No. 13-298

IN THE

Supreme Court of the United States

ALICE CORP. PTY. LTD,
Petitioner,

v.

CLS INTERNATIONAL AND CLS SERVICES LTD.,
Respondent.

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

BRIEF OF *AMICUS CURIAE* IEEE-USA IN SUPPORT OF GRANT OF *CERTIORARI*

CHRIS J. KATOPIS
Counsel of Record
1308 Clifton Street, N.W.
Washington, D.C. 20009
Tel. (202) 200-9490
chriskatopis@gmail.com

7 October 2013

TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES

STATUTES

OTHER AUTHORITIES

STATEMENT OF INTEREST OF *AMICUS CURIAE* [1]

IEEE-USA is an organizational unit of The Institute of Electrical and Electronics Engineers, Inc. (IEEE), the world's largest organization for technical professionals, and a leading educational and scientific association for the advancement of technology. IEEE-USA supports the nation's prosperity and competiveness by fostering technological innovation for the benefit of all, including more than 200,000 U.S. engineers, scientists, and allied professionals who are members of the IEEE.

As part of its mission, IEEE-USA seeks to ensure that U.S. intellectual property law serves to promote the progress of science and the useful arts consistent with the principles set forth by our Nation's Founders. IEEE-USA's members serve on the "front line" of the United States patent system. Our membership includes inventors who create and

---

[1] Pursuant to Supreme Court Rule 37.6, counsel listed on the cover states that this brief was authored by *amicus curiae* and reviewed by counsel, and that counsel for a party did not author this brief in whole or in part. Nor did counsel for a party make a monetary contribution intended to fund the preparation or submission of the brief. In addition, all parties have consented to the filing of this *amicus* brief, and their consent letters are on file with the Clerk's office.

use cutting-edge technology, who research and publish professional articles and journals, and who develop published standards that form the bases of widely adopted and critical technologies. IEEE-USA members are more than merely scientists and research engineers; they are also entrepreneurs and employees of firms that acquire, license, and market patented technology.

IEEE-USA recognizes that the promotion of scientific and technological progress requires a delicate balance of the interests of producers and users of intellectual property, and IEEE-USA consistently speaks for that balance. IEEE-USA has the broad experience and balanced perspective to aid the Court as it interprets the law to achieve the constitutional directive of promoting progress in science and the useful arts. IEEE-USA has offered its experience at the intersection of technology and law as *amicus* in a number of cases, and this Court adopted the rule of decision offered by IEEE-USA in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.,* 535 U.S. 722 (2002).

This case presents an extraordinarily important question regarding inventors' rights and patent law, an area of law important to IEEE's U.S. members and the innovation ecosystem for scientists, engineers, and entrepreneurs. IEEE-USA recognizes the important role of § 101 in protecting the public interest and right to innovate. However, IEEE-USA also recognizes the crucial role patents play in encouraging innovation, in giving startup companies (and new business lines within existing companies) the breathing room and protection

needed to compete in market niches dominated by market incumbents, and in attracting investment capital to risky technological ventures.

SUMMARY OF ARGUMENT

This Court's precedent for the application of 35 U.S.C. § 101, defining the *kind* of inventions that can be patented, diverges along two irreconcilable lines.

This Court's decision in *Diamond v. Diehr*, 450 U.S. 175 (1981) taught that in a § 101 inquiry, each element of an invention is measured against a § 101 standard, that is, whether there is at least one element that is neither *"abstract"* (purely in the human mind) nor *"natural"* (as opposed to manmade). *Diehr* explained that the analysis for the *kind* of invention eligible under § 101 is "wholly apart" from the analysis for whether the invention or any element is *new* and differentiated from the prior art.

In contrast, the approach of *Mayo Collaborative Svcs. v. Prometheus Laboratories, Inc.*, 566 U.S. ___, 132 S.Ct. 1289 (2012) evaluates an invention for an "inventive concept" using the analysis and language traditionally reserved for "*novelty*" and "*obviousness*"—that is, the components of the invention are weighed against the standards of § 102 and § 103, without considering whether the components are laws of nature, abstract, or otherwise relevant to traditional concerns arising under § 101.

The two approaches are irreconcilably in conflict with each other. When applied to fact patterns, the two approaches reach opposite results.

This Court's reasoning in *Mayo* is inconsistent with this Court's reasoning in *Diehr*. The irreconcilable conflict between the *Mayo* and *Diehr* approaches has created confusion in the lower courts. This Court should grant *certiorari* to determine which approach should control in determining patent-eligible subject matter.

ARGUMENT

I. This Court's § 101 Precedent Diverges on Two Irreconcilable Lines—the Court Should Grant *Certiorari* to Determine Which Approach Should Control in Determining Patent-Eligible Subject Matter.

The statute at issue is 35 U.S.C. § 101, defining the *kind* of inventions that can be patented:

> **35 USC § 101 Inventions patentable**
>
> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

§ 101 distinguishes patentable inventions (generally in technology and the "useful arts") from unpatentable subject matter such as the fine arts, abstract principles that are not applied to any practical use, and the like.

A. The Two Incompatible Approaches: *Diehr* and *Mayo*

This Court's decision in *Diehr* taught that in a § 101 inquiry, each element of a patent claim is measured against a § 101 standard, that is, whether

there is at least one claim element that is *not "abstract"* (purely in the human mind), or *not "natural"* (as opposed to manmade). *Diehr*, 450 U.S. at 185. *Diehr* explained that the requirements and analysis for the *kind* of invention eligible under § 101 is "wholly apart" from the requirements and analysis for whether the invention or any element is *new* and differentiated from the prior art. *Diehr*, 450 U.S. at 190. *Diehr* notes that whether the invention or any element is differentiated from the prior art is only relevant under § 102 and § 103.

The second approach, which is inconsistent with *Diehr*, is exemplified by *Mayo*. Under the *Mayo* approach, a § 101 analysis begins by looking for a "law of nature." If a single "law of nature" exists, then the remaining claim elements are reviewed for whether they involve an "inventive concept" as opposed to "well-understood, routine, conventional activity previously engaged in by researchers in the field" (*Mayo*, 132 S.Ct. at 1294)—that is, the claim components are weighed against the standards of § 102 and § 103.

To be sure, neither *Mayo* itself nor the Federal Circuit's plurality opinion expressly relies on § 102 or § 103; both declare that the "inventive concept" analysis under § 101 "does *not* involve the familiar issues of novelty and obviousness that routinely arise under §§ 102 and 103." *CLS Bank Intern. v. Alice Corp. Pty. Ltd.* 717 F.3d 1269, 1282 (Lourie, J., concurring, emphasis added). Yet, the analysis used in *Mayo* and by the panel majority is precisely that commonly used to analyze obviousness under § 103, relying on established § 103 terminology, evidence,

and analytical techniques. IEEE-USA is unaware of any authority other than § 103 for determining an "inventive concept;" and this Court has often observed in all other contexts that "there is no legally recognizable … 'essential' element, 'gist' or 'heart' of the invention," *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 345 (1961). By the same token, strikingly absent from *Mayo* is any weight given to the "manmade" or nonabstract nature of elements, the factors that are relevant under the *Diehr* § 101 approach. Since the only established body of law relying on concerns anything like those invoked in *Mayo* and the Federal Circuit's plurality opinion are § 102 and § 103, this brief refers to it as such.

In *Diehr*, the invention centered on the Arrhenius equation, a relationship between temperature and chemical reaction rate that had been known for eighty years. Use of the equation in computer control of rubber molding was known for at least five years. The *Diehr* court measured the remaining claim language—particularly the phrase "opening the press"—against the "abstract" and "law of nature" yardstick of § 101, rather than weighing it in the balance of § 102 and § 103. *Diehr*, 450 U.S. at 187. The *Diehr* Court concluded that "opening the press," though old and routine, is not *abstract*. *See id.* at 188-89. Rather, "opening the press" is language that *applies* a law of nature or abstract idea to a practical, man-made process. *Id.* at 187. That non-abstract application was the relevant fact in determining patent eligibility. *Id*. at 187-89.

The *Diehr* Court gave a simple explanation, 450 U.S. at 188-189 (emphasis added, citations, quotations, and footnotes omitted) for application of its approach for using a § 101 yardstick instead of a § 102/§ 103 balance when evaluating subject matter eligibility:

> In determining the eligibility of respondents' claimed process for patent protection under § 101, their claims must be considered as a whole. 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. This is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made. …
>
> It has been urged that novelty is an appropriate consideration under § 101. Presumably, this argument results from the language in § 101 referring to any "new and useful" process, machine, etc. Section 101, however, is a general statement of the type of subject matter that is eligible for patent protection "subject to the conditions and requirements of this title." Specific conditions for patentability follow and § 102 covers in detail the conditions relating to novelty. 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."

The *Diehr* Court further warned of the consequences of applying novelty and nonobviousness concepts in the context of § 101 (*Diehr*, 450 U.S. at 189 n. 12):

> It is argued that the procedure of dissecting a claim into old and new elements is mandated by our decision in *Flook* … petitioner premises his argument that if everything other than the algorithm is determined to be old in the art, then the claim cannot recite statutory subject matter. … To accept the analysis proffered by the petitioner would, if carried to its extreme, make all inventions unpatentable because all inventions can be reduced to underlying principles of nature which, once known, make their implementation obvious. …

In contrast, *Mayo* uses exactly the "dissect and discount the conventional" approach that is disapproved in *Diehr*. The *Mayo* approach determines whether an invention is the *kind* of invention eligible under § 101 by weighing claim limitations for novelty (under § 102) and non-obviousness (under § 103). The *Mayo* Court dissected the patent claim into constituent parts, and then proceeded to discount each part sequentially from consideration by using the language of novelty and nonobviousness (*Mayo*, 132 S.Ct. at 1297-98):

- "pre-existing"
- used "long before"
- "well known in the art"

- "well-understood, routine, conventional activity previously engaged in"
- "conventional or obvious"

Mayo attempts to reconcile itself with *Diehr* by noting a silence in *Diehr* (*Mayo*, 132 S.Ct. at 1298-99):

> The [*Diehr*] Court pointed out that the basic mathematical equation, like a law of nature, was not patentable. But it found the overall process patent eligible because of the way the additional steps of the process integrated the [Arrhenius] equation into the process as a whole. Those steps included "installing rubber in a press, closing the mold, constantly determining the temperature of the mold, 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." [*Diehr*, 450 U.S. at 187.] It nowhere suggested that all these steps, or at least the combination of those steps, were in context obvious, already in use, or purely conventional.

But *Diehr* is *not* silent on this issue. *Diehr* expressly stated that the facts relied on in *Mayo are not to be considered* (*Diehr*, 450 U.S. at 188-189):

> The "novelty" of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101

> categories of possibly patentable subject matter.

This Court's reasoning in *Mayo* is inconsistent with the Court's reasoning in *Diehr*. *Diehr* keeps the statutory sections separate. *Mayo* mixes them together. The analysis in *Mayo*—picking the claim apart, and weighing whether each component of the claimed invention was either known or would have been part of the ordinary course of the art, without measuring it against the § 101 abstractness—is perfectly at home as an obviousness inquiry under § 103, but that is not the § 101 yardstick taught in *Diehr*.

The split among the judges of the Federal Circuit in this case tracks the split among this Court's precedent. In this case at the Federal Circuit, the original panel majority, and the *en banc* dissents of judges Newman, Linn, and Moore, followed the *Diehr* approach, with the dissent of Chief Judge Rader trying to find a middle ground. The *en banc* plurality opinion of Judge Lourie followed the *Mayo* approach.

The facts of *Diehr* and *Mayo* can be used to illustrate prime examples of how the two approaches are incompatible, and reach opposite results.

B. The *Mayo* Approach Applied to the *Diehr* Facts Leads to the Opposite Outcome

When Diehr filed his original patent application in 1973, the prior art knew the following steps in molding rubber articles:[2]

- inputting into a computer various numerical properties of the rubber batch and the mold,
- computing a cure time for the molding process using the Arrhenius equation,
- heating the mold press for the calculated time, and
- opening the press at the end of the computed cure time.

The Arrhenius equation is a law of nature, known for eighty years before Diehr's invention, and used in computer control of rubber molding for at least five years before. *See* U.S. Pat. No. 3,649,729. The sole difference between the prior art and Diehr's method was an algorithm (*Diehr*, 450 U.S. at 179):

- continuously, at frequent intervals, measuring the temperature of the curing rubber, and *recomputing* the total cure time.

---

[2] *See*, *e.g.*, Method of curing a rubber or plastic tire, U.S. Pat. No. 3,649,729 (filed 1967), which was made of record during examination of Diehr's patent.

This illustrates the direct conflict between the *Mayo* approach and the *Diehr* approach. A "mathematical algorithm" standing alone is an "abstract idea." *Parker v. Flook*, 437 U.S. 584, 594 (1978). Under the *Mayo* approach, if the only new element of a claimed process is a mathematical algorithm or formula, that process is unpatentable. *Flook*, 437 U.S. at 594. But an algorithm, and repetition of routine measurement and mathematical calculation, is the only difference between Diehr's invention and the prior art.

Had this Court used the *Mayo* analysis on the *Diehr* facts, the Court would have dissected Diehr's claim into its constituent parts, would have noted that repeated temperature measurement and time calculation was an abstract "mathematical algorithm," and that repeatedly executing a set of computer instructions for carrying out a task that used to be performed once was well known to those in the art. A *Mayo* analysis would have finished off by discounting each remaining step as old, well-known, directed to persons in the relevant art, or the like.

Instead, the *Diehr* Court noted that Diehr's claim—*as a whole*—applied well-known scientific and abstract algorithm concepts—to *a new context*, an improved and practical process for curing rubber. *Diehr*, 450 U.S. at 184. In essence, any single limitation that could not be performed in the human mind or by nature unaided by human intervention—*e.g.*, measuring a temperature of a physical process, or opening an industrial mold press—converted Diehr's recognition of applicability of an "abstract"

principle such as an algorithm into a patentable application of that principle. The *Diehr* Court expressly held that the old-or-new status of individual components of Diehr's invention was *irrelevant* to a § 101 analysis. *Id.* at 193 n. 15. However, because Diehr's claim recited language that could not be performed by nature unaided, and could not be performed in the "abstract" by the human mind, the claim *as a whole* satisfied § 101. *Diehr*, 450 U.S. at 191.

C. The *Diehr* Approach Applied to the *Mayo* Facts Leads to the Opposite Outcome

Conversely, as the Government's brief[3] in *Mayo* explained, the *Diehr* approach to the *Mayo* facts leads to the conclusion that the *Mayo* claim was directed to eligible subject matter, contrary to this Court's holding. In *Mayo*, the patent was directed to optimizing dosing of a synthetic chemotherapy drug for a particular patient. The inventor realized that a metabolite of the drug produced by the body served as a good marker for whether the dose was too high, too low, or just right. The claim at issue in *Mayo*, in paraphrase, recited:

---

[3] *Mayo v. Prometheus*, Brief for the United States as Amicus Curiae Supporting Neither Party, 2011 WL 4040414 (Sep. 9, 2011).

- administering a non-naturally-occurring chemotherapy drug that metabolizes into 6-thioguanine,
- measuring the blood level of 6-thioguanine, and
- based on the blood levels of 6-thioguanine, deciding whether to increase or decrease the amount of drug to be administered in the future.

Under the *Diehr* approach, the claim in *Mayo* would be *taken as a whole*, without "dissect[ing] the claims into old and new elements and then . . . ignor[ing] the presence of the old elements in the analysis." *Diehr*, 450 U.S. at 188. Rather, under the *Diehr* approach, claim elements are reviewed for their § 101 properties—whether they are purely natural, or purely mental and "abstract." In *Mayo*, the human body's processing of the drug into 6-thioguanine is a purely natural phenomenon, analogous to computation of the Arrhenius equation in *Diehr*. Two claim recitations of *Mayo* are neither natural nor abstract (the two issues relevant under § 101), and are therefore analogous to "opening the press" of *Diehr*:

- "administering a drug providing 6–thioguanine"—a drug that is manmade, that *never* existed in nature, and
- "determining the level of 6–thioguanine" in the patient—blood levels have to be measured using man-made apparatus, and cannot be done either by nature or the human mind without manmade technology.

Each of these would be independently sufficient under *Diehr* to remove the *Mayo* invention from the realm of "law of nature" and "abstract idea." That either is "conventional" or "well known" is *irrelevant* under § 101. Under the *Diehr* approach, the *Mayo* invention is more than a raw "law of nature" or an abstract principle, and is thus the *kind* of invention that is eligible under § 101.[4] (IEEE-USA agrees with the Government's brief in *Mayo*, that the analytical steps relied on by the *Mayo* Court are appropriate under § 103—they are highly relevant, just not *under § 101* when using the *Diehr* approach.)

D. Other Examples Show that *Mayo* and *Diehr* Are Irreconcilably in Conflict

For another example, consider the "low tire pressure" indicator in most modern cars. The only difference between a car with a low tire pressure indicator and a car with antilock brakes is "mathematical" software. The sensors used in detecting low tire pressure were conventional and preexisting, because they are the sensors used in automotive antilock brake systems. However, a

---

[4] As the Government's brief in *Mayo* noted, the claims are likely invalid under [§ 102 and § 103]," using *the very same facts that the Court relied on under § 101*, although "the claims describe patent-*eligible* subject matter" (2011 WL at *9, emphasis in original). The overall patentability of a claimed invention, including, subject matter eligibility, novelty, and non-obviousness would have all been conducted, just in a different order, with facts slotted into different pigeonholes.

clever engineer noted that a tire with low pressure rotates at a different rate than tires with normal pressure. Therefore, the same data from the same automotive antilock brake system's sensors could be used to detect when one wheel is turning slightly faster than the other three. By simply using software to mathematically compute and compare four wheel rotation rates (and turning on an indicator light on the dashboard when the rates differed by a specified amount), the engineer came forth with a new invention. The invention of low tire pressure sensing may or may not be obvious, but certainly no one would contest that it is in *kind* patent-eligible subject matter.

Under the *Diehr* approach, "low tire pressure" indicators in modern cars would indeed be found to constitute in *kind* patent-eligible subject matter, because the mathematics at the heart is driven by non-abstract sensors. On the other hand, under the *Mayo* approach, the low-pressure indicator would likely *not* constitute in *kind* patent-eligible subject matter:

- The software used to mathematically compute and compare four wheel rotation rates and provide an alert when the rates differ by a specified amount embody an abstract "mathematical algorithm" or "algorithmic" concept.

The various rationales enumerated in *Mayo* for discounting claim elements from the invention then remove each remaining element of the tire pressure indicator:

- the sensors were conventional and preexisting;
- the data from the tire rotation were already being collected; and
- the devices and systems for data, computation, and the indicator lighting were either preexisting or conventional.

Other examples where the *Mayo* and *Diehr* approaches would provide different results in patent-eligible subject matter include:

- Improvement to a car's electronic fuel injection often takes the form of a mathematical algorithm that computes spark timing based on engine speed, temperature, gasoline properties, automobile weight, road incline, and the like. Engine timing was previously controlled by cams, levers, vacuum, and the like, with clever bends or tooth face shapes. Software now fills many of the niches formerly filled by mechanical systems. Under the *Diehr* approach, improved electronic fuel injection systems are in *kind* patent-eligible subject matter, even though implemented by purely mathematical software. On the other hand, under a *Mayo* approach, today's software-based process control systems are *not* patent-eligible subject matter in *kind*.
- In medical diagnostic imaging, the raw image collected by the detectors is often unintelligible. Rather, mathematical software separates one tissue type from another, tumor from healthy tissue, active brain region from quiescent. This image processing is based almost entirely on mathematical algorithms (Fourier transforms,

Butterworth filters, contour detection, and the like). Under *Diehr*, the step of collecting data from a non-abstract but conventional sensor separates an abstract algorithm from an eligible invention that applies the algorithm. Under *Mayo*, the fact that the difference is "pure mathematics" removes the invention from patentability.

- Modern data storage, video streaming, and cell phones would be impossible without image compression and other digital signal processing, to reduce the amount of data by 90 percent or more, or to extract intelligible signal out of noise. Again, these inventions are often purely mathematical algorithms that make the difference between feasible and infeasible communications. Successive improvements arise by tuning the algorithm. Under the *Diehr* approach, image compression and other digital signal processing systems are in *kind* patent-eligible subject matter. On the other hand, under a *Mayo* approach, if the improvement can be characterized as mathematical, it's irrelevant that the improvement is set in the context of a purely manmade, practical, nonabstract device.

- Computerized trading systems for securities have transformed markets by making them faster and less expensive. Some involve "abstract" mathematical or organizational principles, choosing what data to display and how, applied to arrange computer displays to communicate more information or reduce error, or to allow humans to understand trends and apply findings to real-life scenarios These inventions require large

> investment in design, coding, testing, marketing, regulatory review and approval. Under a *Diehr* approach, the fact that the invention is executed on a computer, or displayed on a physical display device, suffices to make it the *kind* of invention eligible under § 101 (leaving novelty and nonobviousness to § 102 and § 103). Under a *Mayo* approach, inventions related to data analysis and modeling might be characterized as an "abstract idea" with insignificant "post solution" displaying.

As the above examples illustrate, the two irreconcilably contradictory approaches to determining patent-eligible subject matter can lead to confusion. IEEE-USA is concerned that the confusion results in an overly narrow scope for patent-eligible subject matter, despite nonobvious inventive effort and immense investment in turning an invention into a practical product. IEEE-USA urges that this Court should grant *certiorari* to resolve the irreconcilable contradictions between the *Diehr* approach and the *Mayo* approach.

E. This Court Regrounded its Approach Before, in 1980-81

This case will not be the first time that this Court has regrounded its § 101 jurisprudence in the text of the statute. In the late 1970's, after *Gottschalk v. Benson*, 409 U.S. 63 (1972) and *Flook* in 1978, both following the approach later adopted in *Mayo*, the § 101 field was in great disarray. In 1979, in the case that reached this Court in *Diamond v. Chakrabarty*, 447 U.S. 303 (1980), the appeals court

decision that was affirmed by this Court was written by Judge Giles Rich. In 1952, Mr. Rich had been the lead author of the 1952 Patent Act, and he later served as the Chief Judge of the Court of Customs and Patent Appeals. Judge Rich, in *In re Bergy and Chakrabarty*, 596 F.2d 952 (CCPA 1979), gave a detailed explanation of the statutory scheme, and the relationship among the three statutory provisions. Judge Rich gave a detailed history of the statute over 140 years, of the treatises, the Reviser's Note and other legislative history of the 1952 Act, 596 F.2d at 960-62. In part, Judge Rich wrote as follows (italic in original, underline added, citations and quotations omitted):

> Section 101 states three requirements: novelty, utility, and statutory subject matter. The understanding that these three requirements are *separate and distinct* is long-standing and has been universally accepted. The text writers are all in accord and treat these requirements under separate chapters and headings. [listing treatises]. Thus, the questions of whether a particular invention is *novel* or *useful* are questions wholly apart from whether the invention falls into a category of statutory subject matter. Of the three requirements Stated in § 101, only two, utility and *statutory subject matter*, are *applied* under § 101. As we shall show, <u>in 1952 Congress voiced its intent to consider the novelty of an invention under § 102</u> … notwithstanding the fact that this requirement is first Named in § 101.

Bergy contrasts the "the statutory-categories requirement of § 101 with a requirement for the existence of 'invention' [renamed nonobviousness by the 1952 Act]" (596 F.2d at 962-63, italic in original):

> Falling into a category, does not involve considerations of novelty or nonobviousness and *only* those two considerations involve comparison with prior art or inquiry as to whether all or any part of the invention is or is not in, or assumed to be in, the prior art or the public domain. *Prior art is irrelevant to the determination of statutory subject matter under § 101*. An invention can be statutory subject matter and be 100% old, devoid of any utility, or entirely obvious…..

In 1980 and 1981, this Court reconsidered its approach to the § 101 issue. In *Diamond v. Chakrabarty*, 447 U.S. 303 (1980) and *Diamond v. Diehr*, 450 U.S. 175 (1981), this Court essentially repudiated the reasoning of *Benson* and *Flook*, and borrowed much from Judge Rich's *Bergy*. The Court shifted from an analysis that mixed together questions of novelty and subject matter (similar to the *Mayo* approach), to the *Diehr* model that focused on whether any abstract principle was practically *applied* in some real-world way. The *Diehr* approach was entirely workable and reasonably stable and predictable for 30 years, until *Mayo* reinjected concerns of novelty into the § 101 inquiry.

IEEE-USA reads this Court's precedents to set out two distinct and contradictory approaches to determining patent eligible subject matter: the

Diehr approach which evaluates § 101 eligibility based on the claim "as a whole," "wholly apart" from novelty and non-obviousness of components; vs. the *Mayo* approach which evaluates eligible subject matter by disassembling a patent claim into constituent parts, and characterizing each part in terms of its novelty and non-obviousness.

This Court should grant *certiorari* to resolve the irreconcilable contradictions between the *Diehr* approach and the *Mayo* approach.

II. This Court Should Grant *certiorari* to Establish the Correct Rule of Law

The Federal Circuit opinions in this case are fractured along the lines separating the *Mayo* and the *Diehr* approaches. It is evident that this split cannot be reconciled without this Court's review.

The confusion created by this fracture at the Federal Circuit will have many negative impacts on technology businesses, including unpredictability at the U.S. Patent Office regarding which patents it will reject based on § 101, in the courts, regarding patents that issued years ago, and in licensing.

As Judge Moore noted in her dissent, this case presents a broad spectrum of fact patterns, so that this Court can carefully vet out a number of implications and alternatives. This case presents a good vehicle for this Court "to distinguish between claims that *are* and *are not* directed to patentable subject matter." *CLS*, 717 F.3d at 1314 (Moore, J. dissenting-in-part, emphasis in original).

Given the irreconcilable conflict between the *Mayo* and the *Diehr* approaches, and the confusion that the conflict has created in the lower courts' evaluation of subject matter eligibility, this Court should grant *certiorari* to determine which approach is correct for evaluating § 101 issues.

CONCLUSION

For the foregoing reasons, the IEEE-USA therefore respectfully urges this Court to grant *certiorari*.

Respectfully submitted,

Chris J. Katopis
Counsel of Record
1308 Clifton Street, N.W.
Washington, D.C. 20009
Tel. (202) 200-9490
chriskatopis@gmail.com

Counsel for Amicus Curiae