No. 2007-1130
(Serial No. 08/833,892)

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

IN RE BERNARD L. BILSKI
and RAND A. WARSAW

Appellants.

APPEAL FROM THE UNITED STATES PATENT & TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES.

BRIEF FOR *AMICUS CURIAE* SAP AMERICA, INC.

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April 7, 2008

CERTIFICATE OF INTEREST

Counsel for amicus curiae SAP America, Inc., certifies the following:

1. The full name of the party or amicus represented by us in this case is: SAP America, Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by us is: Not Applicable.

3. The parent companies, subsidiaries (except wholly owned subsidiaries), and affiliates that have issued shares to the public, of the party or amicus curiae represented by us are: SAP AG.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by us in the trial court or agency or are expected to appear in this Court, are:

FISH & RICHARDSON P.C.
Katherine Kelly Lutton
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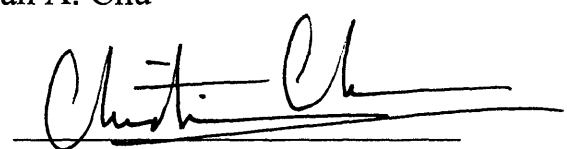
April 7, 2008



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INTEREST OF THE AMICUS CURIAE

The Amicus, SAP America, Inc. ("SAP"), is a leading technology company focused on developing innovative software and computer-based business solutions. The Amicus conducts significant research and development and invests heavily in commercializing innovative technologies. Given these significant investments, SAP has a strong interest in promoting clear, simple, and predictable patent rules, so that the system of incentives embodied by the patent system continues to foster innovation, business competition, and economic growth in the United States.

In its en banc order, this Court has permitted amicus briefs to be filed without leave of court. For this reason, no motion under F.R.A.P. 29 is submitted.

SUMMARY OF THE ARGUMENT

Although mere abstract ideas that preempt an entire area of inquiry are not patentable, practical implementations of those ideas constitute patentable subject matter. To distinguish between the two in the context of process claims, the courts have primarily looked to results: the Supreme Court has relied on the presence of transformed subject matter, and this Court has further looked to a "concrete, useful, and tangible result." An analysis of the process itself is also important in determining whether the invention is abstract rather than practical, particularly for human-implemented processes where there is a real danger that the steps may be recited without the specificity required for a vague idea to become a practical implementation. For this reason, courts should consider whether, in addition to producing an output that transforms subject matter, a claimed process is sufficiently machine-like that it does not preempt all possible implementations of an idea.

As this Court has recognized, machine-implemented inventions (e.g., computer-implemented software and other computer-implemented inventions), by their very nature, meet the standard of being patent-eligible implementations rather than unpatentable abstract ideas, and fail only if their activity is so abstract and attenuated from any real world impact that they are little more than mere algorithms. Amicus encourages this Court to confirm the patentability of software

that has a practical implementation, and to avoid unnecessarily broad terms which would jeopardize settled expectations for those who have patented software inventions that fall well inside Section 101 and which are key to the nation's economy and job growth.

ARGUMENT

A. The Test For Distinguishing An Unpatentable Idea From a Patentable Implementation Should Consider The Result As Well As The Manner of Obtaining The Result

1. The Current Tests For Distinguishing Unpatentable Ideas From Patentable Implementations Are Helpful, But Incomplete

As this Court recently reaffirmed, an invention is patentable only if it falls within one of the four subject matter categories provided by § 101, i.e., if the invention is a "process, machine, manufacture, or composition of matter."[1] In re Nuijten, 500 F.3d 1346, 1354 (Fed. Cir. 2007) ("The four categories together describe the exclusive reach of patentable subject matter. If a claim covers material not found in any of the four statutory categories, that claim falls outside the plainly expressed scope of § 101 even if the subject matter is otherwise new and useful."). Although few in number, the subject matters covered by these four categories are

[1] Much attention is bound to be focused on attempting to classify the Bilski invention as being, or not being, a so-called "business method." Amicus submits that such classification is unhelpful, and that the inquiry must remain centered around the claim language, the specification, and the relevant factors expressed in the precedent of the Supreme Court and this Court.

wide-ranging and far-reaching, as emphasized by the Supreme Court's most-quoted statement on the point:

> The Committee Reports accompanying the 1952 Act inform us that Congress intended statutory subject matter to "include anything under the sun that is made by man."

Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980).

This sweeping statement cannot, however, be read to its fullest literal extent because the Supreme Court has interpreted the statute as excluding from patentability three broad classes of discoveries: "laws of nature, natural phenomena, and abstract ideas." Diamond v. Diehr, 450 U.S. 175, 185 (1981). The first two classes, neither of which is implicated in this appeal, cannot be patented because they are not new—i.e., they are "manifestations of ... nature, free to all men and reserved exclusively to none." Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 130 (1948). The third class—abstract ideas—is relevant here and is unpatentable because such ideas are mere abstractions without concrete and practical application. See Rubber-Tip Pencil Co. v. Howard, 87 U.S. (20 Wall.) 498, 507 (1874) ("An idea of itself is not patentable.").

The courts have distinguished unpatentable abstractions from patent-eligible implementations by balancing two competing public policies: The desire to encourage broad disclosure of new technological ideas so as to "promote the progress of science and the useful arts," U.S. Const. Art. I § 8, and the need to keep

the marketplace of ideas free from government-created monopolies on fundamental concepts, see Le Roy v. Tatham, 55 U.S. (14 How.) 156, 175 (1853) ("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.").

For process claims, the Supreme Court has drawn this difficult line by considering whether such a claim would preempt every practical implementation of an idea. Gottschalk v. Benson, 409 U.S. 63, 71-72 (1972). While this line-drawing determination is highly fact-dependent, the high court's precedent has generally recognized that a process that is tied to a particular machine or that results in a transformation of subject matter does not implicate these policy-based concerns of overbreadth and preemption. Diehr, 450 U.S. at 184 ("Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines." (quoting Benson, 409 U.S. at 70 (1972)); see also Parker v. Flook, 437 U.S. 584, 588 n.9 (1978). To assist the inventing community, this Court provided further guidance on the Supreme Court's abstraction/implementation standard by focusing on the results obtained and considering whether the claimed process achieves a "concrete, useful, or tangible result."[2] E.g., AT&T Corp. v. Excel

[2] Amicus submits that "transformation of subject matter"—essentially the terminology used in Diehr—is preferable to other articulations of this test, such as

Communications, Inc., 172 F.3d 1352, 1356-57 (Fed. Cir. 1999); see also In re Alappat, 33 F.3d 1526, 1544 (Fed. Cir. 1994) (en banc).

While such inquiries have been sufficient to decide prior cases, these cases' exclusive focus on the results achieved caused them to disregard a separate but equally important inquiry: analyzing the process itself as a key "clue" to whether the process is preemptive in its effect, or is simply one of multiple possible practical implementations. Specifically, if a process is expressed so generally that it does nothing more than implement an abstract idea for bringing about a result, it may very well preempt all possible implementations even where it results in a concrete, useful, and tangible output.[3] Diehr, 450 U.S. at 192 n.14 (explaining that "a mathematical formula does not become patentable subject matter merely by including in the claim for the formula token postsolution activity such as the type claimed in Flook").

Concerns regarding a process itself has animated the Supreme Court's recognition that processes tied to a particular machine are patentable, because

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"physical transformation." The latter leads to confusion over the meaning of terms like "physical" and how such terms apply in the electronic world—questions that distract from the fundamental inquiry.

[3] Such specific articulations of the Supreme Court's general announcements are precisely the sort of tasks envisioned for this Court at its creation. Although State Street and Alappat involved machine claims rather than process claims, they are instructive here because this Court has emphasized that arbitrary differences between method and apparatus claims should not be created. In re Alappat, 33 F.3d 1526, 1581-83 (Fed. Cir. 1994) (Rader, J., concurring).

machines by their very nature are limited in their implementation and operate in predetermined manners rather than according to broad, abstract ideas. In contrast, where a process achieves a clear result but primarily depends on the vagaries and variability of human judgment, there is a very real danger that such claims may preempt all possible implementations. See, e g., In re Comiskey, 499 F.3d 1365, 1377 (Fed. Cir. 2007) ("However, mental processes-or processes of human thinking-standing alone are not patentable even if they have practical application.").

2. A Test That Considers The Process For Achieving A Result Better Delineates Patentable Processes Directed to Implementations From Unpatentable, All-Preempting Methods

Amicus submits that in determining the patentability of claimed process, this Court should, in addition to considering whether the process produces an output that is transformative, look to whether the process is sufficiently machine-like, in terms of practicality and specificity, such that it does not preempt all possible implementations of an idea.

As recognized by precedent, a process limited to a particular machine implementation will necessarily meet this requirement. E.g., Diehr, 450 U.S. at 187-88 (finding process claim using computer to calculate well-known Arrhenius's equation to be patent-eligible: "Rather, they [the inventors] seek only to foreclose from others the use of that equation in conjunction with all of the other steps in

their claimed process. These include ... constantly recalculating the appropriate cure time through the use of the formula and a digital computer, and automatically opening the press at the proper time."); Flook, 437 U.S. at 588 n.9 (acknowledging that a process is patentable subject matter "when it either was tied to a particular apparatus or operated to change materials to a 'different state or thing'"); Expanded Metal Co. v. Bradford, 214 U.S. 366, 385-86 (1909) ("We therefore reach the conclusion that an invention or discovery of a process or method involving mechanical operations, and producing a new and useful result, may be within the protection of the Federal statute, and entitle the inventor to a patent for his discovery."); Arrhythmia Research Tech., Inc. v. Corazonix Corp., 958 F.2d 1053 (Fed. Cir. 1992) (reversing § 101 invalidity judgment entered against a method of detection of a certain heart condition through the use of specially programmed electronic equipment).

For processes not clearly tethered to machines and thus open to a number of different implementations, more is required. Looking to the character of the process itself as an additional clue to patentability will ensure that Section 101 does not stretch too far. The machine-like nature of a process thus stands as a hallmark that the process is a practical (and patent-eligible) implementation rather than an all-preempting abstract idea. Such additional consideration connects to traditional notions of patent eligibility rooted in machine-implemented inventions

and chemical processes, which by their very nature meet such a test, while still leaving adequate flexibility to address true inventions in fields of technology we still cannot predict. Though not wording its analysis in this particular manner, the Court has effectively done so when asking whether an invention would preempt "every substantial practical application" of an abstract idea. Benson, 409 U.S. at 71-72.

This Court has encountered in the past many examples of process claims that were so broad as to be mere abstractions that preempt an entire idea or area. E.g., In re Warmerdam, 33 F.3d 1354, 1358-60 (Fed. Cir. 1994) (finding method claims to prevent collisions unpatentable because "[a]s a whole, the claim involves no more than the manipulation of abstract ideas"); In re Schrader, 22 F.3d 290, 292-96 (Fed. Cir. 1994) (rejecting as unpatentable broadly claimed methods for conducting auctions via competitive bidding); In re Grams, 888 F.2d 835, 837-41 (Fed. Cir. 1989) (holding that the method was nonstatutory where all but one of the steps of the claim were in essence a mathematical algorithm and the remaining step merely provided data for the algorithm); In re Meyer, 688 F.2d 789, 794-96 (CCPA 1982) (rejecting claims that recited an algorithm that involved mental steps performed by a neurologist because "we conclude that appellants' independent claims are to a mathematical algorithm representing a mental process that has not been applied to physical elements or process steps and is, therefore, not limited to

any otherwise statutory process, machine, manufacture, or composition of matter"). In each instance, the Supreme Court and this Court have protected the public interest in unencumbered use of abstract ideas and the sanctity of one's thought processes.[4]

This proposed approach, which considers both the process and the result of the process, substantially echoes other provisions of the Patent Act. Indeed, Section 101's distinction between "abstract ideas" and more specific and practical implementations of such ideas, in some way resembles an analysis under Section 112 when viewed superficially. This resemblance is not coincidental given that both Sections 101 and 112 aim to prevent claim overbreadth. But the particular policies implemented by Section 101, the level at which they are enforced, and the tests for enforcing them, are wholly different; the tests for Section 101 look to whether the general claim would preempt numerous implementations, while the tests for Section 112 look to whether a skilled artisan would read the specification

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[4] With this additional explicit consideration directed to the process itself, subject matter deemed patentable in the past would still be patentable. For example, the claims in Diehr implicated a very definite machine-implemented process for molding rubber that transformed subject matter from one state into another, thereby bringing about a very concrete, useful, and tangible result. See Diehr, 450 U.S. at 191. Likewise, AT&T's claimed process involved a specific process in which a computer transformed input telephone-related data into concrete, useful, and tangible billing-related information by applying Boolean algebra on the input data. AT&T, 172 F.3d at 1358. And State Street and Alappat's claims would not be affected by the consideration of this additional dimension because they implicated machines rather than processes.

to adequately describe the invention. For example, Section 101 looks broadly to whether an invention is more than an abstract idea, while Section 112 looks more specifically to the adequacy of the disclosure and to the definiteness of particular claim language so that a competitor will understand the scope of the property right, regardless of whether or not the invention is abstract. This refining role performed by Section 112 thus underscores why Section 101, a truly blunt tool, need not be a panacea for patentability, and why it is important that the courts apply Section 112 rigorously to prevent patentees from asserting rights over inventions to which they have no legitimate entitlement.[5]

But to reach the analysis of Section 112, a claim must first qualify as patentable subject matter under Section 101. State Street Bank & Trust Co. v. Signature Fin'l Group, Inc., 149 F.3d 1368, 1372 n.2 (Fed. Cir. 1998) ("The first door which must be opened on the difficult path to patentability is § 101." (citation omitted)). In cases such as this one, the line between patentable and unpatentable subject matter can be difficult to draw. Amicus, however, submits that, by focusing on the results achieved and the process itself, this Court will preserve the

[5] Looking at the process as well as the result should provide sufficient clues to determine whether a process should pass muster under 101 as not being an abstract idea preempting all implementations. To the extent there remain any concerns about the patentability of overbroad or ill-defined process claims and the courts, industry, Bar and Patent Office are seeking additional guidance and tools for ensuring patent quality, those concerns are more properly addressed by a rigorous application of Section 112.

careful balance between competing public policies, ensure the patentability of worthwhile claims directed to specific implementations, and exclude overbroad process claims which would preempt all application of the abstract idea.

3. This Court Should Reaffirm That Software or Computer-Implemented Processes Are Patentable

Implementing the Supreme Court's guidance, this Court has long recognized that a computer-implemented process is clearly patentable subject matter because it transforms data, results in a practical implementation of a mathematical formula, and produces a concrete, useful, and tangible result in the form of actual, quantifiable data. For example, the patent-eligible process in Arrhythmia was implemented through a specially programmed computer to convert input electrocardiograph signal data into concrete, useful, and tangible data representing heart activity to determine whether the patient is subject to ventricular tachycardia. Arrhythmia, 958 F.2d at 1054-55. Recognizing that the claimed process solely focused on a specific implementation, the Arrhythmia court found the process to be patentable subject matter because "[t]he method claims do not wholly preempt these procedures, but limit their application to the defined process steps." Id. at 1059-60. Similarly, in AT&T, this Court held AT&T's claimed method of processing primary interexchange carrier data by using a computer to apply Boolean algebra on the data and thus producing data useful for billing purposes,

was patentable subject matter. AT&T, 172 F.3d at 1358 ("Because the claimed process applies the Boolean principle to produce a useful, concrete, tangible result without pre-empting other uses of the mathematical principle, on its face the claimed process comfortably falls within the scope of § 101.").

This Court's precedent therefore teaches that software and computer-implemented processes are presumptively within the ambit of § 101, because they are tied to a computer, transform subject matter, and generally operate by very definite machine-like processes.[6] Such claims are patentable because the entire point of most software is to create a real-world implementation from an idea. The Supreme Court has recognized this important fact when, decades ago, it put to rest once and for all any contention that software or computer-implemented process claims could never be patentable subject matter. Diehr, 450 U.S. at 187 ("Our earlier opinions lend support to our present conclusion that a claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula, computer program, or digital computer."). And in its more recent opinions, the high court has implicitly regarded software and

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[6] Amicus encourages the Court, in appropriate cases, to look beyond the claim body and preamble in determining whether an invention should be considered computer-implemented, because it is only recently that the explicit language "computer-implemented" has been added to claim preambles as a matter of course. See Honeywell Int'l, Inc. v. ITT Indus., Inc., 452 F.3d 1312, 1318 (Fed. Cir. 2006) (construing claim to be limited to particular implementation, a fuel filter, where the entire specification focused on that one implementation).

computer-implemented inventions as patentable subject matter well within the scope of § 101. See Microsoft Corp. v. AT&T Corp., __ U.S. __, 127 S.Ct. 1746, 1750-60 (2007) (discussing potential infringement of software-related patent under § 271(f)); see also id. at 1760-61 (Alito, J., concurring) (discussing creation of source code and duplication of golden master discs).

This presumptive patent eligibility for computer-implemented inventions is overcome only where the invention is so abstract and so attenuated from real-world application that it is nothing more than an idea rather than an implementation, making the process more human and mental than machine-like. See, e.g., Flook, 437 U.S. at 594-95 (finding unpatentable a process for computing a number).

Amicus, like others in its industry, has relied on this long line of precedent that provides protection for software in planning its affairs and protecting its innovations. Amicus therefore requests that this Court expressly reaffirm that computer-implemented processes that have a practical application are patentable subject matter. See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 739 (2002) ("[C]ourts must be cautious before adopting changes that disrupt the settled expectations of the inventing community. . . . Fundamental alterations in these rules risk destroying the legitimate expectations of inventors in their property.").

B. This Court Should Avoid Any Sweeping Tests That Unnecessarily Restrict Patentable Subject Matter and, In The Process, Unwittingly Damage The Software and Information Technology Industry

Beyond the guidance from prior case law, this appeal presents challenging issues that reach beyond the facts at hand. The dispute comes to this Court against the backdrop of ongoing controversy regarding the wisdom of business method and software patenting that began well before this Court's opinions in State Street Bank, 149 F.3d 1368, and AT&T, 172 F.3d 1355. This Court should not be swayed, however, by the passions of the moment and atypical facts. In particular, the Court should avoid any reactionary legal standards that, while perhaps settling the ongoing controversy for a time, would damage an industry as important to the national economy as the software and information technology sector.

1. The Software And Information Technology Industry Is An Important Sector Of the National Economy

America's software and information technology industry is among the most dynamic sectors of the U.S. economy, having an impact far greater than its relative share of the GDP. As a recent report indicates, the industry grew more than three times faster than the overall U.S. economy in 2005. SIIA Report at 7 & 13.[7] Yet the industry represents only 2.8% of the overall U.S. economy, leaving much room for more growth. Id. at 14.

[7] Software & Info. Indus. Ass'n, Software And Information Driving the Global Knowledge Economy (2008) (citing various U.S. Government statistics and market research reports).

The industry is also key to the country's economic position in the world—representing 13 percent of all U.S. sales of products through overseas affiliates. Id. at 9 & 13 (citing the U.S. Bureau of Economic Analysis's U.S. International Services: Cross-Border Trade 1986-2006, and Sales Through Affiliates, 1986-2005 report). The industry also generates high-wage jobs; from 1997 to 2006, the industry added 400,000 jobs that pay wages 78 percent higher than the national average, contrasting sharply with reductions in industries such as transportation equipment manufacturing (-13%), computer and electronic product manufacturing (-27%), telecommunications (-8%) and chemical manufacturing (-13%). SIIA Report at 8, 13, & 20-21 (citing the U.S. Bureau of Labor Statistics's 2006 National Industry-Specific Occupational Employment and Wage Estimates). And over the next decade, the U.S. Bureau of Labor Statistics predicts over two million job openings in software and information technology occupations, with the demand for computer software engineers alone increasing by 450,000 to reach 1.2 million by 2016. Id. at 8. Not surprisingly, software and information technology firms with a U.S. presence have maintained dominant global positions in their respective sectors. S.J. Graham & D.C. Mowery, "Intellectual Property Protection in the U.S. Software Industry," in Patents In the Knowledge-Based Economy at 222-23 (W.M. Cohen & S.A. Merrill, eds., 2003).

The industry's indirect positive effects on the country, in the form of improved productivity for workers nationwide, are also phenomenal. According to a recent report by the Information Technology & Innovation Foundation, the industry was responsible for two-thirds of this country's total growth in productivity between 1995 and 2002, and virtually all of the growth in labor productivity. R.D. Atkinson & A.S. McKay, Digital Prosperity: Understanding the Economic Benefits of the Information Technology Revolution at 3 (March 2007). As the report noted, "IT has been the key factor responsible for reversing the 20-year productivity slowdown from the mid-1970s to the mid-1990s and in driving today's robust productivity growth." Id. at 10.

The software and information technology is thus key for the U.S. economy, contributing substantially to economic growth, gross domestic product, positive export balances, high-quality job growth and salaries, and an overall rise in productivity. Any negative impact on such an important sector as a result of a change in patent eligibility rules may have drastic consequences for the economy.

2. The Software And Information Technology Industry Benefits From Strong Patent Protection

"An economy's capacity for invention and innovation helps drive its economic growth and the degree to which standards of living increase." Fed. Trade Comm'n, To Promote Innovation: The Proper Balance of Competition &

Patent Law and Policy, Chap. 1 at 1 (2003) (hereinafter FTC Report). Patents can spur innovations in this industry by preventing free riding and encouraging investment in innovation, encouraging disclosure of inventions, and more broadly protecting software innovation than copyright law can.

First, patents in the software and information technology industry provide incentives to invest in development and commercialization of inventions by deterring free-riding and unlawful copying. In this industry, "[i]mitation may occur quickly," with the Internet facilitating the rapid and inexpensive distribution and marketing of such imitations. FTC Report, Chap. 3 at 45.[8] Without patent rights, inventors would likely avoid the mandatory disclosure required by the Patent Act in order to prevent "free-riding" and unfair imitations. FTC Report Chap. 2 at 5. By shielding inventors from such free-riding, patents allow them to discuss their work with other firms to obtain the investments or assistance necessary to further develop and commercialize the invention.[9] Id.

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[8] see also J.R. Kuester & L.E. Thompson, "Risk Associated with Restricting Business Method and E-Commerce Patents," 17 Ga. St. Univ. L.R. 657, 682 (2001) (recognizing that software innovations are vulnerable to copying, especially when sold, demonstrated, or disclosed on the Internet).

[9] The importance of this incentive is apparent by looking at the history of a particular method patent directed to business data processing. On January 8, 1889, the Patent & Trademark Office issued United States Patent Nos. 395,781; 395,782; and 395,783 to inventor-entrepreneur Herman Hollerith for methods and apparatuses for automating the tabulating and compiling of statistical information for businesses and enterprises. U.S. Patent & Trademark Office, "Automated

For more established companies like Amicus, the protection afforded by patent rights is even more necessary to justify its large R&D investments. For instance, SAP and its parent company spent over €1.3 billion on R&D in 2006—over 14% of annual revenues. SAP AG, Form 20-F – Annual And Transition Report of Foreign Private Issuers at 69 (2007). Its commitment to R&D is also apparent from the nearly 12,000 employees (30% of total employees) engaged in this endeavor. Id. Without patent protection, a new entrant could easily duplicate the unique innovations that SAP developed through considerable investment, circumvent copyright laws by making trivial alterations, undercut the investments and efforts of SAP and other companies by avoiding the high cost of research and development, and thus unfairly compete in the marketplace. To prevent such a scenario, companies like SAP have come to rely on the strong safeguards afforded by this country's patent system and this Court's case law in planning long-term R&D strategies and in making investments to develop innovative products.

Second, patents promote innovation by demanding disclosure in exchange for a period of exclusivity. By requiring and rewarding disclosure, the system fosters further innovation by enabling skilled artisans to learn from another's

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Financial Or Management Data Processing Methods (Business Methods)," USPTO White Paper at 3 (March 2000). The protection of his patents allowed Mr. Hollerith's fledgling Tabulating Machine Company to succeed and thrive. A few decades later, in 1924, Thomas J. Watson, Sr. changed the company name to International Business Machine Corporation. Id.

invention. FTC Report, Chap. 2 at 6. "Thus, an issued patent 'communicates a considerable amount of information that can help other would-be inventors, including rival firms.'" Id. (quoting Kenneth W. Dam, "The Economic Underpinnings of Patent Law," 23 J. Legal Studies 247, 267 (1994)). This disclosure requirement is particularly important and beneficial in the software industry, because patents afford more protection than copyrights in this area, FTC Report Chap. 3 at 47,[10] and "[i]nnovation in software generally is a cumulative activity, and individual software products frequently build on components from other products." Graham & Mowery, supra, at 255; see also FTC Report, Chap. 3 at 44 ("The path of innovation is often incremental, with new ideas added, and products developed and commercialized, using earlier work as the foundation and building blocks."). Without the protection of patents to secure their rights, inventors and companies may opt-out of the patent system and its mandatory disclosure rather than risk a competitive disadvantage from providing such information to their competitors. Ultimately, any propensity against disclosing technical information through patents harms the public and reduces the body of

[10] Indeed, an analytical study of various intellectual property regimes concluded that certain aspects of computer programs not protected by copyright law, such as processes and methods, "are vulnerable to rapid imitation that, left unchecked, would undermine incentives to invest in software development." P. Samuelson et al., "A Manifesto Concerning the Legal Protection of Computer Programs," 94 Colum. L. Rev. 2308, 2310 (1994).

technological knowledge available to the world, especially because "[i]t is estimated that 85-90% of the world's technology is disclosed only in patent documents." In re Alappat, 33 F.3d 1526, 1571 (Fed. Cir. 1994) (Newman, J., concurring).

Together, these factors provide strong incentives for software companies, like SAP, to continue innovating in this field. A weakening in these incentives would impact the allocation of resources and the disclosure of inventions to the general public.

ANSWERS TO THE QUESTIONS PRESENTED

(1) Whether claim 1 of the 08/833,892 patent application claims patent-eligible subject matter under 35 U.S.C. § 101?

Amicus does not speak to this issue.

(2) What standard should govern in determining whether a process is patent-eligible subject matter under section 101?

To satisfy Section 101, a process, just like a system, must be new (not natural phenomena or laws of nature) and must result in practical implementations (not an abstract idea that preempts all implementations). To test whether a process is an unpatentable abstract idea or a practical implementation which constitutes patentable subject matter, the Court should look to the result of the process (e.g., whether it results in the transformation of subject matter, by creating for example,

a concrete, useful, and tangible result), and to the process itself (e.g., whether it is tied to a particular machine or is sufficiently machine-like in terms of practicality rather than a mere abstract idea). A machine-implemented (e.g., computer-implemented) process by its nature is practical both in its result and its operation, and is patentable unless its operation is so completely attenuated from any practical application that it is, in essence, a mere algorithm.

(3) Whether the claimed subject matter is not patent-eligible because it constitutes an abstract idea or mental process; when does a claim that contains both mental and physical steps create patent-eligible subject matter?

Such a process claim is patentable if the mental and physical steps result in a transformation of subject matter that, for example, creates a concrete, useful, and tangible result, and if the process is carried out on a machine or is sufficiently machine-like as to be a practical implementation rather than a mere abstract idea.

(4) Whether a method or process must result in a physical transformation of an article or be tied to a machine to be patent-eligible subject matter under section 101?

While a process claim would constitute patentable subject matter if it results in a physical transformation or is tied to a machine (such as a computer), precedent from the Supreme Court and this Court does not restrict patent-eligible inventions to these two categories. Rather, the case law indicates that a process is patent-eligible if it transforms subject matter, such as data, while also being sufficiently

machine-like in terms of practicality that it does not preempt all possible implementations of an idea. Hence, a computer-implemented process with a practical application constitutes a patent-eligible method rather than an unpatentable abstract idea.

(5)Whether it is appropriate to reconsider State Street Bank [] and AT&T [], in this case and, if so, whether those cases should be overruled in any respect?

It is always appropriate for the en banc Court to reconsider decisions of a panel when the issues are fairly presented, as they are here. Nevertheless, State Street Bank and AT&T both appear to be appropriate implementations of the Supreme Court's case law if they are read properly.

CONCLUSION

The Amicus respectfully submits that, for the foregoing reasons, this Court should provide guidance to the inventive community by clarifying its test for patent-eligible processes, while avoiding any drastic rule that would impair an industry vital to the national economy or damaging the flexibility of the Patent Act to encompass future inventions.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

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The undersigned individual hereby certifies that the BRIEF FOR *AMICUS CURIAE* complies with Federal Rule of Appellate Procedure 32(a)(7)(B) limiting briefs to 7,000 words.

This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word, Office 2003, in Times New Roman, 14 point.

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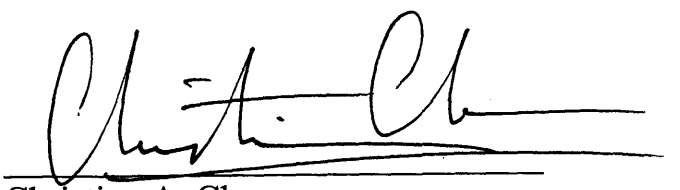

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