

No. 10-1150

IN THE
Supreme Court of the United States

MAYO COLLABORATIVE SERVICES
(D/B/A MAYO MEDICAL LABORATORIES),
AND MAYO CLINIC ROCHESTER,
Petitioners,

v.

PROMETHEUS LABORATORIES, INC.,
Respondent.

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

**BRIEF OF SAP AMERICA, INC.
AS *AMICUS CURIAE*
IN SUPPORT OF AFFIRMING
THE FEDERAL CIRCUIT'S OPINION**

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TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES.....	iii
STATEMENT OF INTEREST	1
SUMMARY OF ARGUMENT.....	2
ARGUMENT.....	3
I. WHEN CONSIDERING THE PATENT ELIGIBILITY OF MEDICAL DIAG- NOSTIC PROCESSES, THIS COURT SHOULD TAKE CARE NOT TO DISRUPT PATENTING OF SOFT- WARE AND OTHER COMPUTER TECHNOLOGIES.....	3
A. While the present case does not involve software, any interpretation of section 101 should avoid disrupt- ing innovation in cutting edge technologies, including software.....	3
B. Section 101 is purposefully broad to encourage innovation in cutting edge technologies, including software and other computer technologies.	5
II. THE FEDERAL CIRCUIT HAS THE TOOLS NEEDED TO EVALUATE PATENT ELIGIBILITY, AND THIS COURT SHOULD RESIST INVITA- TIONS TO FURTHER RESTRICT SECTION 101	6
A. Section 101 is broad, with only three limited exceptions.....	6

TABLE OF CONTENTS—Continued

	Page
B. The Federal Circuit has the tools necessary to find the appropriate boundaries for patent eligible subject matter.	7
C. This Court should decline Petitioners’ invitation to introduce a “mental steps” test for patent-eligibility.	11
CONCLUSION	13

TABLE OF AUTHORITIES

FEDERAL CASES	Page
<i>Bilski v. Kappos</i> , 130 S. Ct. 3218 (2010)	<i>passim</i>
<i>Classen Immunotherapies, Inc. v. Biogen IDEC</i> , Nos. 2006-1634, 2006-1649, 2011 WL 3835409 (Fed. Cir. Aug. 31, 2011)	10, 11
<i>Diamond v. Chakrabarty</i> , 447 U.S. 303 (1980)	5, 12
<i>Diamond v. Diehr</i> , 450 U.S. 175 (1981)	<i>passim</i>
<i>Gottschalk v. Benson</i> , 409 U.S. 63 (1972)	5, 6, 8, 9
<i>In re Alappat</i> , 33 F.3d 1526 (Fed. Cir. 1994) (en banc)	6, 10
<i>In re Bergy</i> , 596 F.2d 952 (C.C.P.A. 1979).....	12
<i>J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc.</i> , 534 U.S. 124 (2001)	5
<i>Parker v. Flook</i> , 437 U.S. 584 (1978)	8, 9
<i>Prometheus Labs. v. Mayo Collaborative Servs.</i> , 628 F.3d 1347 (Fed. Cir. 2010).....	7
<i>Research Corp. Techs. v. Microsoft Corp.</i> , 627 F.3d 859 (Fed. Cir. 2010).....	8, 9
<i>Ultramercial, LLC v. Hulu, LLC</i> , 657 F.3d 1323 (Fed. Cir. 2011).....	6, 9, 10

TABLE OF AUTHORITIES—Continued

FEDERAL STATUTES	Page
35 U.S.C. § 100(b) (2006)	6
35 U.S.C. § 101 (2006).....	<i>passim</i>
35 U.S.C. § 102.....	12
 OTHER AUTHORITIES	
Annual Report on Gross Domestic Product by Industry, U.S. Department of Com- merce Bureau of Economic Analysis (Apr. 26, 2011), http://www.bea.gov/iTable/index_ industry.cfm	3-4
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STATEMENT OF INTEREST ¹

Amicus SAP America, Inc. is a leading technology company focused on developing innovative software

¹ Pursuant to Supreme Court Rule 37.6, counsel for amici represent that no counsel for a party authored this brief in whole or in part and that none of the parties or their counsel, nor any other person or entity other than amici or its counsel, made a monetary contribution intended to fund the preparation or submission of this brief. Pursuant to Rule 37.3(a), counsel for amici represent that all parties have consented to the filing of this brief as reflected on the docket for Case No. 10-1150.

and computer-based business solutions. The Amicus conducts significant research and development and invests heavily in commercializing innovative technologies.

SUMMARY OF ARGUMENT

The software and computer industries are a vital part of today's Information Age economy and these industries depend on patent protection for growth and innovation. A decision regarding the scope of 35 U.S.C. § 101 as applied to medical diagnostic processes could have far-reaching effects in all technology areas, including software and other computer-related technologies. Amicus SAP America, Inc. respectfully cautions this Court not to disrupt patenting of software and computer technologies in the instant case. Instead, this Court should reiterate that the scope of section 101 is purposefully broad and that this threshold test for patent eligibility must remain flexible to accommodate unforeseen inventions in all technology areas.

Today's decision should encourage the lower courts and United States Patent and Trademark Office to continue to follow the broad statutory framework and existing precedent to ferret out claims to abstract ideas, laws of nature, and physical phenomena, and discourage the exclusion of claims to useful applications of those well-settled exceptions. Petitioner's invitation to introduce a "mental steps" test that would contradict precedent and result in uncertainty for computer-related inventions should also be declined.

ARGUMENT**I. WHEN CONSIDERING THE PATENT ELIGIBILITY OF MEDICAL DIAGNOSTIC PROCESSES, THIS COURT SHOULD TAKE CARE NOT TO DISRUPT PATENTING OF SOFTWARE AND OTHER COMPUTER TECHNOLOGIES**

Petitioners Mayo Collaborative Services and Mayo Clinic Rochester (“Mayo”) argue against the patent eligibility of claims related to medical diagnostic methods. Amicus SAP America, Inc. (“SAP”) respectfully notes that any opinion regarding the scope of 35 U.S.C. § 101 could also impact the software and computer industries that rely on process claims to protect their innovations. A flexible analysis is necessary under section 101 to avoid excluding “emerging technologies” such as software from patent eligibility. *See Bilski v. Kappos*, 130 S. Ct. 3218, 3227 (2010) (“In the course of applying the machine-or-transformation test to emerging technologies, courts may pose questions of such intricacy and refinement that they risk obscuring the larger object of securing patents for valuable inventions . . .”).

A. While the present case does not involve software, any interpretation of section 101 should avoid disrupting innovation in cutting edge technologies, including software.

Software is vital to the “Information Age” economy. In 2010, the value added to the gross domestic product (“GDP”) by “Information-communications-technology-producing industries” was \$684.1 billion, or 4.7% of the total GDP. Annual Report on Gross

Domestic Product by Industry, U.S. Department of Commerce Bureau of Economic Analysis (Apr. 26, 2011).² From 2006-2010, the U.S. Patent and Trademark Office issued 10,400 patents in class 707, which is only one of the ten classes for patents related to data processing. See *Patenting in Technology Classes, Breakout By Organization*, U.S.P.T.O.³ The list of notable companies that obtained these patents, including IBM, Microsoft, and SAP, is testament to the fact that software innovators continue to seek patent protection to further their business development efforts. *Id.*

From 2005-2010, SAP AG alone obtained 1,477 software-related patents. *Id.* (follow “ALL CLASSES” hyperlink). In that time, SAP increased its spending on research and development by nearly 30%. SAP AG, 2010 ANNUAL REPORT 87 (2011).⁴ SAP recognizes the importance of continued innovation and the value of patents to strengthen its market position and contribute to its position as an industry leader. *Id.* at 94. Reliable patent protection is vital to the continued growth of the software industry, so this Court should take care not to allow this case to become a vehicle to restrict software patenting.

² http://www.bea.gov/iTable/index_industry.cfm (follow “Begin using the data” hyperlink; select “GDP-by-industry accounts”; click “Next Step”; select “Value Added by Industry”) (“Information-communications-technology-producing industries” includes “computer and electronic products; publishing industries (includes software); information and data processing services; and computer systems design and related services.”) (last visited Nov. 3, 2011).

³ <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/tecasg/classes.htm> (last visited Nov. 2, 2011).

⁴ available at http://www.sap.com/corporateen/investors/reports/annualreport/2010/pdf/SAP_2010_Annual_Report.pdf.

B. Section 101 is purposefully broad to encourage innovation in cutting edge technologies, including software and other computer technologies.

“Section 101 is a ‘dynamic provision designed to encompass new and unforeseen inventions.’” *Bilski*, 130 S. Ct. at 2337 (quoting *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int’l, Inc.*, 534 U.S. 124, 135 (2001)). Categorical rules should not be espoused that would contrast with Congress’s intent to accommodate the ever-changing world of technology. *See id.* (“A categorical rule denying patent protection for ‘inventions in areas not contemplated by Congress . . . would frustrate the purposes of the patent law.’” (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 315 (1980))).

Software is among the technologies eligible for patenting. In *Diamond v. Diehr*, this Court noted the Patent Office’s mistaken belief that “claims that are carried out by a computer under control of a stored program constituted nonstatutory subject matter under this Court’s decision in *Gottschalk v. Benson*, [409 U.S. 63 (1972)].” 450 U.S. 175, 180 (1981). Instead, “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula, computer program, or digital computer.” *Id.* at 187. More recently, members of this Court cited computer programs as an example of patentable inventions that were once thought, wrongly, to be excluded from patenting. *Bilski*, 130 S. Ct. at 3227.

Noting that “[t]he digital computer may be considered by some the greatest invention of the twentieth century,” the Federal Circuit recently wrote that “both this court and the Patent Office have long acknowledged that ‘improvements thereof’ through

interchangeable software or hardware enhancements deserve patent protection.” *Ultramercial, LLC v. Hulu, LLC*, 657 F.3d 1323, 1329 (Fed. Cir. 2011). This view is consistent with the plain language of the Patent Act, which provides that patentable processes include “a new use of a known process, machine, manufacture, composition of matter, or material.” 35 U.S.C. § 100(b) (2006). Because software installed on a general purpose computer puts the computer to new use, it falls squarely within the scope of subject matter eligible for patenting. *See, e.g., In re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994) (en banc).

II. THE FEDERAL CIRCUIT HAS THE TOOLS NEEDED TO EVALUATE PATENT ELIGIBILITY, AND THIS COURT SHOULD RESIST INVITATIONS TO FURTHER RESTRICT SECTION 101

A. Section 101 is broad, with only three limited exceptions.

Rigid tests for patent eligibility are unnecessary and do not serve the Patent Act’s purpose. For example, several members of this Court have questioned the value of the machine-or-transformation test for inventions in the Information Age, including medical diagnostic methods and software. *Bilski*, 130 S. Ct. at 3227-28. Indeed, “new technologies may call for new inquiries” to avoid “freez[ing] process patents to old technologies, leaving no room for the revelations of the new, onrushing technology” *Id.* at 3228 (quoting *Benson*, 409 U.S. at 71).

Rather than adopting a rigid test, *Bilski* reiterated that section 101 has only three limited exceptions, *i.e.*, laws of nature, physical phenomena, and abstract ideas. *Id.* at 3225. These exceptions “have defined

the reach of the statute as a matter of statutory *stare decisis* going back 150 years.” *Id.* While encouraging the Federal Circuit to continue its efforts to devise ways to prevent patenting of these fundamental principles, this Court emphasized that the existence of three exceptions does not “give[] the Judiciary *carte blanche* to impose other limitations that are inconsistent with the text and the statute’s purpose and design.” *Id.* at 3226.

B. The Federal Circuit has the tools necessary to find the appropriate boundaries for patent eligible subject matter.

Courts face a difficult task when evaluating patent eligibility of innovations in the Information Age. “In searching for a limiting principle, this Court’s precedents on the unpatentability of abstract ideas provide useful tools.” *Id.* at 3229. The Federal Circuit is the appropriate venue to determine the contours of unpatentable abstract ideas, and it has risen to that challenge in several recent decisions. In the instant case, the Federal Circuit recognized that this Court “declined to adopt any categorical rules outside the well-established exceptions for laws of nature, physical phenomena, and abstract ideas” *Prometheus Labs. v. Mayo Collaborative Servs.*, 628 F.3d 1347, 1352 (Fed. Cir. 2010). In other recent decisions, the Federal Circuit has carefully followed this Court’s guidance in evaluating patent eligibility of Information Age inventions, so this Court should allow the Federal Circuit to continue its work and refrain from imposing further restrictions.

In its first post-*Bilski* consideration of section 101 and computer technologies, the Federal Circuit noted,

“the Supreme Court in *Bilski* refocused this court’s inquiry into processes on the question of whether the subject matter of the invention is abstract.” *Research Corp. Techs. v. Microsoft Corp.*, 627 F.3d 859, 868 (Fed. Cir. 2010). The Federal Circuit noted this Court’s forbearance from establishing “a rigid formula or definition for abstractness.” *Id.* Following this Court’s lead, the Federal Circuit also did “not presume to define ‘abstract’ beyond the recognition that this disqualifying characteristic should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that directs primary attention on the patentability criteria of the rest of the Patent Act.” *Id.*

Lower courts are instructed to look to the “guideposts” of *Diehr*, *Benson*, and *Parker v. Flook*, 437 U.S. 584 (1978) to identify patent-eligible processes that are not abstract ideas or natural phenomena. *Bilski*, 130 S. Ct at 3231. To analyze patentability of a process that included algorithms for halftoning digital images, the Federal Circuit applied this Court’s reasoning from *Diehr*, observing that the patentees “do not seek to patent a mathematical formula” but recognized that “[i]nstead, they seek patent protection for a process of halftoning in computer applications.” *Research Corp.*, 627 F.3d at 869 (citing *Diehr*, 450 U.S. at 187). Because “[t]he invention presents functional and palpable applications in the field of computer technology,” the Federal Circuit concluded that the claims at issue were patent eligible. *Id.* at 868-69. The Federal Circuit reasoned that “inventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act.” *Id.* at 869. Such

reasoning demonstrates appropriate analysis for Information Age technologies, and any ruling on Respondent's claims should not disrupt this analysis for computer-related inventions.

In *Ultramercial, LLC v. Hulu, LLC*, the Federal Circuit noted that “members of the Supreme Court and this court have recognized the difficulty of providing a precise formula or definition for the judge-made ineligible category of abstractness.” 657 F.3d at 1327. The Federal Circuit again declined to craft a precise definition of abstractness, instead applying the “guidepost” cases which recognized that “[a]lthough abstract principles are not eligible for patent protection, an application of an abstract idea may well be deserving of patent protection.” *Id.* (discussing *Benson*, *Flook*, and *Diehr*). Applying these cases to evaluate the claimed method for monetizing and distributing copyrighted products over the Internet, the Federal Circuit concluded that the patent “does not simply claim the age-old idea that advertising can serve as currency,” but “[i]nstead the . . . patent discloses a practical application of this idea.” *Id.* at 1328. The Federal Circuit also confirmed that claim breadth or a lack of specificity in a process claim is not the focus of § 101, but rather “written description and enablement are conditions for patentability that title 35 sets ‘wholly apart from whether the invention falls into a category of statutory subject matter.’” *Id.* at 1329 (quoting *Diehr*, 450 U.S. at 190).

In *Ultramercial*, the Federal Circuit also dispelled the notion that computer software programming deserves no patent protection or “in the confusing terminology of machines and physical transformations, fails to satisfy the ‘particular machine’ requirement.” *Id.* at 1328. The Federal Circuit noted its own long-

standing en banc precedent that “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.” *Id.* at 1329 (quoting *Alappat*, 33 F.3d at 1545). “Far from abstract, advances in computer technology—both hardware and software—drive innovation in every area of scientific and technical endeavor.” *Id.*

In *Classen Immunotherapies, Inc. v. Biogen IDEC*, Nos. 2006-1634, 2006-1649, 2011 WL 3835409, at *1 (Fed. Cir. Aug. 31, 2011), the Federal Circuit noted:

The § 101 patent-eligibility inquiry is only a threshold test. Even if an invention qualifies as a process, machine, manufacture, or composition of matter, in order to receive the Patent Act’s protection the claimed invention must also satisfy “the conditions and requirements of this title.” § 101. Those requirements include that the invention be novel, see § 102, nonobvious, see § 103, and fully and particularly described, see § 112.

Id. at *6 (quoting *Bilski*, 130 S. Ct. at 3225). Following this Court’s caution that “[t]he question therefore of whether a particular invention is novel is ‘wholly apart from whether the invention falls into a category of statutory subject matter,’” the Federal Circuit found some of Classen’s claims passed the threshold of § 101 despite concerns about their ultimate validity. *Id.* (quoting *Diehr*, 450 U.S. at 189-190).

Regarding patent-eligibility of a process involving a law of nature or abstract idea, the Federal Circuit noted that “[i]t is now commonplace that an applica-

tion of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection” *Id.* (quoting *Diehr*, 450 U.S. at 187) (emphasis in original). Because only “manifestly” abstract inventions fail to pass the “coarse eligibility filter” of section 101, the Federal Circuit ruled that some of the claims that included the physical step of immunization on a determined schedule satisfied section 101. *Id.* at *8. In doing so, the Federal Circuit demonstrated its understanding of this Court’s guidance that “[r]ather than adopting categorical rules that might have wide-ranging and unforeseen impacts,’ exclusions from patent-eligibility should be applied ‘narrowly.’” *Id.* (quoting *Bilski*, 130 S. Ct. at 3229).

As exemplified by its recent decisions, the Federal Circuit understands this Court’s guidance regarding the scope of patent eligible subject matter, and any decision in the instant case should maintain an emphasis on a broad and flexible framework for analyzing today’s cutting-edge inventions under section 101, leaving the Federal Circuit to continue its work without further restriction.

C. This Court should decline Petitioners’ invitation to introduce a “mental steps” test for patent-eligibility.

Petitioners suggest that the Prometheus claims contain “mental steps” and should therefore not be patent eligible. *See, e.g.*, Pet. Br. at 6 (stating that Prometheus’s patent claims “broadly encompass the mental recognition of the correlations”); *id.* at 19, 33 (arguing that “Prometheus’s claims culminate with [an] “open-ended ‘mental step’”); Pet. for Cert. at 26 (stating that the Federal Circuit “cobble[d]

together two well-known preliminary steps . . . and attach[ed] them to an admittedly insufficient mental step, to create a sprawling monopoly for Prometheus.”). A new test excluding claim elements that encompass “mental steps” from patent eligibility is inconsistent with the plain language of the statute and this Court’s precedent. *Bilski*, 130 S. Ct. at 3227 (rejecting a “categorical rule denying patent protection for ‘inventions in areas not contemplated by Congress’” (quoting *Chakrabarty*, 447 U.S. at 315)).

Furthermore, Prometheus’s claims are not purely mental steps. All of the claim steps are critical to the analysis of the claim as a whole under § 101, and dissecting the claims into well-known and “new” elements impermissibly entangles the threshold § 101 analysis with a § 102 novelty analysis. *Diehr*, 450 U.S. at 188 (“It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis.”); *id.* at 190 (“The question therefore of whether a particular invention is novel is ‘wholly apart from whether the invention falls into a category of statutory subject matter.’” (quoting *In re Bergy*, 596 F.2d 952, 961 (C.C.P.A. 1979))). To the extent that Mayo encourages the application of a “mental steps” test, this Court should reaffirm that practical applications of abstract ideas are patent eligible.

As Respondent Prometheus points out, Mayo’s proposed mental steps test is ill-suited for “today’s information age” and would introduce uncertainty across technologies. Resp. Br. at 34-36. Applying a mental steps test to determine whether and when software is sufficiently physical would put software claims on uncertain grounds, and is contrary to the principle that patent law should afford certainty to

patentees. *Bilski*, 130 S. Ct. at 3231 (Stevens, J., concurring) (“In the area of patents, it is especially important that the law remain stable and clear.”).

CONCLUSION

For the foregoing reasons, SAP urges this Court to affirm the Federal Circuit’s opinion, allowing 35 U.S.C. § 101 to remain broad to accommodate unforeseen inventions in all technology areas, to avoid disruption of software patents, and to reject any invitation to introduce a “mental steps” test for patent eligibility.

Respectfully submitted,

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