No. _____

In the Supreme Court of the United States

SOLUTRAN, INC.,

Petitioner,

v.

ELAVON, INC., U.S. BANCORP,

Respondents.

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

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

This Court has held that laws of nature, natural phenomena, and abstract ideas are not patentable subject matter. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014). *Alice* set forth a two-step test for determining subject-matter eligibility. Step one determines whether a claimed invention is directed to a patent-eligible concept.

Here, the patent-at-issue's claims, when viewed as a whole, are directed to a patent-eligible concept—an improvement to a physical process for handling tangible, physical items (paper checks). The inventors also identified this physical-process improvement as their advance over the prior art (*i.e.*, what they invented).

In the decision below, however, the Federal Circuit did not view the claims as a whole and did not consider the inventors' claimed advance over the prior art. Instead, the court identified a broadly stated business method underlying one of the claim's elements as the claim's focus and found the claim ineligible under *Bilski v. Kappos*, 561 U.S. 593 (2010). In so doing, the Federal Circuit ignored this Court's instructions for analyzing subject-matter eligibility and effectively banned all business-method patents.

Accordingly, the question presented is this:

Does *Alice*'s step one require that the claims be viewed as a whole and that consideration be given to the claimed advance over the prior art?

CORPORATE DISCLOSURE STATEMENT

There is no parent corporation, publicly held corporation, or wholly owned subsidiary to report for petitioner Solutran, Inc.

RELATED CASES

- *U.S. Bancorp v. Solutran, Inc.*, No. CBM2014-00076, U.S. Patent & Trademark Office, Patent Trial & Appeal Board. Final decision entered Aug. 5, 2015 and U.S. Bancorp's request for rehearing denied Nov. 6, 2015.

- *U.S. Bancorp v. Solutran, Inc.*, No. 2016-1302, U.S. Court of Appeals for the Federal Circuit. Judgment entered Aug. 8, 2016.

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PETITION FOR A WRIT OF CERTIORARI

Petitioner Solutran, Inc. ("Solutran") respectfully petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit.

OPINIONS BELOW

The opinion of the Federal Circuit (App. 1a-16a) is reported at 931 F.3d 1161. The Federal Circuit's order denying rehearing en banc (App. 42a-43a) is unreported. The opinion of the United States District Court for the District of Minnesota granting summary judgment in Solutran's favor regarding Section 101 (App. 17a-41a) is reported at 291 F. Supp. 3d 877.

JURISDICTION

The Federal Circuit entered judgment on July 30, 2019. The court denied Solutran's timely petition for rehearing en banc on October 1, 2019. On December 16, 2019, the Chief Justice extended the time within which to file a petition for a writ of certiorari to and including February 13, 2020. No. 19A667. This Court has jurisdiction under 28 U.S.C. § 1254(1).

STATUTORY PROVISIONS INVOLVED

Under Section 101 of Title 35 of the United States Code, "[w]hoever 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."

INTRODUCTION

The Federal Circuit's decision misinterprets and misapplies step one of the subject-matter-eligibility test set forth in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 573 U.S. 208 (2014).

The Constitution encourages innovation by protecting those who promote the progress of science with exclusive rights to their inventions. U.S. CONST. art. I, § 8, cl. 8. The Patent Act provides that "[w]hoever invents any new or useful process, machine, manufacture, or composition of matter, or any new or useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101.

Although Congress enacted a broad statement of patent eligibility in Section 101, this Court has held that some subject matter is not patentable. Specifically, this Court's jurisprudence precludes patenting the "building blocks of human ingenuity"—namely, "laws of nature, natural phenomena, and abstract ideas." *Alice*, 573 U.S. at 216-217 (citing

Mayo Collaborative Servs. v. Prometheus Labs., Inc., 566 U.S. 66, 71, 85 (2012)). These "building blocks" should be equally available to everyone because they are the foundational principles from which all innovation arises. *Id.* at 217. But courts must "tread carefully in construing this exclusionary principle lest it swallow all of patent law." *Id.* To tread carefully, this Court established a two-part test for determining patent eligibility, the first step of which is to "determine whether the claims at issue are directed to a patent-ineligible concept." *Id.* at 218.

Lower courts face significant difficulty in determining whether a claimed invention is directed to an abstract idea under *Alice*'s step one. One district court, for example, lamented that "any claim, described at a certain level of generality, can be challenged as directed to an abstract idea . . . . [A]nd lower courts have received little guidance on how to determine whether a claim is directed to an abstract idea." *Fairfield Indus., Inc. v. Wireless Seismic, Inc.*, No. 4:14-cv-2792, 2014 WL 7342525, at *4 (S.D. Tex. Dec. 23, 2014). Underscoring this confusion, courts have compared the *Alice* test to Justice Stewart's famous test for obscenity—"I know it when I see it." *See McRO, Inc. v. Sega of Am., Inc.*, No. CV 12-10327, 2014 WL 4749601, at *5 (C.D. Cal. Sept. 22, 2014) (quoting *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964) (Stewart, J., concurring)).

One need look no further than the present case to see that lower courts are confused and inconsistent when applying step one to abstract ideas. Here, both the Patent Trial and Appeal Board ("PTAB") and the district court applied one standard of determining to

what the patent-at-issue's claims are directed and concluded that the claims were *not* directed to an abstract idea under step one, while the Federal Circuit applied a different standard and reached the opposite conclusion.

Specifically, the PTAB, applying *Alice*, declined review under Section 101:

> In determining whether a method or process claim recites an abstract idea, we must examine the claim as a whole . . . . [W]e find that the basic, core concept of independent claim 1 is a method of processing paper checks, which is more akin to a physical process than an abstract idea. Indeed, there is nothing immediately apparent about this basic, core concept that would indicate that it is directed to an abstract idea at all.

(App. 57a-58a.) And the district court issued a detailed decision denying US Bancorp's and Elavon's (together "US Bank") summary-judgment motion on Section 101 grounds. The district court considered the claims as a whole, analyzed the inventors' claimed advance over the prior art, and concluded that the patent-at-issue "improves upon the prior art through the processing of paper checks, via two-paths, at different times and locations, and the physical movement of paper checks." (App. 31a.) The district court concluded that because the invention was "rooted in an enhanced processing method and a palpable application of that process, in a different

time and place," it was "not directed to an abstract idea." (App. 32a.)

After losing at trial, US Bank appealed to the United States Court of Appeals for the Federal Circuit, which reversed. Instead of examining the patent-at-issue's claim 1 as a whole and analyzing the inventors' claimed advance over the prior art, however, the Federal Circuit's "directed to" analysis focused on a single claim element and adopted a statement of its underlying business goal (crediting a merchant's account as early as possible while electronically processing a check) as the claim's focus. (App. 8a-14a.) The Federal Circuit did not acknowledge the fact that the patent-at-issue expressly described a prior-art process that already "credit[ed] a merchant's account as early as possible while electronically processing a check." (C.A.J.A. 169-170.)

It cannot possibly be the case that the patent-at-issue is "directed to" doing something that the patent *expressly says* had already been done in the prior art. By ignoring the claim as a whole and the physical nature of what the inventors actually identified as their improvement over the prior art, and instead citing an associated business goal as the claim's focus, the Federal Circuit's decision effectively renders all business methods unpatentable no matter how physical their process improvements are.

STATEMENT OF THE CASE

A. Factual background

1. The invention

Solutran is a Minnesota company that invented a method of processing paper checks that offers merchants the benefits of electronic check-processing without burdening them with the usual associated costs. Before 2005, merchants had limited options for check processing. They could physically transport checks to a bank or ATM and deposit them. By the mid-1990s, merchants could process checks electronically. (C.A.J.A. 169-170.) One such method was Point of Purchase ("POP"). Using POP, merchants could capture check data (including the Magnetic Ink Character Recognition ("MICR") characters on each check) at the cash register and then use that data to get their account credited. (C.A.J.A. 169-170.) The POP method, however, required taking the check from the customer, scanning it, and then handing it back to the customer. (C.A.J.A. 169-170.) But scanning the check at the register and handing it back to the customer is a process that requires specialized training, takes time, and can leave customers confused as to why the cashier is returning their check. (C.A.J.A. 4635.)

In 2005, the National Automated Clearinghouse Association ("NACHA")[1] changed the

[1] NACHA is a non-profit membership association charged with overseeing and regulating the Automated Clearing House ("ACH") electronic check system.

rules for electronic check processing. For the first time, merchants could process paper checks electronically by scanning them at the end of each day in their own back offices—a process called Back Office Conversion ("BOC"). (C.A.J.A. 169-170.) The industry assumed that merchants would jump at the opportunity to save on check-processing fees by scanning their own checks. But, in reality, merchants were loath to invest in scanners as well as pay for the staff time necessary to scan the checks. (C.A.J.A. 4954.)

At trial, Solutran employee Scott Reid, one of the patent-at-issue's inventors, described the challenges associated with electronic check processing:

> It's a four-part business problem for the merchants accepting checks. One is they want to get immediate credit for ACH-eligible checks presented for payment. They don't want to invest in check scanning hardware. They don't want to train employees or take employee time for operating check scanning hardware. And they don't want to have to physically give the check back to the consumer at the point of sale.

(C.A.J.A. 4774.)

Reid and co-inventor Kari Hawkins came up with a counterintuitive solution to these challenges. Their invention splits the physical check from the check data at the point of sale, allowing the merchant

to obtain the benefits of electronic check-processing without the burden of having to scan the check themselves. Merchants would mail their checks to a third-party payment processor for scanning, and the third-party payment processor would scan the checks and thereafter reunite the check images with the electronic data at the end of the process. (C.A.J.A. 170.)

The '945 patent is the result of this innovation, which fundamentally re-envisions how to handle paper checks. With Solutran's invention, merchants receive their money through electronic check processing while avoiding the cost and practical challenges associated with buying and using their own scanning equipment to capture digital images of the paper checks or training their staff to scan checks.

2. The '945 patent's claims

Solutran applied for and received a patent for its invention. Under claim 1 of U.S. Patent No. 8,311,945 (the "'945 patent"), each paper check is scanned at two different times, in two different places, by two different pieces of equipment. (C.A.J.A. 173.) The first scan, at a merchant's point of purchase, creates a data file containing the MICR information printed at the bottom of the check, as well as a transaction amount (step (a)). (C.A.J.A. 173.) These data are used (in step (b)) to credit the merchant's account. (C.A.J.A. 173.) The paper check is then shipped to a central scanning facility. After the merchant's account is credited, the paper check arrives at the central facility and is scanned by a digital image scanner to create an image of the check

(step (c)). (C.A.J.A. 173.) A computer then compares this later-created image with the earlier-created data received in the data file, which allows the images and data to be matched up (step (d)) and permits exception processing (claim 2) to handle any discrepancies. (C.A.J.A. 173-174.)

The '945 patent's specification specifically describes two prior-art techniques for processing paper checks: Point-of-Purchase ("POP") conversion and Back Office Conversion ("BOC"). (C.A.J.A. 169-170.) POP conversion captures check data at the point of sale and then uses that data to credit the merchant's account. (C.A.J.A. 169.) POP can capture an image of the check at the point of purchase at the same time as the data capture, and then the check is handed back to the customer at the point of purchase. With the second method (BOC), employees bring paper checks to their own back office and scan the checks to obtain both the check data and the check's digital image. (C.A.J.A. 169-170.)

As with the prior-art POP and BOC methods, the '945 patent's process extracts data from a check and uses it to credit a merchant's account, and, as with POP, these data are extracted from the check at the point of purchase. And as with both POP and BOC, the '945 patent's process creates an image of the check. None of these elements can be considered the claimed advance over the prior art, nor do they form part of the problem facing the '945 inventors. The '945 patent itself expressly acknowledges that these features existed at the time of the '945 patent's invention. (C.A.J.A. 169-170.)

But the '945 patent offers an important advance over both POP and BOC, and that advance is directed to a physical process. Specifically, the '945 patent does not extract the check data and create the digital image at the same time and location. Instead, it divides check handling into two different steps that are performed at different times, in different locations, by different machines. (C.A.J.A. 170.) This means that rather than handling the paper check a single time, the paper check must be physically handled a first time for data extraction, then be transported to a different location, and then be physically handled a second time for image capture.

This separation of the check-handling process into two steps—data extraction and image capture—ran contrary to conventional wisdom, which aimed to *reduce* the amount of physical handling for each check. (C.A.J.A. 4975.) The '945 patent counterintuitively *increased* the amount of physical handling required to process any one check. The splitting of this process into two separate steps created additional complications with respect to linking the check data and check images (which had been accomplished in the prior art by using a common identifier in the data and images). Because such linking is not possible with the '945 patent's process, the patent added a step (claim 1, step d) of comparing the resulting data and digital images in order to match these items back together. (C.A.J.A. 173.)

This change to the traditional physical check-handling process—separating the data capture and image creation in time and place—constitutes the claimed advance over the prior art. Claim 1, read as

a whole, clearly sets forth this requirement. Steps (a) and (b) require the receipt of data captured from paper checks at a merchant's point of purchase and the crediting of the merchant's account, which is also done in POP processing. (C.A.J.A. 173.) Step (c), however, requires that the receipt and image processing of the paper check happen at a different (later) time and a different location than the data capture described in step (a). (C.A.J.A. 173.) The fact that step (c) must occur after step (b) requires that a significant amount of time pass between steps (a) and (c)—that is, long enough that the merchant's account will be credited based on the captured data before the paper checks are even received for image processing.

The '945 patent emphasizes this physical and temporal separation of the data-processing and image-capturing steps:

> The data files and image files are separated both in time and in space, with the data files being used to promptly initiate the transfer of funds to and from appropriate accounts, while the paper checks, at a remote location and typically lagging in time, are scanned to create digital image files.

(C.A.J.A. 160.) The specification's "field of the invention" section notes that the process captures point-of-sale data "and ***later*** and ***remotely*** capturing the image of the check for later matching of the check image with the check data." (C.A.J.A. 169 (emphasis added).) The patent's Figure 3, which depicts some aspects of the '945 invention, prominently features an

image of a truck (element 52). The specification explains that "[t]he merchant **34** periodically ***physically transfers*** a batch **50** of its paper checks to a secure courier (e.g. Brinks, UPS or U.S. postal service) **52** ***for physical delivery*** to a secure, high-volume scanning operation . . . ." (C.A.J.A. 164, 171 (emphasis added).)

B. Procedural background

On September 25, 2013, Solutran sued US Bank for patent infringement. (C.A.J.A. 759.) US Bank petitioned the PTAB to review the '945 patent under Patent Act Sections 101 and 103 in a Covered Business Method review. The PTAB, applying *Alice*, declined review under Section 101:

> [W]e find that the basic, core concept of independent claim 1 is a method of processing paper checks, which is more akin to a physical process than an abstract idea. Indeed, there is nothing immediately apparent about this basic, core concept that would indicate that it is directed to an abstract idea at all.

(App. 58a.) The PTAB did take up the Section 103 challenge and, after conducting a trial, ruled in Solutran's favor. *U.S. Bancorp v. Solutran, Inc.* CBM2014-00076, 2015 WL 4698463 (PTAB Aug. 5, 2015). The Court of Appeals for the Federal Circuit affirmed in an unpublished summary disposition. *U.S. Bancorp v. Solutran, Inc.*, 668 F. App'x 363 (Fed. Cir. 2016).

The case returned to district court, where the court presided over discovery, held a claim-construction hearing, and heard summary-judgment motions.

The district court issued a detailed decision denying US Bank's summary-judgment motion on Section 101 grounds after analyzing the claims as a whole and the claimed advance over the prior art. (App. 27a-41a.) The case proceeded to trial and a jury found in Solutran's favor, upholding the patent's validity and awarding Solutran damages for US Bank's infringement. (C.A.J.A. 1.)

The parties cross-appealed to the Court of Appeals for the Federal Circuit. On July 30, 2019, nearly six years after the lawsuit was filed, the Federal Circuit reversed the district court's summary-judgment decision, holding that the claims were directed to the abstract idea of crediting a merchant's account as early as possible while electronically processing a check. (App. 8a.) The Federal Circuit denied Solutran's petition for rehearing on October 1, 2019. (App. 42a-43a.)

REASONS FOR GRANTING THE PETITION

I. THE COURT SHOULD GRANT THIS PETITION TO CLARIFY THAT THE *ALICE* TEST'S STEP ONE REQUIRES EXAMINING THE CLAIMS AS A WHOLE AND CONSIDERING WHAT THE INVENTORS INVENTED.

A. The lower courts and innovators are hopelessly confused about how to apply step one.

Alice created a two-step test for determining patent eligibility, with the first step asking "whether the claims are *directed to* a patent-ineligible concept." *Alice*, 573 U.S. at 218 (emphasis added). Step one does *not* ask whether the claims "embody" or otherwise "involve" an ineligible concept, but rather whether the claims are "directed to" such a concept. This is because abstract ideas and ineligible concepts can be found in *all* inventions:

> [W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law. At some level, "***all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas***." Thus, an invention is not rendered ineligible for patent simply because it involves an abstract concept.

Id. at 217 (emphasis added) (citations omitted) (quoting *Mayo*, 566 U.S. at 70).

The Federal Circuit acknowledges that step one's "directed to" inquiry means more than merely showing that a claim "involves" an abstract idea, or simply identifying an abstract idea that "underlies" a claim. *See, e.g.*, *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 766 (Fed. Cir. 2019). Unfortunately, however, the Federal Circuit remains confused about how to apply step one's "directed to" inquiry:

> But if we are not to re-characterize the claims [for step one], what are we supposed to do? Are we not to ignore any limitations? May we ignore some? If so, which ones? Which limitations matter and which do not? What exactly is the task at hand under step one?
>
> Step one cannot be a hunt for the abstract idea underlying the claim, because underlying virtually every claim is an abstract idea. And if the task under step one is to assess whether the claim is directed to no more than an abstract idea, what is left for determination under step two? Where do you draw the line between properly determining what the claim is directed to and improperly engaging in an overly reductionist exercise to find the abstract idea that underlies virtually every claim?

Smart Sys. Innovations v. Chicago Transit Auth., 873 F.3d 1364, 1378 (Fed. Cir. 2017) (Linn, J., dissenting in part and concurring in part).

In struggling with step one, the Federal Circuit has developed some guidance but has not applied it consistently. For example, numerous decisions have held explicitly that step one requires examining the claims as a whole, rather than picking at individual claim elements. *See, e.g., Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015) ("Under step one of *Mayo/Alice*, the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter."); *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1011 (Fed. Cir. 2018) (the step-one inquiry "requires that the claims be read as a whole").

But as clear as that guidance is, the Federal Circuit's recent denial of rehearing en banc in *Athena Diagnostics, Inc. v. Mayo Collaborative Services, LLC*, demonstrates that the court has now repudiated the need to read the claims as a whole. *See, e.g.*, 927 F.3d 1333, 1366 (Fed. Cir. 2019) (Newman, J., dissenting from denial of rehearing en banc) ("There is no support in the [Supreme] Court's precedent for ***our abandonment of the invention-as-a-whole in determining eligibility under section 101***." (emphasis added)); *see also id.* at 1361 (Moore, J., dissenting from denial of rehearing en banc) ("We have since ignored these considerations [relating to examining actual claim scope], treating every claim that includes a law of nature as directed to that law, even if the claim as a whole recites a specific way of applying that law of nature to a new and useful end."). The Federal Circuit's abandonment of this principle appears to be based, at least in the mind of the author of the present case's panel decision, on a desire to follow the holding of *Mayo* and a determination that

"*Mayo* is in considerable tension with *Diehr*'s[2] instruction to consider claims 'as a whole.'" *Athena*, 927 F.3d at 1347 (Chen, J., concurring in denial of rehearing en banc); *see also id.* at 1351 ("Even though Athena's claims likely would be found patent-eligible under *Diehr*'s framework, it is not an inferior court's role to dodge the clear, recent direction of the Supreme Court.").

The Federal Circuit has also instructed district courts to examine the claim's "character" or "focus" to determine whether the inventors' "claimed advance" is directed to an identified abstract idea. *See, e.g.*, *Affinity Labs of Texas, LLC v. DirecTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) ("The 'abstract idea' step of the inquiry calls upon us to look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter."). Judge Linn describes step one as determining "the problem to be solved and the discovered solution to that problem," or what the inventors "'characterize [as] their contribution to the art.'" *Smart Sys. Innovations*, 873 F.3d at 1379 (Linn, J., dissenting in part and concurring in part) (quoting *In re Diehr*, 602 F.2d 982, 983 (C.C.P.A. 1979), *aff'd*, 450 U.S. 175 (1981)). And last year, the Federal Circuit reiterated that the step-one inquiry may "involve looking to the specification to understand 'the problem facing the inventor' and, ultimately, what the patent describes as the invention." *ChargePoint*, 920 F.3d at 767.

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2 *Diamond v. Diehr*, 450 U.S. 175 (1981).

Once again, however, even though this guidance has been repeated in multiple opinions, the Federal Circuit has not consistently applied the principle that it must examine what the inventors considered to be their contribution to advancing the art (*i.e.*, their invention) when performing the *Alice* test's step one and determining to what concept the patent is directed. For example, none of the concurring or dissenting opinions from the Federal Circuit's decision declining to rehear *Athena* en banc included such an analysis.

That the lower courts' Section 101 jurisprudence is confused and inconsistent is scarcely debatable. Scholars, jurists, and trade groups agree that *Alice* and the Court's other recent Section 101 decisions "have injected tremendous legal uncertainty into the U.S. patent system." Kevin Madigan & Adam Mossoff, *Turning Gold into Lead: How Patent Eligibility Doctrine Is Undermining U.S. Leadership in Innovation*, 24 GEO. MASON L. REV. 939, 946-947 (2017). At a recent U.S. Patent Trademark Office Roundtable, an inventor explained this uncertainty from her perspective:

> These cases . . . are thus inconsistent with each other and provide no reliable rules that can be used to predict outcomes going forward.
>
> This is the hallmark of failed jurisprudence. Judges have no faith that applying the test will yield what they believe should be the proper outcome, so they bend the test to suit their desired

> result. Step two becomes step one, preemption matters, and then it doesn't.

Daniel R. Cahoy, *Patently Uncertain*, 17 NW. J. TECH. & INTELL. PROP. 1, 38 (2019) (quoting Marian Underweiser, IBM). The concern with step one jurisprudence is not "that the standards are too narrow," but rather that the standards "are undeterminable." *Id.*

The impact of this confusion over what is patentable under Section 101 on the United States economy cannot be overstated. Available data "raises the very real concern that the U.S. is abandoning its gold standard patent system," and "ceding this innovation leadership to other countries." Madigan & Mossoff, *supra* p. 18, at 959-960. This is particularly the case with respect to technology-based start-ups—in which inventions in "software, business methods, medical diagnostics, and personalized medicine" dominate—as companies seek patent protection overseas in countries that "recognize the importance of innovations in these fields and allow them patent eligibility." Xuan-Thao Nguyen & Jeffrey A. Maine, *Attacking Innovation*, 99 B.U. L. REV. 1687, 1750-1751 (2019).

B. This Court's holdings require that step-one analysis include examining the claims as a whole and considering the invention made by the inventors.

Despite confusion in the lower courts, this Court's precedents can best be read as requiring that the claims be read as a whole at *Alice*'s step one. In

Diehr, this Court analyzed process claims that included ineligible mathematical claim elements in the context of an overall claim to curing synthetic rubber. This Court concluded that the claims were patent-eligible only after articulating that, in "determining the eligibility of respondents' claimed process for patent protection under § 101, their claims ***must be considered as a whole***." *Diehr*, 450 U.S. at 188 (emphasis added). More particularly, *Diehr* found that "[t]he fact that one or more of the steps in [the claimed] process may not, in isolation, be novel or independently eligible for patent protection is irrelevant to the question of whether the claims as a whole recite subject matter *eligible* for patent protection under § 101." *Id.* at 193 n.15. The Court emphasized the additional importance of considering the claims as a whole in *process* claims:

> 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. 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.

Id. at 188-189 (emphasis added).

In considering the claims as a whole, *Diehr* found that the claims were directed to a physical process of curing synthetic rubber, which was patent-eligible. *Id.* at 181, 184, 187. This conclusion was reached only after this Court also considered what the inventors believed to be their invention. In particular, this Court emphasized the problem faced by the inventors ("according to the respondents, the industry has not been able to obtain uniformly accurate cures because the temperature of the molding press could not be precisely measured") and what the inventors viewed as their invention ("[r]espondents characterize their contribution to the art to reside in the process of constantly measuring the actual temperature inside the mold"). *Id.* at 178.

Diehr's instruction to consider the claim as a whole and to examine what the inventors characterized as their invention properly forms part of *Alice*'s step one. Although neither *Alice* nor *Mayo* provided detailed guidance on how to apply step one, a number of Federal Circuit decisions have explained that step one should be applied with these instructions from *Diehr* in mind. *See, e.g.*, *ChargePoint,* 920 F.3d at 767; *Data Engine Techs.*, 906 F.3d at 1011; *Affinity Labs of Texas*, 838 F.3d at 1257; *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016); *Internet Patents Corp.*, 790 F.3d at 1346. And several Federal Circuit decisions have directly cited *Diehr* as the rationale for analyzing the claims "as a whole" as part of step one under *Alice*. *See Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1348 (Fed. Cir. 2017); *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1313 (Fed. Cir. 2016).

As for examining the claimed advance over the prior art in step one, Federal Circuit judges have also pointed to this Court's holding in *Flook*:

> Consequently, the step one inquiry cannot be settled in the affirmative by the observation of an underlying abstract idea nor in the negative by recitation of just any additional limitations.
>
> Rather, the step one inquiry is a legal analysis that must focus on determining "what type of discovery is sought to be patented."

Amdocs, 841 F.3d at 1310 (Reyna, J., dissenting) (quoting *Parker v. Flook*, 437 U.S. 584, 593 (1978)). In the words of Justice Stevens, who wrote for the Court in *Flook*, determining Section 101 eligibility "must start with an understanding of what the inventor claims to have discovered." *Diehr,* 450 U.S. at 212 (Stevens, J., dissenting). Justice Stevens encouraged a "fair reading of the entire patent application" to understand what the inventors claim to be their invention. *Id.* at 208.

Under *Diehr*, Section 101 requires considering the claims as a whole and analyzing the invention that the inventors believed they had made. Admittedly, there is a tension between this holding of *Diehr* and *Flook's* instruction that subject-matter eligibility be based on dividing a claim into elements and finding an inventive concept in those claim elements that fall outside of the ineligible concept. *See Athena*, 927 F.3d at 1344-1346 (Chen, J.,

concurring in denial of rehearing en banc) (discussing "*Diehr's* evident disagreement with *Flook's* analysis"). While many believed that *Diehr* in part superseded *Flook,* this Court never overruled *Flook* and the Court's later decisions continue to cite both *Diehr* and *Flook* as good law. *See, e.g., Alice*, 573 U.S. at 222-223; *Mayo*, 566 U.S. at 71-72.

This seeming tension is best resolved by formally folding the two cases' approaches into the two steps of the *Alice* test. *Diehr's* instruction to examine the claims as a whole and to examine the invention made by the inventors should form the basis of the "directed to" inquiry under step one, as the Federal Circuit has done in the numerous decisions cited above. And *Flook's* instruction to divide a claim into elements and find an inventive concept should continue to form the basis of step two.

C. This Court's holdings do not permit the Federal Circuit to effectively ban business-method patents.

The law of the land is that Section 101 "precludes the broad contention that the term 'process' categorically excludes business methods." *Bilski v. Kappos*, 561 U.S. 593, 606 (2010). The *Bilski* majority noted that the defense to infringing a business-method patent formerly found in 35 U.S.C. § 273 showed that federal law contemplates the existence of business-method patents. *Id.* at 607. Similarly, the America Invents Act created a covered-business-method review process that is relevant only to business-method patents. Pub. L. No. 112-29, § 18, 125 Stat. 284, 329-31 (2011). These two laws clearly

demonstrate that Congress intended to allow patent protection for at least some types of business methods.

Alice did not overrule *Bilski* on this point. To the contrary, *Alice* relied on the abstract-idea exception to patent eligibility rather than banning business-method patents. This approach was identical to that of the *Bilski* majority—that there is no reason to categorically exclude business-method patents because the abstract-idea exception will adequately determine which inventions are patent-eligible. A one-paragraph concurrence argued that any claim "that merely describes a method of doing business does not qualify as a 'process' under § 101," *Alice*, 573 U.S. at 227 (Sotomayor, J., concurring) (quotation omitted), but this opinion was not joined by a majority of justices. Accordingly, "there is no categorical business-method exception." *Content Extraction & Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Because there is no categorical exception for business-method patents, business-method patents that are directed to non-abstract, physical-realm improvements remain eligible for patent protection.

II. THIS CASE IS AN IDEAL VEHICLE FOR CLARIFYING *ALICE*'S STEP ONE.

A. The conflicting analyses in this case exemplify the lower courts' confusion about how to perform step one.

The Federal Circuit and the district courts are confused as to whether the *Alice* test's step one should

examine "the claims as a whole" and consider what the inventors claimed they had invented (as required by *Diehr*), and as to how to conduct such an analysis. Judge Chen's opinion, concurring in the denial of rehearing en banc in *Athena* reflects this confusion:

> Under *Diehr's* "claim as a whole" principle, which does not divide the claim into new versus old elements, Athena's claims, particularly claims 7 and 9, likely would have been found to be directed to a patent-eligible process comprising a set of technical, transformative steps to test a patient for a particular medical condition. But in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.,* , the Court set forth an inventive concept/point of novelty framework, which is a more far-reaching, aggressive version of the judicial exceptions to the statute and is largely incompatible with *Diehr's* core rationale. At the same time, nothing in *Mayo* suggests that it sought to repudiate *Diehr's* analysis. While I believe our court would benefit from the Supreme Court's guidance as to whether it intended to override central tenets of *Diehr*, *Mayo*'s reasoning is clear and we are bound by it.

Athena, 927 F.3d at 1344 (Chen, J., concurring in denial of rehearing en banc) (citation omitted). In his opinion concurring in the Federal Circuit's decision not to rehear *Athena* en banc, Judge Chen refused to

read the claims as a whole "under *Diehr*'s framework" as part of step one and, as a direct result, agreed with the *Athena* panel majority that the patent was ineligible under Section 101. *Id.* at 1352.

Less than one month later, Judge Chen wrote the panel decision in the present case. As in *Athena*, Judge Chen chose not to analyze the claim as a whole and consider the inventors' claimed advance over the prior art. When read as a whole, the '945 patent's claim 1 describes the division of the physical handling of paper checks into two different scans and two different places, which is found nowhere in the prior art. But Judge Chen's opinion for the panel ignored the physical process found in the claim as a whole, identified a single step (the "timing of the account crediting step") as the unique aspect in the claim, and then declared that the other claim elements simply "recite basic steps of electronic check processing" similar to those found in a previous case. (App. 9a.)[3]

By so doing, the panel was able to identify an underlying business goal of "crediting a merchant's account as early as possible while electronically processing a check" as the claim's focus under step one. (App. 8a.) Only after concluding that this focus was directed to an abstract idea did the panel discuss the claim steps that related to the changed physical process for handling paper checks. The panel then further compounded its analytical error: rather than considering whether these physical steps (which are

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[3] The PTAB's and the jury's decisions rejected all of US Bank's arguments that the '945 patent was found in, or obvious in light of, the prior art.

integral to the claims when read as a whole) are directed to an abstract idea as *Diehr* commands, the Federal Circuit simply stated that physical steps alone will not save a claim already found to be directed to an abstract idea under step one. (App. 12a-13a.)

The panel's conclusion is also at odds with this Court's instructions to consider the claimed advance over the prior art made by the inventors. The '945 inventors' claimed advance did *not* improve the speed with which a merchant's account is credited when compared to the prior-art POP technique described in the '945 patent's Figure 1. Calling this the claim's focus, as the panel's decision does, assumes that the '945 inventors faced and solved a problem that they had just told the Patent Office had been solved by the POP prior art disclosed in Figure 1. It would be absurd, of course, to try to obtain a patent by telling the Patent Office, "I've come up with an advance over the prior art, but here in my Figure 1, I've pointed out where the prior art does the same thing." But this is precisely what the Federal Circuit panel's decision assumes happened. This error is the consequence of *not* reading the claims as a whole and *not* considering what the inventors actually said was their advance over the prior art.

As the PTAB and district court decisions demonstrate, when the '945 patent's claims are analyzed as a whole, in light of what the inventors claimed to have invented, it is clear that the patent's claims are directed toward an improved process for the physical handling of paper checks. The PTAB examined these claims and found that "there is nothing immediately apparent about this basic, core

concept that would indicate that it is directed to an abstract idea at all." (App. 58a.) The district court "agree[d] with the PTAB that simply because individual elements of Claim 1 recite isolated, fundamental economic practices, such as 'crediting an account for a merchant,' when viewed as a whole, the claim's limitations demonstrate that the claim is not directed to an abstract concept." (App. 37a.) More particularly, the district court found that "the character of Claim 1 is directed to a physical process for processing paper checks that captures data from a paper check at the merchant's point of purchase, and uses the data to credit a merchant's account, while the same paper check is later scanned in a different location to create an image of that check." (App. 37a.) As explained above, this new physical process for handling paper checks is the claimed advance over the prior art made by the inventors.

This Court has never found an improved process for physical handling of tangible items to be directed to an abstract idea. Most of this Court's abstract-idea cases do not relate to improvements made to a physical process. In *Benson*, this court found a mathematical technique useful for digital computers to be ineligible. *Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972). In *Flook*, this Court also found an algorithm that updated a number (an "alarm limit") to be ineligible even if the calculation were performed on a computer for use in the catalytic chemical conversion of hydrocarbons. *Flook,* 437 U.S. at 594. There was no improved physical process in *Flook*, however, but only an improved method for determining that number. In *Bilski*, this Court found that a process for hedging risk and the application of

that concept to energy markets was ineligible. *Bilski*, 561 U.S. at 609. While this claimed process related to initiating a series of transactions, no existing process for handling tangible goods had been improved. Finally, *Alice* held that a claimed method of exchanging financial obligations between parties using an intermediary to mitigate settlement risk was ineligible for patent protection. *Alice*, 573 U.S. at 219.

Only in *Diehr* has this Court analyzed the abstract-idea exception to patent eligibility in the context of an improved physical process. *Diehr* found that a physical process for curing rubber was patent-eligible in spite of the use of a mathematical formula to improve the curing process. *Diehr*, 450 U.S. at 184-185. *Diehr* did not divide the claims into abstract and non-abstract elements, but rather considered the claim "as a whole" and found it directed to a patent-eligible process. *Id.* at 188. In this Court's words, "a physical and chemical process for molding precision synthetic rubber products falls within the § 101 categories of possibly patentable subject matter." *Id.* at 184. And this conclusion "is not altered by the fact that in several steps of the process a mathematical equation and a programmed digital computer is used." *Id.* at 185. In other words, when the claim as a whole addresses an improved technique for the physical and chemical handling of tangible goods, the mere fact that an abstract idea is implicated in some of the claim elements does not alter the conclusion that the claim is patent-eligible under § 101.[4]

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[4] Although the panel decision in the present case did not directly analyze whether an improved physical process is,

Here, the district court analyzed the '945 patent's claim 1 as a whole, considered the inventor's claimed improvement over the prior art, and then agreed with the PTAB that the claim was directed to a patent-eligible physical process for handling tangible objects. (App. 40a.) It was the Federal Circuit's failure to consider the claim as a whole and its failure to consider the inventors' claimed advance, that resulted in its dismissal of the '945 patent's claims as patent-ineligible.

Because the lower courts' contradictory conclusions were a direct result of conflicting approaches to applying *Alice*'s step one, this case presents the ideal vehicle in which to clarify how to apply that step.

B. The panel's decision effectively bans business-method patents.

The Federal Circuit's confused, inconsistent application of *Alice*'s step one spawned the present decision, which has the additional impact of effectively banning all business-method patents. This result flatly contradicts this Court's precedent and, left standing, would radically change patent law. The present case therefore presents an ideal case for

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by definition, not abstract, the Federal Circuit has frequently distinguished between ineligible inventions directed to abstract ideas and patent-eligible inventions directed to improved physical processes. *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1169-1170 (Fed. Cir. 2018); *Thales Visionix Inc.*, 850 F.3d at 1348-1349; *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 809 F.3d 1282, 1286-1287 (Fed. Cir. 2015) (Lourie, J., concurring in denial of rehearing en banc).

establishing that at least some business-method patents are eligible under Section 101.

By opting not to consider the claims as a whole and identify the inventors' claimed advance over the prior art, the Federal Circuit was free to simply seize on a business goal underlying *one* of the claim's elements, deem it the claim's focus, and reject the claim as abstract. This cannot be a correct articulation of the law, as *any* articulated business goal will necessarily be abstract. Indeed, high-level business goals (say, "reducing costs of production," "increasing employee efficiency," "processing inventory," "crediting an account," or "distributing goods") could be associated with any method used in business, declared a fundamental economic practice, and then disposed of with a simple citation to *Bilski*. In truth, this problem is not technically limited to business methods, as any process can be reduced to an underlying goal ("improving health," or "increasing the speed of communications") that can be considered an abstract idea.

Solutran's case presents an inventive process that is useful in business and that also relates to an improvement to a tangible, physical process. The '945 patent takes a physical process—handling tangible items (paper checks)—and breaks it into two pieces, calling for part of the physical process (the scanning of the check to capture MICR and other basic information) to happen with a scanner at the point of purchase, and for another part (scanning the check to capture an image) to happen at a different (later) time, at a different place, with a different machine. (C.A.J.A. 173-174.) It is hard to imagine a business-

method patent more clearly directed to a physical process, and it is easy to see why the PTAB said that "there is nothing immediately apparent about this basic, core concept that would indicate that it is directed to an abstract idea at all." (App. 58a.)

Yet the Federal Circuit's analysis effectively means that even an explicitly physical, business-process improvement will never be patent-eligible. Such a categorical rejection of physical-method inventions contradicts this Court's instruction that there is no categorical exclusion for business-method inventions. *Bilski*, 561 U.S. at 606.

The present case offers the Court an ideal vehicle for clearing up the lower courts' confusion and establishing definitively that Section 101 does not invalidate all business-method patents.

CONCLUSION

For the foregoing reasons, Solutran's petition for a writ of certiorari should be granted.

Respectfully submitted,

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