

**No. 21-1056**

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IN THE

**Supreme Court of the United States**

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UNIVERSAL SECURE REGISTRY LLC,

*Petitioner,*

v.

APPLE INC., VISA INC., VISA U.S.A. INC.,

*Respondents.*

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

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**BRIEF OF *AMICUS CURIAE* INTERTRUST  
TECHNOLOGIES CORPORATION  
IN SUPPORT OF PETITIONER**

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SIDFORD LEWIS BROWN  
INTERTRUST  
TECHNOLOGIES  
CORPORATION  
400 N. McCarthy Blvd.  
Suite 220  
Milpitas, CA 95035

LISA M. GEARY  
*Counsel of Record*  
RMP LLP  
5519 Hackett Road  
Springdale, AR 72762  
(479) 443-2705  
lgeary@rmp.law

*Counsel for Amicus Curiae*

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**INTERESTS OF *AMICUS CURIAE*<sup>1</sup>**

This brief is submitted on behalf of Intertrust Technologies Corporation, a globally recognized technology company that invents, develops, and delivers technologies for trusted computing, digital privacy, and security among leading global corporations—from mobile service providers to enterprise software platform companies. Intertrust has a legacy of invention. It holds a substantial portfolio of patents that were developed in support of Intertrust’s digital rights management and secure distributed computing products.

In developing and maintaining its patent portfolio, Intertrust has been harmed by the uncertainty of recent developments in the Federal Circuit’s Section 101 jurisprudence, which tends to inhibit, not encourage, the development of technology. This *amicus* brief seeks to explain why the Federal Circuit’s current treatment of Section 101 is at odds with this Court’s precedent, the statutory language, and the U.S. Constitution, from the perspective of a technology company that has invested heavily in developing technologies that have been widely deployed throughout the world through patent licensing and product development.

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<sup>1</sup> Pursuant to Supreme Court Rule 37.6, *amicus* state that no person other than *amicus curiae* or their counsel authored this brief in whole or in part or made a monetary contribution intended to fund its preparation or submission. All parties were timely notified of *amicus*’s intention to file this brief and have consented to its filing.

## INTRODUCTION AND SUMMARY OF ARGUMENT

Congress defined patent-eligible subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. 101. Rather than applying the language Congress used, the courts below held Petitioner’s patent claims were ineligible under “judicial exceptions” to statutory eligibility. Those judicial exceptions provide that laws of nature, natural phenomena, and abstract ideas are not eligible for patent protection.

In *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208 (2014), this Court established a two-step test to exclude otherwise eligible subject matter under the judicial exceptions. The jurisprudence that has formed around the *Alice* two-step is a mess. Federal courts have gotten twisted up in knots trying to figure out how to apply the exceptions and have let their efforts to make sense of them lead to inconsistent decisions that undermine patent law’s constitutional purpose. This Court has expressly cautioned courts to tread carefully in this area and not “read into the patent laws limitations and conditions [Congress] has not expressed.” *Diamond v. Diehr*, 450 U.S. 175, 182 (1981) (quotations omitted). The Federal Circuit has not been so careful, making up on the fly new rules for patent eligibility determinations.

Part I highlights some of the Federal Circuit’s unsuccessful efforts to graft additional rules onto the *Alice* test. These attempts have led to inconsistencies and arbitrariness in the Federal

Circuit's recent decisions, which cause uncertainty and disincentivize creation. Part II explains why this case is the perfect vehicle to resolve that uncertainty and end the nearly decade-long confusion in the Federal Circuit over the "contours" of the judicial exceptions.

## ARGUMENT

### I. THE FEDERAL CIRCUIT'S EXPANSIVE INTERPRETATION OF THE JUDICIAL EXCEPTIONS WARRANTS REVIEW.

Section 101 of the Patent Act broadly defines patent eligibility to include "any new and useful process, machine, manufacture, or composition," regardless of its subject. 35 U.S.C. 101. The breadth of eligibility under Section 101 reflects the constitutional purpose of patent law, which is "[t]o promote the Progress of Science and [the] useful Arts." U.S. CONST. art. I § 8, cl. 8.

"Th[is] Court has long held," however, that there are "implicit exception[s]" to the broad language of Section 101, for "[l]aws of nature, natural phenomena, and abstract ideas." *Mayo Collab. Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (quotations and citations omitted). Those judicial exceptions to patentability were added to Section 101 initially in response to the concern that the statute's scope was broad enough to allow patenting of basic building blocks needed for future innovation. *See id.* at 71 ("Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.") (quotations omitted). The fear was that

“monopolization of th[e]se tools through the grant of a patent might tend to impede innovation ....” *Id.*; see also *Alice*, 573 U.S. at 216. (“We have described the concern that drives this exclusionary principle as one of pre-emption”).

Courts have also justified the judicial exceptions as a response to the sense that there were too many unwarranted patents weighing down the economy. As Judge Dyk of the Federal Circuit has explained, “the framework of *Mayo* and *Alice* is an essential ingredient of a healthy patent system, allowing the invalidation of improperly issued and highly anticompetitive patents without the need for protracted and expensive litigation.” See, e.g., *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 809 F.3d 1282, 1287 (Fed. Cir. 2015) (Dyk, J., concurring in the denial of the petition for rehearing *en banc*).

*Alice* sought to provide guidance on the limited scope of these exceptions, by setting forth a two-step test that distinguishes between eligible and ineligible subject matter. Under the *Alice* two-step, a court is first required to determine whether a patent claim is “directed to one of [the] patent-ineligible concepts,” such as an abstract idea. *Alice*, 573 U.S. at 217. If the answer to the first question is “yes,” the court is to determine whether the claim elements contain an “inventive concept” sufficient to “transform the nature of the claim into a patent-eligible application.” *Id.* at 217 (quotations omitted).

#### **A. The Federal Circuit’s Decisions Have Deviated Substantially from *Alice*.**

This Court did not articulate a particular test or standard for determining, at step one, whether a

patent claim is “directed to an abstract idea.” *Id.* at 219. But it did caution courts to “tread carefully” in this area, *id.* at 217, lest the judicially-created exceptions “eviscerate patent law,” *Mayo*, 566 U.S. at 71. The Court aptly recognized that, “[a]t some level, all inventions ... embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas,” and therefore, the risk of over-restricting patent eligibility is great. *Alice*, 573 U.S. at 217. The Court has also made clear that an invention is not ineligible for patent protection simply *because* it involves an abstract concept. *See id.* at 217; *see also Diehr*, 450 U.S. at 187. “[A]pplication[s]” of abstract concepts remain eligible for patent protection, so long as they are put “to a new and useful end.” *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972); *see also Alice*, 573 U.S. at 217.

The Federal Circuit has not been so careful. While *Alice*’s two-step test for applying the judicial exceptions has not swallowed all of patent law whole, it has taken a number of large bites out of it. Like many well-intentioned efforts, the rules the Federal Circuit has created in its efforts to apply *Alice*—hatched on the fly to solve individual cases—have resulted in an unwarranted expansion of the judicial exceptions.

Take, for example, the Federal Circuit’s decision in *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371 (Fed. Cir. 2015). The technology at issue in that case was the use of cell-free fetal DNA for prenatal sex determination, blood typing, diagnosis of genetic disorders such as Down’s Syndrome, and detection of preeclampsia—all of which could be detected using a simple maternal blood test. *Id.* at

1373. The patented technology eliminated the need for amniocentesis and chorionic villus sampling, both of which involved risks to the fetus. *See id.* The technology was ground-breaking, and it rested on a discovery that the Royal Society lauded as “a paradigm shift in non-invasive prenatal diagnosis.” *Id.* at 1381 (Linn, J., concurring).

Notwithstanding the clear patentability of the technology in *Ariosa*, the Federal Circuit held it was ineligible because it was directed at patent-ineligible laws of nature and natural phenomenon. *Id.* at 1376. Treating *Mayo* as having overruled *Diehr*, the court misconstrued language in *Mayo* as having foreclosed the eligibility of any invention in which the “new and useful” criteria of Section 101 required consideration of the claim as a whole—including the natural phenomenon. *Id.* at 1377 (“For process claims that encompass natural phenomenon, the process steps are the additional features that must be new and useful.”). The Federal Circuit’s erroneous decision in *Ariosa* substantially reduces the incentive to make the kind of investments that are needed to develop such ground-breaking inventions. *Ariosa* also shows the Federal Circuit’s confusion over *Mayo* and *Alice*, and the costs of applying broad language generated on the fly to resolve the particular facts of a case.

The Federal Circuit’s decision in *American Axle & Mfg., Inc. v. Neapco Holdings LLC*, 977 F.3d 1379, 1382 (Fed. Cir. 2020), similarly illustrates how far from the original purpose of the judicial exceptions the Federal Circuit’s applications of *Alice* have strayed. The invention in that case was a better balanced drive shaft, which is neither a natural law nor an abstraction. Yet the Federal Circuit held the

invention was ineligible because the focus of the claims was an *application* of Hooke's law, a principle of physics first developed in the 17th century. *See id.* at 1386-87. The inventors in *American Axle* didn't claim to have invented or discovered Hooke's law; if they had, their claims would have failed under the plain language of Sections 101 and 102. They merely *applied* Hooke's law to develop a novel solution to a problem that has plagued cars and trucks for over 100 years. The claims preempted nothing more than what was invented, and the driveshaft liner is not a building block needed for the further advancement of civilization.

Part of the inconsistency in the court's rulings stems from its failure to apply a consistent meaning of what is "abstract." The word "abstract" is an adjective describing nouns that do not refer to concrete objects. *See Oxford English Dictionary* (2d ed. 1989). That is how Judge Newman used the term in determining that a digital camera was *not* abstract: it has a designated structure and mechanism for performing specified functions. *See Yu v. Apple Inc.*, 1 F.4th 1040, 1047 (Fed. Cir. 2021) (Newman, J., dissenting). Judge Newman recognized that, even if a mechanical/electronic device would not satisfy all the substantive requirements of patentability, that does not mean it is an abstract idea. *See id.* The majority took a different approach, denying the patent because it was "directed to the abstract idea of taking two pictures .. and using one picture to enhance the other in some way." *Id.* at 1042-43. They ignored the designated structure of the camera and focused only on the ideas to which it was directed. *See id.*

The Federal Circuit’s application of *Alice* has also caused the court to conflate patent eligibility under Section 101 with other parts of the statutory scheme. *See* 35 U.S.C. 102, 103, 112. For example, Section 112 requires a specification to “contain a written description of the invention, and of the manner and process of making and using it, in ... full, clear, concise, and exact terms,” and to “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. 112(a), (b). Some preemption is inherent in a patent—that is the purpose of obtaining patent protection. It is only *undue* preemption that is sought to be avoided, and that is squarely an issue that Section 112 could resolve. *See Ariosa*, 809 F.3d at 1286 (Lourie, Moore, JJ., concurring in the denial of the petition for rehearing *en banc*) (“[T]he finer filter of § 112 might be better suited to treating these as questions of patentability, rather than reviewing them under the less-defined eligibility rules.”).

Thus, not only has the Federal Circuit injected inconsistency and unpredictability into Section 101, but it has also begun to use Section 101 to do the work that Congress intended other sections of the Patent Act to do. Indeed, that is exactly what happened in this case. The Federal Circuit required USR to establish that its claims contain (1) an inventive concept separate from whatever is identified as the abstract idea or natural law, (2) specificity, and (3) a technical solution. *See* Pet. App. 12a-13a, 17a-18a, 22a-23a, 27a-28a. These requirements are not needed for a Section 101

analysis. And at least one of them (specificity) is better addressed under Section 112's requirements for a claim's description and enablement. The well-developed law under those statutes provides a more solid footing than the undefined contour of "specificity" the Federal Circuit created out of whole cloth.

### **B. The Federal Circuit's Decisions Create Uncertainty for Inventors.**

The Federal Circuit has acknowledged the lack of predictability in its Section 101 analyses. In trying to waive off criticism on the inconsistency of its decisions, the court has noted that its own case law is of little use in predicting how the court will apply the judicial exceptions in new cases. *See CosmoKey Solutions GmbH & Co. KG v. Duo Security LLC*, 15 F.4th 1091, 1099 (Fed. Cir. 2021) ("While prior cases can be helpful in analyzing eligibility, whether particular claim limitations are abstract or, as an ordered combination, involve an inventive concept that transforms the claim into patent eligible subject matter, must be decided on a case-by-case basis ....").

Even the Judges on the Federal Circuit—"the nation's lone patent court"—have pleaded with this Court for guidance, recognizing their decisions have become so arbitrary they are essentially "panel-dependent," and admitting that they are now "at a loss as to how to uniformly apply § 101." *American Axle*, 977 F.3d at 1382 (Moore, J., concurring).

The result is "destabilized technologic development in important fields of commerce." *Yu*, 1 F.4th at 1049 (Newman, J., dissenting). The Federal Circuit's decisions on patent eligibility have harmed

inventors, like Intertrust, that depend on predictability in patent eligibility determinations to incentivize and protect their creations. Without such certainty, businesses have little incentive to make the investments necessary for new developments in science and the useful arts. And without investments or predictable patent eligibility determinations, inventors have little incentive to create.

The harm from the Federal Circuit’s incoherent decisions on patent eligibility will be felt for decades. *See Pet.* at 26-32. According to former USPTO directors, if the Federal Circuit’s patent eligibility jurisprudence is not resolved now, “we risk our nation being left behind as others fortify their IP laws and race towards technological dominance.” Remarks by Director Iancu (Jan. 19, 2021).<sup>2</sup> The National Security Commission on Artificial Intelligence has likewise found that “[t]he legal uncertainty for U.S. innovators and companies as to whether their inventions will be eligible for patent protection ... has impacted investments in AI and technologies critical to national security.” Nat’l Sec. Comm’n on Artificial Intelligence, Final Report 469 (2021).<sup>3</sup>

Allowing the Federal Circuit to continue on the path forward, without guidance from this Court, will undermine research, development, and innovation. “[T]he victims are the national interest in an

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<sup>2</sup> Available at <https://www.uspto.gov/about-us/newsupdates/remarks-director-iancu-us-chamber-commerce-event-how-innovation-and#>.

<sup>3</sup> Available at <https://www.nscai.gov/wp-content/uploads/2021/03/Full-Report-Digital-1.pdf>.

innovative industrial economy, and the public interest in the fruits of technological advance.” *American Axle & Mfg., Inc. v. Neapco Holdings LLC*, 966 F.3d 1347, 1357 (Fed. Cir. 2020) (Newman, J., dissenting from denial of rehearing *en banc*).

## **II. THIS CASE IS THE IDEAL VEHICLE TO BRING THE FEDERAL CIRCUIT’S CASE LAW INTO CONFORMITY WITH *ALICE*.**

When this Court issued its opinion in *Alice*, it determined that it “need not labor to delimit the precise contours” of the judicial exceptions to Section 101. *Alice*, 573 U.S. at 221. The last eight years, however, have demonstrated the need for guidance. This case is the perfect vehicle to provide it.

USR’s patents claim processes for securing electronic payments without exposing a credit card number. Instead of exposing the credit card number to a merchant, the card-holder provides a time-varying code to the merchant. The merchant then sends the code to the credit card company for authorization, and the credit card company checks for restrictions on transactions between the card holder and the merchant. The credit card company then approves or denies the transaction. Pet. App. 8a-9a, 15a, 20a-21a, 24a-25a.

USR thus provides a new process that enables secure credit card transactions without exposure of the credit card number or any other sensitive information of the credit card holder. The process is useful insofar as it reduces the exposure of sensitive information that could be used for fraudulent transactions. Under the plain language of Section 101, the process was eligible for patent protection.

The Federal Circuit appears to have accepted, for the purpose of its decision, that the USR patents claimed a new and useful process. Pet. App. 2a-3a. Yet the court held USR's patents invalid under the judicial exception for abstract ideas. Pet. App. 2a. It did so by applying additional "criteria" that the Federal Circuit has developed in an attempt to apply the *Alice* two-step—none of which appear in *Alice* or any other decision of this Court. Pet. App. 5a-6a, 12a, 17a-18a, 22a-23a, 27a-28a. Rather, as the Petition ably explains, the court has simply grafted additional qualitative requirements onto the judicial exceptions, leading to inconsistent patent eligibility determinations that go well beyond the narrow scope of the exceptions. *See* Pet. at 16-24.

The uncertainty of the Federal Circuit's misguided approach to *Alice* is also shown by a comparison of the decision below and *CosmoKey*—a decision that was issued shortly after the decision in this case but reached the opposite conclusion with respect to claims to very similar subject matter. *CosmoKey* and *USR* both involved authentication techniques comprised of architectures built out of new combinations of existing kit. *Id.* at 1093-94. Moreover, like the claims in *USR*, the claims in *CosmoKey* were to a specified architecture for two-factor authentication. *Id.* at 1093, 1096. USR's claims improve security by using public key cryptography to avoid exposing bank account and other personal information during transactions. *CosmoKey*'s claims turn on and off the authentication function on the user's device. *See id.* at 1093-94.

The Federal Circuit found that the on/off switch for an app in *CosmoKey* was technical and therefore patent-eligible, while the use of public key encryption technology in *USR* was not. *Compare CosmoKey*, 15 F.4th at 1097 *with* Pet. App. 18a-19a. But neither the district court nor the Federal Circuit explained how to predict whether a particular solution would be regarded as technical. There was no rhyme or reason to its characterization.

The Federal Circuit's decisions on patent eligibility have led to widely inconsistent outcomes, turning the law of eligible subject matter into the proverbial nose of wax. *Parker v. Flook*, 437 U.S. 584, 590 (1978) ("The concept of patentable subject matter under §101 is not like a nose of wax which may be turned and twisted in any direction ....") (quotations omitted). This case is the perfect vehicle to provide clarity to the Federal Circuit and reduce the uncertainty it has caused.

### CONCLUSION

This Court should grant the Petition.

Respectfully Submitted,

SIDFORD LEWIS BROWN  
INTERTRUST  
TECHNOLOGIES  
CORPORATION  
400 N. McCarthy Blvd.  
Suite 220  
Milpitas, CA 95035

LISA M. GEARY  
*Counsel of Record*  
RMP LLP  
5519 Hackett Road  
Springdale, AR 72762  
(479) 443-2705  
lgeary@rmp.law