whether a claimed process is patentable is whether it "is tied to a particular machine or transforms an article to a different state or thing." In *Diehr* and *Benson*, this Court termed the machine or transformation test the "clue" to patentability of a process. *Diehr*, 450 U.S. at 184 (quoting *Benson*, 409 U.S. at 70); *see also Flook*, 437 U.S. at 588 n.9. The Court suggested that this formulation is not exclusive and may evolve with the continued progress of "technology." *Benson*, 409 U.S. at 71. Finding no such exceptions in subsequent cases, the Federal Circuit endorsed the test as "the" rule. But in *Diehr, Benson,* and other cases citing the test, the context was whether the claimed process was *abstract*. The machine or transformation test provided a useful lens for determining abstraction. But it does not, presumably, change the fundamental rule that a law of nature or natural phenomenon cannot be patented. Specifically, a patent claim cannot be recited in a way that effectively preempts all uses of a law of nature or natural phenomenon.

The "machine or transformation" test, as previously applied by the Court, seemed to embody a presumption, perhaps a strong one, that processes not tied to a machine and not transforming an article are abstract ideas – and therefore

unpatentable. But the Federal Circuit's new bright line rule goes too far. Some troublesome applications are conceivable. A claim to applying heat to an ice cube to create water, for example, may be a patentable process under that rule. It transforms the article (an ice cube) to a different state or thing (water). This Court's more general preemption rulings, applied properly, would preclude this claim, as preempting all uses of the natural phenomenon of heat melting ice. As Respondent points out, many similar examples are conceivable. Resp. Br. at 34-36.

Thus, in this case, the Court should return the section 101 analysis to the more fundamental principles described in *Benson*, *Flook,* and *Diehr*, and clarify the meaning of the "machine or transformation" test.

Before turning to Petitioner's patent claim, a few observations about patent quality are apt. It is well documented that patent quality in the computer and software related arts is an ongoing concern of industry and the government. "Poor patent quality and legal standards and procedures that inadvertently may have anticompetitive effects can cause unwarranted market power and can unjustifiably increase costs. Such effects can hamper competition that otherwise would stimulate innovation." Federal Trade Commission, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy* (October 2003), *http://www.ftc.gov/os/2003/10/innovationrpt.pdf,* Executive Summary at 5. The detrimental effects of poor quality patents are especially pernicious in the

software industry. When a software publisher is developing a new computer program, "it often is extraordinarily difficult – notwithstanding the business's best efforts – to identify all of the existing patents, and pending patent applications, that may be relevant to each of the hundreds or even thousands of components that make up that new product." SIIA Comments to the FTC (2009) at 4.

The rigorous and consistent enforcement of several statutory provisions that are not at issue in this case are central to improving patent quality. The examination of claimed inventions under sections 102, 103, and 112 (as well as the task of identifying applicable prior art in each case) continues to evolve and be refined.[8]

But section 101 also plays an important role in improving patent quality. Examining patent applications takes time and money. Proper enforcement of section 101 will discourage applicants from burdening the U.S. Patent and Trademark Office with claims to ineligible inventions, will permit more efficient rejection of such ineligible applications that are filed, and will allow the office to better utilize its limited examining resources. Moreover, in litigation, a section 101 challenge to a patent's validity may be amenable to determination at an early stage of the case. By comparison, more fact-intensive defenses like obviousness may not be

[8] SIIA's endorsement of any standard for patentable subject matter under section 101 is not intended to affect the interpretation of the other requirements for patent protection, nor provisions that Congress may pass in the future.

determined until after months (or more) of costly discovery and motions. Moreover, as Respondent argues (at 40), in some cases sections 102, 103 and 112 may not be dispositive. One can conceive of a variety of human activities that are novel (section 102), nonobvious (section 103) and definitely claimed (section 112) but yet should remain unpatentable pursuant to section 101. Resp. Br. at 41, 46 (citing methods of playing games, mediation, dating, sports moves, etc.).

Thus, in short, proper interpretation of section 101 is an important ingredient to improving patent quality in the field of software. For the reasons described above, the Federal Circuit's exclusive test does not fill this need. *See, e.g.,* Scott Bain, *Patently Undecided: The Bilski Case*, INFORMATION TODAY, Vol. 26 Issue 2 (Feb. 1, 2009) at 1, http://www.infotoday.com/IT/feb09/index.shtml ("Indeed, it seems that the real winners in the *Bilski* [appellate] decision are the patent lawyers who will battle over the further contours of the law and not the investors in software and business ventures who were seeking more certainty.").

III. PETITIONER'S CLAIM 1 IS NOT PATENTABLE SUBJECT MATTER

Claim 1 of the Bilski patent application recites:

> A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:
>
> (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumers;
>
> (b) identifying market participants for said commodity having a counter-risk position to said consumers, and
>
> (c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.

Pet. App. 2a-3a. The Court should find, as did the Federal Circuit and the Patent and Trademark Office, that Petitioner's claim is not directed to

patentable subject matter. The result is the same regardless of whether the Court (1) applies the general "preemption" rule of its prior cases, that abstract ideas, pure mental steps, or natural phenomena cannot be claimed in a way that preempts all uses thereof; (2) affirms the Federal Circuit's application of the rule that a patentable process must be tied to a machine or transform an article to a different state or thing; or (3) adopts the view of some *amici* that a patentable claim must include a "technological contribution" or be in the "technological arts." Petitioner's claim 1 appears to fail all of these tests.

First, applying the Court's guidance in *Benson, Flook,* and *Diehr*, claim 1 improperly attempts to preempt the idea of hedging financial risk in commodities transactions, without more. It is abstract, and therefore unpatentable. While the claim, like all method claims, sets forth a series of steps, these steps simply embody what is inherent to the idea of hedging: multiple transactions with counter-risk positions.

The claim is similar to a variety of claims to business methods, legal relationships, and other concepts rejected by various courts as merely consisting of abstract ideas. *See, e.g., Benson,* 409 U.S. 63 (rejecting claim that essentially covered mathematical relationship between binary and BCD numerical systems); *Flook,* 437 U.S. 584 (rejecting claim to alarm limit formula); *Morse,* 56 U.S. at 112-113 (rejecting claim to using electromagnetism for distance transmission); *Comiskey*, 499 F.3d at 1377 (rejecting claim to "arbitration method" involving

establishing legal relationships). Petitioner argues that a patentable method need only produce a "useful, concrete, tangible result."[9] But the rejected patent claims in each of the foregoing cases did produce – or surely were capable of producing – useful, concrete, tangible results. They were rejected because they attempted to preempt all uses of an abstract idea, or put another way, to patent human intelligence itself. *See Comiskey*, 499 F.3d at 1379.

Second, Petitioner's claim 1 fails the "machine or transformation" test. As described above, SIIA interprets *Diehr* and other decisions of this Court as using the "machine or transformation" test as the primary tool for determining whether a claim is unpatentable as abstract, not the sole requirement for patentable subject matter as the Federal Circuit ruled below. In either case, this claim is unpatentable. On its face, it is tied to no machine or apparatus. And on its face, it transforms no article: the sole result of performing the steps recited is that "said series of market participant transactions balances the risk position of said series of consumer transactions." In other words, the claim accomplishes a change in relationships, not transformation of an article. Should the Court

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[9] As referenced in f.n. 3, *supra*, litigants often cite *State Street Bank,* 149 F.3d 1368, and *AT&T*, 172 F.3d 1352 as "ruling" that a process yielding a useful, concrete, tangible result satisfies section 101. While both opinions did include that statement, processes *per se* were not at issue in either case – the claimed inventions in both cases recited *machines*. The Federal Circuit put to rest the "useful, concrete, tangible result" dicta in its opinion below. *See Bilski*, 545 F.3d at 959-960.

endorse the Federal Circuit's bright-line test, then, the claim must be rejected as unpatentable.

In prior cases, the Court declined to adopt the "machine or transformation" test as the sole test for patentable subject matter, suggesting that future cases could reveal exceptions to the machine or transformation rule. *See Benson,* 409 U.S. at 71; *Diehr,* 450 U.S. 175. SIIA is aware of no such exception to date – no patentee has overcome the "strong presumption," in effect, that a claim is abstract if it is unattached to any machine and does not transform an article. And there appears to be nothing in the present claim that would overcome such a presumption.

Third and finally, some *amici* argue that section 101 and/or patent law generally have historically required an invention to include a "technological contribution." *See, e.g., Comiskey*, 499 F.3d at 1375 ("The Constitution explicitly limited patentability to "the national purpose of advancing the useful arts – the process today called technological innovation.") (quoting *Paulik v. Rizkalla,* 760 F.2d 1270, 1276 (Fed.Cir.1985) (*en banc*)). Respondent now appears to endorse this position, at least in part. *See* Resp. Br. at 11 ("Section 101 protects industrial and technological processes, and it excludes methods directed to organizing human activity.").

A "technological contribution" requirement would produce the same result in this case as the previously-discussed tests: Petitioner's claim 1 is not patentable subject matter. His claim includes no

particular technological contribution or requirement. While one perhaps *could* conceive of some technological means of hedging risk in commodities trading, that is not what Petitioner claimed. To the contrary, he avoided limiting the process to any technological context, and avoided requiring any particular technology. Implicit (or even explicit) data gathering or post-solution activity using technology, in any event, would not have changed the character of the claimed invention to make it patentable. *See Flook,* 437 U.S. 584; *Comiskey*, 499 F.3d at 1377-78; *In re Grams*, 888 F.2d 835, 839-40 (Fed. Cir. 1989).

CONCLUSION

The judgment of the Court of Appeals for the Federal Circuit should be AFFIRMED.

Respectfully submitted,

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