No. 08-964

IN THE

Supreme Court of the United States

BERNARD L. BILSKI and RAND A. WARSAW,

Petitioners,

v.

JOHN DOLL, Acting Under Secretary of Commerce for Intellectual Property and Acting Director, Patent and Trademark Office,

Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF OF *AMICUS CURIAE* THE HOUSTON INTELLECTUAL PROPERTY LAW ASSOCIATION IN SUPPORT OF PETITIONERS

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INTERESTS OF THE AMICUS CURIAE

The Houston Intellectual Property Law Association (HIPLA) is an association of over 400 lawyers and other professionals who work in the Houston, Texas area.[1] Founded in 1961, HIPLA is one of the largest associations of intellectual property practitioners in the country. No HIPLA member has served as record counsel to any party in the subject of this appeal.

The practice of most of the HIPLA membership relates in substantial part to the field of intellectual property law, and HIPLA members are often called upon to advise their clients in matters involving the statute at issue in this case, 35 U.S.C. § 101. Members of HIPLA advise clients from all over the United States and the world, most of whom routinely file patent applications in the United States. Each of those patent applications is subjected to scrutiny by the United States Patent and Trademark Office under the statute. Once their patents are allowed, HIPLA members' clients rely on the validity of those patents, which is subject to review under the statute. As such, section 101 is a statutory provision of great consequence to many clients of HIPLA members.

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1. No counsel for a party authored this brief in whole or in part, and no such counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than the *amicus curiae*, or its members or counsel made a monetary contribution to its preparation or submission. The parties have consented to the filing of this brief.

Many HIPLA members' clients file patent applications directed to software and business methods. Even companies that appear to be traditional brick–and–mortar enterprises, such as the energy companies, have developed large portfolios of software and business methods patents and patent applications. Software and business methods patents and patent applications are among the patent properties adversely affected by the decision under appeal here.

Because the Federal Circuit has improperly narrowed the scope of the statute as it applies to processes from that established by this Court in *Diamond v. Diehr*, this Amicus respectfully requests this Court to reverse such holding. *Diamond v.* Diehr, 450 U.S. 175 (1972). Because the Federal Circuit has improperly established the "machine–or–transformation" test for patent eligibility, this Amicus respectfully requests this Court to reverse such holding.The United States Patent and Trademark Office (hereinafter the "USPTO") rejected the claims of the instant patent application under 35 U.S.C. § 101. The Court of Appeals for the Federal Circuit (hereinafter the "Federal Circuit") affirmed the rejection. *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008), *cert. granted* 129 S. Ct. 2735 (U.S. 2009) . In its decision, the Federal Circuit adopted the machine–or–transformation test as the sole test governing section 101 analysis for process patents.

SUMMARY OF THE ARGUMENT

The Patent System is very important to the economy of the United States. It provides the context for much of the wealth owned by companies and for employment in the United States and around the world. Further, owners use their intellectual property not merely to protect the benefits of their substantial research and development investments from exploitation by both domestic and foreign enterprises, but also to generate licensing revenue and as leverage in collaborative agreements. All of those uses rely on a stable Patent System.

The Federal Circuit's *Bilski* opinion disrupts that stability. One example of that disruption is that the Board of Patent Appeals and Interferences now generally applies the *Bilski* opinion in such a way that claims to software, standing alone, and transformation of data, standing alone, are not patentable subject matter. A second example is that applying the Federal Circuit's machine–or–transformation test to important patents which have issued in recent years might have invalidated those patents, which would have been detrimental to the United States economy. Others will argue that the Federal Circuit's *Bilski* opinion is inconsistent with this Court's precedent. We will focus on the disruptions to the stability of the Patent System caused by those inconsistencies.

This Court should reject the machine–or–transformation test.

ARGUMENT

A. The Federal Circuit's Adoption of the "Machine–or–Transformation" Formula as the "Only Applicable Test" to Determine Patent Eligibility for a Process Threatens to Stifle Innovation, a Key Driver of the Nation's Economy

1. The Patent System is a Key Driver of the United States Economy and Should Adapt to Changing Times

The United States economy has undergone an enormous change in the last few decades. We have moved from a brick–and–mortar economy to one that relies on such technologies as the Internet, e–commerce, and cellular telephones. Technological revolutions are not uncommon in United States history and often induce discussions about patent quality:

> [W]henever the United States has undergone a major industrial renaissance – such as occurred during the nineteenth century when first steam and then later the telegraph, telephone, and electric power industries emerged[2] – the number of new patents [has] skyrocketed, as have concerns about a resulting decline in patent quality and an increase in patent litigation. So in 1836, and

2. *See also* Kevin G. Rivette & David Kline, Rembrandts in the Attic 15 (Harvard Bus. Sch. Press 2000). Figure 1–2 shows several other industrial evolutions, including Auto and Air in the early 20th century, Synthetics and Aerospace in the 1960s and 1970s and the current High Tech revolution.

> again in 1870, Congress reformed the patent system to better enable it to meet the demands of new technologies and new industries. MARSHALL PHELPS & DAVID KLINE, BURNING THE SHIPS, INTELLECTUAL PROPERTY AND THE TRANSFORMATION OF MICROSOFT, 161 (John Wiley & Sons 2009).

Indeed, the Congress is considering, as it did in its last session, sweeping revisions to the Patent Statute. 35 U.S.C. § 101, *et seq*.

Such changes are to be expected and are healthy. Patent law, as an enabler of innovation, must keep up with the times and changes to technology. Changes to patent law should be made carefully, though, and should be made in the context of the long history of the Patent Statute and be sensitive to the fact that current owners of patent properties, such as patents, patent applications, and licenses to patents or patent applications, have relied on the current state of the law in acquiring and applying such assets.

For example, patent holders have gone beyond using patent properties in the traditional negative sense, i.e., preventing others from making, using, selling, offering to sell, or importing the patented invention. Patents are also used to generate licensing revenue for their owners in return for the right to practice the patented invention. *See* Ronald A. Katz, *Secrets of the Trade: An Inventor Shares His Licensing Know–How*, *in* MAKING INNOVATION PAY: PEOPLE WHO TURN IP INTO SHAREHOLDER VALUE 177, 182 (Bruce Berman, ed. 2006) (describing a "business model" for licensing patents).

Further, some patent property holders have realized that "IP's greatest value [lies] not so much in being a weapon *against* competitors, but rather in serving as a *bridge to collaboration* with other firms that would enable companies to acquire technologies and competencies they needed to compete successfully." PHELPS & KLINE, *supra*, at 5 (emphasis in original). For Microsoft Corporation, one of the America's leading technology companies, "these IP–enabled collaborations have led to greater success . . . in the marketplace, materially enhanced the company's bottom line, and advanced the interests of [its] shareholders." *Id*. at 142.

These strategies rely on a stable Patent System and anything other than carefully measured changes could disrupt the entire structure. *See 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"). It is difficult, for example, to seek enforcement of one's patent rights, attempt to license a patent, or work out a collaborative agreement when the patent property bases of such efforts suddenly become invalid. But that is exactly the cloud that the Federal Circuit's decision has caste. The next section of this brief provides some examples, illustrative of the decision's broad negative impact on the patent system.

This is not an abstract problem without economic implications. According to one commentator:

> intellectual property has now become the chief source of wealth of the modern corporation. IP and other intangible assets today account

> for upwards of 80 percent of the market capitalization of all public companies in the world—with brands, copyrights, patents and technological know–how now comprising the lion's share of these intangibles. PHELPS & KLINE, *supra*, at 137.

One important set of intellectual property rights that is directly threatened by the Federal Circuit's *Bilski* decision is software. "Intellectual property rights in software are now essential to the jobs and living standards of tens of millions of people the world over. Of the 1.2 trillion dollars spent worldwide on information technology this year, 21 percent of that will go towards software. Yet that 21 percent produces more than half of the 35 million jobs worldwide in the information technology sector." PHELPS & KLINE, *supra*, at 163.

The Federal Circuit's decision to adopt the machine–or–transformation test as the only test for patentable subject matter is a drastic, unjustified, and improvident change of direction for patent law. It should be rejected.

2. The "Machine–or–Transformation" Formula Threatens the vitality of many Software Patents

In the decision under appeal, the Federal Circuit observed that "a claim is not a patent–eligible 'process' if it claims 'laws of nature, natural phenomena, [or] abstract ideas.'" *In re Bilski*, 545 F.3d at 952, *quoting Diamond v. Diehr*, 450 U.S. 175, 185 (1972)). The Federal Circuit further observed this Court's distinction "between those claims that 'seek to pre–empt the use

of' a fundamental principle, on the one hand, and claims that seek only to foreclose others from using a particular '*application*' of that fundamental principle, on the other." *Id.* at 953, (*quoting Diehr*, 450 U.S. at 187). The Federal Circuit then adopted the "machine–or–transformation" formulation as the governing test for determining if a claimed process is "tailored narrowly enough to encompass only a particular application of a fundamental principle rather than to pre–empt the principle itself," i.e., whether a process is patent–eligible under 35 U.S.C. § 101. *Id.* at 954, 956. The Federal Circuit's formulation of that test is: "A claimed process is surely patent–eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing." *Id*. at 954. The Federal Circuit determined that the "machine–or–transformation" is to be the "sole test governing § 101 analysis." *Id*. at 955–956.

Thus, rather than adopting the test annunciated under *Diehr* that a process is patent–eligible if it is tailored narrowly enough to encompass a particular application of a fundamental principle, rather than the principle itself, and rather than adopting the machine–or–transformation test as one test for patent eligibility, the Federal Circuit adopted its new machine–or–transformation test as the *only* test.

One quasi–judicial body charged with applying the Federal Circuit's machine–or–transformation test is the Board of Patent Appeals and Interferences (hereinafter "BPAI") within the United States Patent and Trademark Office (hereinafter "USPTO"). The BPAI's implementation of the machine–or–transformation test

since the Federal Circuit's *Bilski* decision has been, in the words of one commentator, a "mess." *See* Peter Zura, *Bilski at the BPAI–What a Mess (Part 1)*, The 271 Patent Blog, *http://271patent.blogspot.com/2009/06/bilski-at-bpai-what-mess-part-1.html* (last visited July 8, 2009). As of June 16, 2009, "section 101 rejections [had] a 92% rate of being at least partly affirmed at the BPAI in 2009." *Id*. All "of the BPAI's cases in 2009 dealt with business methods and algorithmic processes. The 92% rate is remarkable, given the fact that, as recently as 2005, the BPAI *did not uphold a single rejection based on patentable subject matter.*" *Id*. (emphasis in original). Thus, the Federal Circuit's decision in this case has fundamentally changed section 101 law, at least as it respects business methods and algorithmic processes.

a. The BPAI has applied the Federal Circuit's *Bilski* opinion as a broad exclusion over software.

The BPAI analysis of patentability of a process under the Federal Circuit's *Bilski* decision is an exercise in formalistic reasoning. The BPAI typically does not deal with the questions of whether or not the claim covers a law of nature or natural phenomenon and whether or not the claimed subject matter sets out "'[a] procedure . . . [a] series of actions, motions, or operations definitely conducing to an end, whether voluntary or involuntary.'" *In re Bilski*, 535 F.3d at 952 (definition of "process"). Those questions are most likely answerable upon a quick inspection of the claim. Instead, the BPAI moves directly to the question of whether the claimed subject matter is unpatentably abstract. In some cases, the BPAI considers the abstraction question as one of

whether or not the claim pre–empts the use of a fundamental principle. *See*, *e.g.*, *Ex Parte Barnes*, 2009 WL 164074 at *6 (BPAI January 22, 2009)("A claim that is drawn only to the analyzing of data . . . is a claim that seeks to pre–empt the use of a fundamental principle"). In other cases, the BPAI decides the abstraction issue using the machine–or–transformation test. *See*, *e.g.*, *Ex Parte Hardwick*, 2009 WL 1796055 at *4–5 (BPAI June 22, 2009)(invention "not tied to a particular machine" and does not transform an article).

The BPAI appears to have arrived at some general rules:

1. It has been found that software, such as a data processing program, standing alone, does not satisfy the machine element of the machine–or–transformation test. *See*, *e.g.*, *Ex Parte Petculescu*, 2009 WL 1718896 at * 8 (BPAI June 4, 2009) ("Software in itself, with no structural tie to an article of manufacture, machine, process or composition of matter, is not patentable subject matter" (citing *In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007)); *Ex Parte Mau*, 2009 WL 1182161 at *11 (BPAI May 1, 2009) ("[c]omputer programs and data structures are not physical machines").

2. It has been found that a claim that recites an otherwise unpatentable method does not become patent eligible simply because the claim recites the method being run on a general purpose computer. *See*, *e.g.*, *Ex Parte Avinash*, 2009 WL 1714570 at *9, *11 (BPAI June 2, 2009) ("Even assuming that the claimed temporal processing unit introduces structure into claim 1, we still find that the claim recites no more than a general–

purpose controller or computer (FF 14) that preempts substantially all practical applications;" "a general purpose computing system does not tie claim 10 to a special purpose or *particular* machine" (emphasis in original)).

3. It has been found that transforming data does not satisfy the transformation test, *See e.g.*, *Ex Parte Verhaegh*, 2009 WL 1719535 at * 14 (BPAI June 11, 2009) ("The steps of process claims 1–5 also failed the second prong of the machine–or–transformation test because the data process in the claims do not represent physical and tangible objects"); *Ex Parte Patculescu*, *supra*, at *7 (the "purported transformation of data without a machine, is insufficient to establish patent–eligibility under § 101" (citing *In re Bilski*, 545 F.3d at 961)); *Ex Parte Busche*, 2009 WL 1707168 at *10 (BPAI May 28, 2009) ("the data represents information about a generic training and testing data set, which are intangible data;" the data is not transformed), unless the (a) data clearly representing physical and tangible objects, such as bones, organs, and other body tissue; and (b) the transformation of raw data into a particular visual depiction of a physical object on a display (i.e., the Adele exception). *See*, *e.g.*, *Ex Parte Avinash*, *supra* at *12; Ex Parte Caputo, 2009 WL 1747508 at *3 (BPAI June 18, 2009)("'So long as the claimed process is limited to a practical application of a fundamental principle to transform specific data, and the claim is limited to a visual depiction that represents physical objects or substances, there is no danger that the scope of the claim would wholly pre–empt all uses of the principle'" (*quoting In re Bilski*, 545 F.3d at 962).

4. It has been found that reciting a computer in the preamble of a claim is usually found to be merely an exercise in claim drafting, *see*, *e.g.*, *Ex Parte Greene*, 2009 WL 1134839 at *7 (BPAI April 24, 2009) ("merely adding a nominal recitation of conventional computer hardware in a claim otherwise directed to a pure mathematical algorithm is merely an exercise in claim drafting that cannot, by itself, render the claim statutory"), or merely a field of use recitation and insufficient to transform an otherwise unpatentable method claim into patentable subject matter. *See*, *e.g.*, *Ex Parte Dang*, 2009 WL 1892586 at *4 (BPAI June 29, 2009) ("although the claim preamble recites the method as being computer implemented, we consider it to be merely a field of use recitation . . . [s]ince the reference to a computer is not again mentioned in the claim, we find that claim 1 fails to be tied to a particular machine or apparatus" and thus non–patent eligible subject matter).

5. On the other hand, it has been found that the recitation of a computer in the preamble and later in the body of the claim does recite patentable subject matter. *See*, *e.g.*, *Ex Parte Altman*, 2009 WL 1709111 at *6 (BPAI May 29, 2009) (preamble recites host multiprocessor system's operating system and claim body recites "a local lookaside table that *receives* a target virtual memory address and *outputs* a host memory address and page access rights" indicating that "execution by a machine is required" and the claim recites patentable subject matter (emphasis in original)).

6. Finally, it has been found that recitation of elements in the means–plus–function format satisfies

the machine prong of the machine–or–transformation test. *See*, *e.g.*, *Ex Parte Verhaegh*, *supra*, at *7 (elements in means plus function format are presumed to require construction under 35 U.S.C. § 112 implying that the claim is directed to a machine).

These examples, taken either individually or as a whole, provide clear evidence of the problems with the rigid *Bilski* machine–or–transformation test. The machine prong of that test is implicitly at odds with language this Court quoted in *Diehr*, i.e., that "the tools to be used . . . . may be of secondary consequence." *Diehr*, 450 U.S. at 183-84 (quoting *Cochrane v. Deener*, 94 U.S. 780, 787–788 (1877)). The Bilski test on the contrary raises the "tool" to having primary significance.

The transformation component of that test is equally at odds with this Court's precedent. Although this court has frequently used the phrase "transformation and reduction of an article" in its opinions, the focus has always been on the fact that "[t]he process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence." *Id.* at 183 (quoting *Cochrane*, 94 U.S. at 780, 787; and that "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, *Id.* The Bilski focus on the article changes the focus from the nature of the process – to do something in a certain order – to a focus on the object of the process. That is a more limiting standard than either the Patent Statute or this Court's precedent requires and should be overruled.

As the above BPAI examples indicate, the Federal Circuit's *Bilski* decision has resulted in a significantly different outcome for recently filed patent applications than would have been expected heretofore. As the examples below further indicate, the decision also raises questions regarding the state of long issued patents on which a significant portion of the economy relies.

b. The machine–or–transformation test's negative impact on important patents.

As discussed above, intellectual property rights are vitally importantly throughout the world and particularly in the United States. The change to the law brought about by the Federal Circuit's *Bilski* opinion might be argued to be a vehicle to invalidate some of those important patents. Several examples follow.

i. Dell Computer Corporation's "build–to–order" patents.

In the late 1990's Dell Computer Corporation soared to the top of the personal computer business. Rivette & Kline, *supra* n.2, at 34. The key to Dell's success was:

> a unique 'build–to–order' direct sales model that enables buyers to order a custom–configured PC via the Internet or an 800 number. These orders are then processed through continuous–flow manufacturing, configuration, and customer service operation for delivery to home or office within 72 hours.

Id. at 34–35.

Dell patented some of those processes. A Westlaw search of issued patents with Dell as the assignee and "build–to–order" as a search term results in approximately 160 hits. Dell did not just sit on its patents. Instead:

> [i]n the spring of 1999, the company cross–licensed its patents to IBM in a $16 billion deal that enabled each to plug key holes in their respective businesses. Dell gained access to IBM's patented PC components, and IBM obtained access to Dell's patented systems for running a successful build–to–order direct sales effort. *Id*. at 36.

This is an example of the collaborative use of a patent portfolio that was discussed above. Arguably, the agreement would not have been possible without Dell's patenting of its build–to–order manufacturing system.

One patent that may have been included in Dell's cross–license with IBM was U.S. Patent No. 5,963,743, entitled Database for Facilitating Software Installation and Testing for a Build–to–Order Computer System, which issued on October 5, 1999. U.S. Patent No. 5,963,743 (issued Oct. 5, 1999) ("'743 Patent"). The '743 Patent is directed to "an improved method for installing software and testing computer systems before they are shipped to customers." '743 Patent at column 2, lines 30–32.

Claim 1 of the '743 Patent is repeated below:

> 1. A database for use by a system database in the manufacturing of a build–to–order computer system comprising: a step table containing a set of software installation and testing steps shared among different components of substantially all computer systems being manufactured, wherein a prescribed software installation or testing step is executed by the system database during the manufacturing of the build–to–order computer system to facilitate a corresponding software installation or testing for the build–to–order computer system, the step table including an aftercode attribute identifying whether a halt or reboot is required after a corresponding step is executed; and a component table coupled to the step table, the component table containing a set of substantially all possible components that are included within the computer systems being manufactured, wherein the prescribed software installation or testing step executed by the system database is determined in accordance with a corresponding component included in the build–to–order computer system.

Claim 1 recites a step table and a component table. The step table contains the software installation and testing steps necessary to manufacture a build–to–order computer. The component table contains a set of all of the possible components that might be used in the manufacture of the build–to–order computer. The claim does not describe any particular machine and the

databases it recites appear to be intended to reside on a general purpose computer. It could be argued that claim 1 does not describe any action whatsoever and, in particular, does not describe a "transformation."

Therefore, if faced with determining whether claim 1 of the '743 Patent recites patentable subject matter, the BPAI might today determine that it does not. The BPAI might reason that the claim is to a "general purpose computer that has been programmed in an unspecified manner to implement the functional steps recited" in the claim, *Ex Parte Cornea–Hasegan*, 2009 WL 86725 at *4 (BPAI January 13, 2009), and thus that it does not satisfy the "machine" prong of the machine–or–transformation test. Similarly, the BPAI might today find that claim 1 does not satisfy the transformation prong because the claim describes no action at all.

Thus, had the Federal Circuit's *Bilski* decision been in place when Dell was prosecuting the '743 Patent in the USPTO, the '743 Patent might not have issued, or at least not in its current form. Dell might have been deprived of a major component of its deal with IBM, the deal might not have happened, and both Dell and IBM would have been the poorer for it.

ii. AT&T's linear programming patent.

U.S. Patent No. 4,744,028, entitled Methods and Apparatus for Efficient Resource Allocation, U.S. Patent No. 4,744,028 (issued May 10, 1988) ("'028 Patent"), is sometimes cited, by even those that are hostile to software patents, "as an example of what a software patent should be: a highly specific, nontrivial

contribution to practical knowledge." James Bessen & Michael Meurer, Patent Failure, How Judges, Bureaucrats, and Lawyers Put Innovators at Risk, 202 (Princeton Univ. Press 2008). It is directed to optimizing resource allocations, particularly among telecommunications transmission facilities.

AT&T obtained a patent on the algorithm in 1988 and "developed a product (KORBX), bundling the software with a high–performance computer. Although AT&T did make a small number of sales and also apparently licensed the patent, this effort was not a significant commercial success." *Id.*

Claim 1 of the '028 Patent is repeated below:

> 1. A method for allocating the available telecommunication transmission facilities among the subscribers demanding service at a particular time so as to reduce the total cost of operating said transmission facilities, where the available transmission facilities, the subscribers, and the total cost are related in a linear manner, said method comprising the steps of:
>
> tentatively and iteratively reassigning said available telecommunications transmission facilities to said subscribers so as to reduce said total costs at each said reassignment,

each said reassignment being determined by normalizing the previous assignment with respect to constraints on said allocations,

terminating said iterative reassigning steps when said costs are below a preselected threshold, and

allocating said transmission facilities in accordance with the reduced cost assignment.

If asked to review this claim in light of the Federal Circuit's *Bilski* decision, the BPAI might today find that it does not recite patentable subject matter. The BPAI might find that, although the claim mentions "telecommunications transmission facilities" in the body of the claim, the subject matter of the claim is not tied to those facilities. Instead, the claim describes a series of steps to be performed by a general purpose computer. Consequently, the BPAI might decide that the claim merely recites software and does not satisfy the "machine" prong of the machine–or–transformation test.

Further, the BPAI might today decide that, while transmission facilities are allocated in the last step of the claim, that allocation is represented by mere data in the computer and the transmission facilities are not transformed by the claimed process. *See Ex Parte Nawathe*, 2009 WL 327520 at *4 (BPAI February 9, 2009) (transforming input XML documents into represented data is not a transformation because "documents are not an article . . . [r]ather, they are mere data that

represent such entities"). Accordingly, the BPAI might find that the claim does not satisfy the transformation prong of the machine–or–transformation test and that, as a result, the claim does not qualify as patentable subject matter. As a result, an exemplary software patent may not have issued.

One commentary criticizes the '028 Patent saying that "serious questions exist as to the boundaries of even this patent, questions as to whether its claims are truly novel, and whether Karmaker [the inventor] actually 'possessed' all the technologies claimed." Bessen & Meurer, *supra*, at 202. These questions illustrate a better approach to questioning the validity of this patent. The threshold for patentable subject matter should be low, and should not exclude software, and the other tests for patentability, i.e., novelty under 35 U.S.C. § 102, obviousness under 35 U.S.C. § 103, and the various requirements of 35 U.S.C. § 112, should be applied as more appropriate gate–keepers.

iii. Sperry Corporation's LZW compression patent.

Law.com describes U.S. Patent No. 4,558,302, entitled High Speed Data Compression and Decompression Apparatus and Method, U.S. Patent No. 4,558,302 (issued Dec. 10, 1985) ("'302 Patent"), as "the patent that spurred the growth of the Web from little known medium used by techies for sending files to a worldwide phenomena." Alan Cohen, *The Squishy Patent*, Nat'l L.J., Aug. 8, 2002, *http://www.law.com/jsp/article.jsp?id=1028321281489* (last visited July 9, 2009). "The LZW algorithm provides a fast, elegant way to

compress and decompress data. It is the trick that allows Web users to view photos and animations without waiting hours for them to download. Every time you call up CNN.com, Yahoo or just about any other Web site, you're looking at LZW compression in action." *Id.*

Claim 107 of the '302 Patent is repeated below:

> 107. In a data compression and data decompression method, a compression method for compressing a stream of data character signals into a compressed stream of code signals, said compression method comprising the steps of
>
> storing, in the locations of a memory, strings of data character signals encountered in said stream of data character signals, respectively, said stored strings having code signals associated therewith, respectively, said locations of said memory being accessable by a plurality of address signals, respectively, each said string of data character signals comprising a prefix string of data character signals and an extension character signal, said prefix string corresponding to a string stored in said memory,
>
> searching said stream of data character signals by comparaing said stream to said stored strings to determine the longest match therewith,

> inserting into said memory, for storage therein, an extended string comprising said longest match with said stream of data character signals extended by the next data character signal following said longest match,
>
> assigning a code signal corresponding to said stored extended string, and
>
> providing the code signal associated with said longest match so as to provide said compressed stream of code signals.

If asked to review this claim in light of the Federal Circuit's *Bilski* decision, the BPAI might find that it does not recite patentable subject matter. The various steps set out in the claim all appear to be intended to be performed in software and there is no reference in the claim to a particular machine. Therefore, the BPAI might find that the claim does not satisfy the "machine" prong of the machine–or–transformation test.

Further, the BPAI might today find that the only thing that is transformed in the claim is data, that transforming data is not sufficient to satisfy the "transformation" prong of the machine–or–transformation test, *see Ex Parte Nawathe*, *supra*, at *4 (transforming data is does not satisfy the "transformation" prong of the test), and therefore that claim 107 of the '302 Patent does not claim patentable subject matter.

3. The proper standard that should govern in determining whether a process is patent–eligible subject matter under section 101 is the test for processes stated in *Diehr*

This Amicus believes, for the reasons set out above, that the Federal Circuit erred in adopting the machine–or–transformation test as the sole test for determining whether a process is patent eligible subject matter. The Federal Circuit seemed reluctant to come to that conclusion, apparently driven by its interpretation of this Court's precedent. *See In re Bilski*, 545 F.3d at 956 ("we agree that future developments in technology and the sciences may present difficult challenges to the machine–or–transformation test, just as the widespread use of computers and the advent of the Internet has begun to challenge it in the past decade"). The Federal Circuit appeared to invite this Court to speak to the standard, writing that "we recognize that the Supreme Court may ultimately decide to alter or perhaps even set aside [the machine–or–transformation test] to accommodate emerging technologies." *Id.*

This Court, however, has already given guidance as to the proper standard in *Diamond v. Diehr*. This Amicus urges this Court to reject the machine–or–transformation test and return the "[t]ransformation and reduction of an article 'to a different state or thing'" analysis stated in its precedent. Determining whether a process is patent–eligible subject matter under section 101 should be a two–step process: (a) determine whether the process falls under one of the exclusions from patent coverage (laws of nature, natural phenomena, and abstract ideas), and, if not, (b) apply the general rule

for process claims set out by the Court in *Diehr* : "[t]he process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence," *Id.*, at 184 (quoting *Cochrane*, 94 U.S. at 780, 787–88); and that "'[t]ransformation 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.'" *Diehr*, 450 U.S. at 184 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972)).

To determine if a process falls under the "abstract ideas" exclusion, the test should be whether the claim seeks to pre–empt the use of a fundamental principle as opposed to seeking to foreclose others from using a particular "application" of that fundamental principle, as set out in *Diehr*.

The long period of time and the tremendous technological advances that have occurred since the *Cochrane* opinion issued in 1877 justify updating the portion of the formulation concerning "certain substances" to include intangible articles, such as commodity consumption risk and ownership interests, as in this case, and this Amicus urges this Court to make that clarification.

Further, this case gives this Court an opportunity to sweep away other formalisms that have crept into section 101 law. The Court's existing precedent in this area has proven to be all too easily manipulated into frustrating the intent of Congress that statutory subject matter should "'include anything under the sun that is made by man.'" *Diehr*, 450 U.S. at 182 (discussing the

legislative history of the 1952 Patent Act). Is there any argument that computer software and data are not "made by man"? And yet, the Federal Circuit, and the BPAI observing the Federal Circuit's mandates, has followed this Court's precedent to decide that they are not patentable subject matter. This Amicus urges the Court to indicate that merely because a claim must be implemented in software or that it involves solely the manipulation of data, that claim does not necessarily pre–empt the use of a fundamental principle.

In summary, this Court has rejected the Federal Circuit's attempts to formularize abstract patent law concepts. *See KSR International v. Teleflex, Inc.*, 550 U.S. 398, 415 (2007) (rejecting the Federal Circuit's "rigid approach" to obviousness analysis); *Festo Corp.* 535 at 738 (rejecting the Federal Circuit's rigid approach to prosecution history estoppels); *Warner–Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 39–40 (1997) (refusing to participate in a debate regarding the "particular linguistic framework" used to analyze the doctrine of equivalents). The Court should do the same in this case and reject the machine–or–transformation test as the sole test for determining whether process claims recite patentable subject matter.

B. The Federal Circuit's Adoption of the "Machine–or–Transformation" Formula as the "Only Applicable Test" to Determine Patent Eligibility for a Process Contradicts the Clear Congressional Intent that Patents Protect "method[s] of doing or conducting business.

This Amicus urges this Court to reject the machine–or–transformation test for patent claims to methods of doing or conducting business for the reasons described above. Such claims should be considered patentable subject matter if they satisfy the *Diehr* test described above.

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