No. 13-298

In the
Supreme Court of the United States

ALICE CORPORATION PTY. LTD.,
Petitioner,

v.

CLS BANK INTERNATIONAL, *ET AL.*,
Respondents.

On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The Federal Circuit

BRIEF OF *AMICI CURIAE* TRADING TECHNOLOGIES INTERNATIONAL, INC., *ET AL.*, IN SUPPORT OF PETITIONER

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STATEMENT OF INTEREST OF *AMICI CURIAE*

Amici curiae are companies that are directly impacted by the uncertainty created by the Federal Circuit's decision in *CLS Bank International v. Alice Corporation*, 717 F.3d 1269 (Fed. Cir. 2013) (en banc) regarding the patentability of claims under 35 U.S.C. § 101, including patents directed to computer-implemented inventions, such as computer software and hardware patents.[1] *Amici* have a strong interest in ensuring that the U.S. patent laws, and the rules of the U.S. Patent & Trademark Office ("USPTO") based on those laws, are interpreted correctly and provide for a clear and effective patent system.

Collectively, *amici* have invested significant amounts of money on research and development of innovations in their respective fields and new products and services for their businesses. Many of the *amici* rely on their patent portfolios to protect those investments, and have licensed and/or asserted patents. Likewise, many of the *amici*, including those who have asserted patents, have been sued for patent infringement, and need to be able to reliably

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[1] Letters of consent to the filing of this brief have been lodged with the Clerk by all parties. All parties' counsel received timely notice of the intent to file this brief. *See* SUP. CT. R. 37.2. No counsel for any party authored this brief in whole or in part, nor did any person or entity, other than the *amici*, their members, or their counsel, make a monetary contribution to the preparation or submission of this brief. *See id.* 37.6. The undersigned counsel have filed applications for admission to the Bar of this Court, which applications are pending.

evaluate the patents of others in order to make business decisions. If fundamental issues relating to the scope of the threshold question of patent eligibility for many inventions remain uncertain, *amici*'s ability to operate their businesses efficiently and effectively will be impaired. This uncertainty will jeopardize future investments in products and services and will make it difficult to ascertain which markets to enter and which to leave to incumbents.

Amici include: Trading Technologies International, Inc.; CME Group Inc.; Bancorp Services, LLC; Regulatory DataCorp; CoreLogic; Aristocrat Technologies Australia Pty. Ltd.; Casino Gaming, LLC; Charles River Analytics Inc.; Architecture Technology Corporation; Great Lakes NeuroTechnologies Inc.; Miramar Labs, Inc.; NeuroWave Systems Inc.; Flocel Inc.; Cleveland Medical Devices Inc.; Orbital Research Inc.; TIP Solutions, Inc.; MONKEYmedia, Inc.; Chief Experience Officer, Inc.; Horizon Digital Finance LLC; Extraordinary Re Holdings, Inc.; DDB Technologies LLC; and RedTxt.com.au Pty. Ltd. For a description of *amici*, *see* Appendix 1a.

Alice Corp.'s Petition presents an opportunity for this Court to bring clarity to a critical issue impacting many patents – the boundaries of patent eligibility under 35 U.S.C. § 101. Accordingly, *amici* request that this Court grant the Petition.

SUMMARY OF ARGUMENT

Because this case presents an issue of great importance affecting many patents, Alice's Petition should be granted. The case below has created unacceptable confusion and uncertainty on the important question of what patent claims are patent-eligible under 35 U.S.C. § 101. In particular, the Federal Circuit has created uncertainty and confusion regarding what it means to be an "abstract idea" (one of the judicially-created exceptions to patentability under Section 101) and when claims to computer-implemented inventions (that are not directed to a law of nature, natural phenomenon, or mathematical formula) are patent-eligible subject matter under Section 101. This uncertainty impacts thousands of patents, including patents directed to computer-implemented inventions. Parties on all sides of the merits are in agreement that the current state of the law is so confused that the outcome of a Section 101 analysis for many patents (at either the United States Patent and Trademark Office or in the courts) is completely unpredictable and arbitrary. This unpredictability extends even to the Federal Circuit, where there is no consensus among a majority of the judges and outcomes are panel-dependent. This unpredictability has evidenced itself in even the short period since the decision below. Since then, different panels at the Federal Circuit have reached irreconcilable results in different decisions. In addition, since the decision below, the USPTO has taken its own approach to the question of patent eligibility of computer-implemented inventions. This Court should grant Alice's Petition to bring clarity regarding the metes and bounds of 35 U.S.C. § 101.

ARGUMENT

I. *CLS Bank v. Alice* Has Created Confusion and Uncertainty Regarding the Scope of Patentability Under 35 U.S.C. § 101, Including for Computer-Implemented Inventions.

The issues presented by 35 U.S.C. § 101 have never been simple. However, in the past few years, several important and closely-watched decisions of the Federal Circuit have further confused the law in this area. The en banc Federal Circuit recently tried to clarify the law in *CLS Bank International v. Alice Corporation*, 717 F.3d 1269 (Fed. Cir. 2013) (en banc), but instead ended up confusing the law further. Numerous commentators have recognized that the Federal Circuit has hopelessly muddied the waters regarding the patentability of computer-implemented inventions, such that the patentability of any given patent now hinges on the particular composition and personal predilections of a given Federal Circuit panel. As such, when evaluating whether their own or a competitor's patent is ineligible for patentability under Section 101 for being merely directed to an "abstract idea," market participants are now faced with a legal landscape that is uncertain and unmanageable.

35 U.S.C. § 101 defines the subject matter that may be patented under the Patent Act: "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." This Court's precedents provide three narrow, judicially-created exceptions to

Section 101's broad patent-eligibility principles: "laws of nature, physical phenomena, and abstract ideas." *Bilski v. Kappos*, 130 S. Ct. 3218, 3225 (2010). In *Bilski*, this Court held that the machine-or-transformation test is not the sole test for determining the patent eligibility of a process, but rather "a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101." *Id.* at 3227. This Court therefore found that claims that do not recite a computer element should not necessarily be deemed ineligible under Section 101. *Id.* at 3227-28.

Immediately after this Court decided *Bilski*, the conventional wisdom was that a patent claim that recited tangible elements (such as computer-related elements) could not be deemed to merely be directed to an "abstract idea" (at a minimum, it was directed to an application of an "abstract idea") and therefore typically did not raise patent eligibility concerns under Section 101.[2] After *Bilski*, the main area of uncertainty with respect to the "abstract idea" exception to patent eligibility resided in how to determine if a claim that does **not** clearly recite tan-

[2] This Court has issued several decisions in which it found that claims could fail under Section 101 even if the claims recite clearly tangible elements (*e.g.*, computer elements) where such elements were found to be superfluous. In each of these cases, the claims at issue were directed to laws of nature, natural phenomena, or mathematical formulas. *See Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Parker v. Flook*, 437 U.S. 584 (1978); *Diamond v. Diehr*, 450 U.S. 175, 182 (1981); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012). There has not been a decision of this Court applying the rationale of these cases to claims not directed to a law of nature, natural phenomenon or mathematical formula.

gible elements, such as computer elements, was too "abstract" to pass muster under Section 101.

In the years since *Bilski*, there have been several decisions at the Federal Circuit that have caused further confusion over Section 101 with respect to the "abstract idea" exception. Different panels of the Federal Circuit have applied different patentability standards and have reached divergent results regarding similar patents directed to computer-implemented inventions, including claims that recite tangible hardware elements. The end result is that the patentability of a given claim is arbitrary because it does not hinge on the uniform application of a coherent body of law. This unfair situation has gotten so bad that one Federal Circuit panel recently alluded to the "murky morass" and "swamp that is § 101 jurisprudence" in the Federal Circuit. *MySpace, Inc. v. GraphOn Corp.*, 672 F.3d 1250, 1260-62 (Fed. Cir. 2012).

For example, some panels have found computerized method, computer-readable medium, and computer system claims unpatentable under Section 101 because they were "abstract," even though they recited tangible computer elements and were not directed to laws of nature, natural phenomena, or mathematical formulas. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1376-77 (Fed. Cir. 2011) (concluding that a computer system for detecting fraud in a credit card transaction over the Internet was not patent-eligible under Section 101); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1317 (Fed. Cir. 2012) (concluding that claims directed to a "computer-aided method and system . . . for pro-

cessing credit applications over electronic networks" were directed to an abstract idea and therefore not patent-eligible); *Bancorp Servs., LLC v. Sun Life Assurance Co.*, 687 F.3d 1266, 1281 (Fed. Cir. 2012), *appeal docketed*, No. 13A185 (U.S. Aug. 13, 2013)[3] (concluding that claims directed to a computerized system for administering a stable value protected life insurance policy were directed to an abstract idea and therefore not patent-eligible). None of these decisions finding claims ineligible under Section 101 articulate a clear definition of what it means for a claim to be merely directed to an "abstract idea."

In contrast, other panels have found computer-implemented inventions patent-eligible under Section 101. *See Research Corp. Tech., Inc. v. Microsoft Corp.*, 627 F.3d 859 (Fed. Cir. 2010) (concluding that it perceived nothing abstract in the subject matter of the processes for an improved method of computing data used for grey-scale printing on a black-and-white printer); *Ultramercial, LLC v. Hulu, LLC*, 657 F.3d 1325 (Fed. Cir. 2011) (concluding that a computerized method for distributing copyrighted products over the Internet constituted a patentable application rather than an unpatentable abstract idea), *vacated*, 132 S. Ct. 2431 (2012), *aff'd on remand*, 722 F.3d 1335 (Fed. Cir. 2013); *CLS Bank Int'l v. Alice Corp.*, 685 F.3d 1341 (Fed. Cir. 2012) (finding that computer-implemented claims for performing financial settlements in a particular way that mitigates or eliminates risk, including claims drawn to methods, computer-readable media, and

[3] On August 14, 2013, the Chief Justice granted an application to extend the time to file a petition for a writ of certiorari to November 8, 2013.

systems, were not abstract ideas and thus were all patent-eligible under Section 101), *vacated*, 717 F.3d 1269 (Fed. Cir. 2013) (en banc).

Apparently in an attempt to resolve this conflict, the en banc Federal Circuit decided to consider and resolve the following questions in *CLS Bank v. Alice*: "What test should the court adopt to determine whether a computer-implemented invention is a patent ineligible 'abstract idea;' and when, if ever, does the presence of a computer in a claim lend patent eligibility to an otherwise patent-ineligible idea?" 717 F.3d at 1293. As might be expected given the issue's importance, the en banc court's decision to review this issue received considerable attention from the patent bar at the merits stage. At least 24 *amicus* briefs were submitted with varying opinions and views on the merits.

Unfortunately, the Federal Circuit's decision only further confused the law. The decision was a one-paragraph *per curiam* opinion upholding the lower court's decision to find the claims at issue ineligible under Section 101. There was no majority agreement on any test or rationale. The Federal Circuit split into at least three separate camps regarding the proper analytical approach to the patent eligibility question for computer-implemented inventions, and the Court issued six separate opinions (not counting the "additional reflections" noted separately by the Chief Judge). The plurality camp believes that the Section 101 subject-matter analysis should include an analysis of novelty and non-obviousness over prior art of the sort done under 35 U.S.C. §§ 102 and 103, as well as an analysis of whether a claim

"preempts" an "abstract idea."[4] Another camp vehemently disagrees with mixing a Sections 102 and 103 analysis in a Section 101 analysis as going against the plain language of the statute and as contradicting this Court's precedent in *Diamond*, which stated that "[t]he 'novelty' of any element or steps in a process . . . is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter." 450 U.S. at 188-89. A third camp believes that a claim reciting tangible computer elements, by definition, cannot be considered as being merely directed to an "abstract idea." Notably, none of the opinions even offered a clear or direct answer to the core issue originally identified by the en banc court – what does it mean to be "abstract"?

Regardless of one's views on the underlying substantive issues, parties on all sides are in agreement that the current state of the law, as reflected in the decision below, is untenable. This is evidenced by the following comments on the Federal Circuit's decision from the patent bar and academia:

- "Unfortunately, the Federal Circuit's decision did nothing to provide clarity and, in fact, perhaps made the interpretation of § 101 more uncertain." Michael

[4] This "preemption" analysis is similar to the analysis done by this Court in its previous decisions dealing with claims directed to a law of nature, natural phenomenon, or mathematical formula. There is a split between different camps regarding whether this Court's rationale in these cases should apply to the general question of whether a claim is directed to an "abstract idea" where that claim is not directed to a law of nature, natural phenomenon or mathematical formula.

L. Kiklis and James Love, *Is the Federal Circuit's* CLS Bank v. Alice Corp. *Decision a Cry for Help from the Supreme Court?* 30 THE COMPUTER & INTERNET LAWYER 1, OBLON (Aug. 2013), http://www.oblon.com/sites/default/files/news/Is%20the%20Federal%20Circuit%E2%80%99s%20CLS%20Bank%20v.%20Alice%208.13.pdf.

- "In an ironic twist, the result [of the *en banc* decision] is something more akin to Alice in Wonderland than the clear guidance patent practitioners were hoping for." Robert Wagner, *Is Software Patentable? Fed Circuit Isn't Sure* – CLS Bank v. Alice Corp., PIT IP TECHBLOG (May 21, 2013), http://pitiptechblog.com/2013/05/21/is-software-patentable-fed-circuit-isnt-sure-cls-bank-v-alice-corp/.

- "'The law of patentable subject matter is such a mess,' said Jeff Lewis of Patterson Belknap Webb & Tyler LLP [the president of the American Intellectual Property Law Association]. 'Nobody knows what patentable subject matter is these days.'" *Software Patent Mess Hits High Court with WildTangent Case*, LAW360, http://www.law360.com/articles/467562/software-patent-mess-hits-high-court-with-wildtangent-case.

- "In what can only fairly be characterized as a patent tragedy, the United

States Court of Appeals for the Federal Circuit now has no official position on the patentability of system claims that objectively recite volumes of tangible structures that clearly satisfy the machine-or-transformation test." *Federal Circuit Makes Mess of Software Patents*, PRACTISING LAW INSTITUTE (May 13, 2013, 16:38), http://patentlawcenter.pli.edu/2013/05/13/federal-circuit-makes-mess-of-software-patents/.

- "Truthfully, all the important questions that we thought might be answered remain completely and totally unanswered because there were only 10 judges who sat on the *en banc* tribunal and no more than 5 judges signed on to any one opinion." Gene Quinn, *Federal Circuit Nightmare in* CLS Bank v. Alice Corp., IPWATCHDOG (May 10, 2013, 1:26 PM), http://www.ipwatchdog.com/2013/05/10/federal-circuit-nightmare-in-cls-bank-v-alice-corp/id=40230/.

- "Today, the Federal Circuit handed down a 135-page decision in an effort to set the record straight on what can and cannot be patented under § 101 of the Patent Act. Unfortunately, the ten judges could only agree on 55 words." Julie Samuels, *Hey, Supreme Court? It's Time To Take Up Software Patents (Again)*, ELEC. FRONTIER FOUND. (May 10, 2013), https://www.eff.org/deeplinks/

2013/05/hey-supreme-court-its-time-take-software-patents.

- "The issue of patentable subject-matter eligibility has been in considerable flux. Currently, it's unclear whether adding computer limitations to an otherwise unpatentable concept somehow renders the concept patent eligible. The Federal Circuit tried to settle this question when the entire court heard *CLS Bank Int'l v. Alice*, 717 F.3d 1269 (Fed. Cir. 2013). But the judges could not find common ground and the decision contained seven separate opinions reflecting at least three distinct approaches. Now it has been suggested that the *CLS Bank Int'l* provided the lower courts with absolutely no guidance." Bernard Chao, *Interpreting* CLS Bank Int'l v. Alice, PATENTLY-O BLOG (Sept. 3, 2013, 3:08 PM), http://www.patentlyo.com/patent/2013/09/interpreting-cls-bank-intl-v-alice.html.

- "If anything, the court's fragmented decision creates further confusion in an area of patent law already mired in conflicting, confusing, and often contradictory precedents." *Unclear If* CLS Bank v. Alice *Really Will Be the "Death of Hundreds of Thousands of Patents,"* DORSEY & WHITNEY LLP (May 22, 2013),http://www.dorsey.com/eu_ip_cls_bank_alice_patents/.

- "In the end, patentees are still without a solid answer as to how far Section 101 reaches to disqualify software or business-method patents as 'abstract ideas.'" Brie L.B. Buchanan and Angela Holt, CLS Bank v. Alice Corp.*: Section 101 Patent Eligibility: New Federal Circuit Decision Clarifies Nothing*, BRADLEY ARANT BOULT CUMMINGS LLP (May 24, 2013), http://m.babc.com/cls-bank-v-alice-corp-section-101-patent-eligibility-new-federal-circuit-decision-clarifies-nothing-05-24-2013/.

II. Since *CLS Bank v. Alice* Was Decided, There Have Already Been Irreconcilable Decisions at the Federal Circuit and the USPTO.

A. Different Panels at the Federal Circuit Apply Different Patentability Standards to Computer-Implemented Inventions After *CLS Bank v. Alice*.

Recent decisions of the Federal Circuit, subsequent to the en banc decision in this case, further highlight the need for this Court to grant *certiorari* in this case. The outcomes in these cases and the rationale used by the different panels are irreconcilable. In one instance, after this Court granted *certiorari*, vacated, and remanded a previous Federal Circuit decision, the Federal Circuit panel in *Ultramercial* held on remand that method claims directed to monetizing and distributing copyrighted products over the Internet are patentable under Section 101. *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335 (Fed. Cir. 2013), *petition for cert. filed*, 2013 WL 4495981

(U.S. Aug. 23, 2013) (No. 13-255). The approach of the *Ultramercial* panel tracks in several significant respects the approaches of Chief Judge Rader and Judges Linn, Moore, O'Malley, and Newman in *CLS Bank v. Alice*. The court rejected the idea of dissecting the claim and ignoring "old elements" that are routine or conventional. *Id.* at 1344. Notably, the court recognized "that any claim can be stripped down, simplified, generalized, or paraphrased to remove all of its concrete limitations, until at its core, something that could be characterized as an abstract idea." *Id.*

However, in another recent decision, the majority of another Federal Circuit panel appears to have used a different approach than the *Ultramercial* panel. *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, No. 11-1486, 2013 WL 4749919 (Fed. Cir. Sept. 5, 2013). The approach of the *Accenture* majority tracks in several significant respects the approaches of Judges Lourie, Dyk, Prost, Reyna, and Wallach in *CLS Bank v. Alice*. In this case, the court affirmed a decision finding a claim directed to a computer-implemented system for generating tasks based on rules to be completed upon the occurrence of an event ineligible under Section 101. The majority used a "preemption analysis" to determine whether "additional substantive limitations . . . narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself." *Id.* at *4 (alteration in original). The *Accenture* majority determined that the claim preempted the abstract idea of "generating tasks [based on] rules . . . to be completed upon the occurrence of an event" and therefore, held that the claim

was patent ineligible. *Id.* at *8 (alterations in original). In reaching its conclusion, the majority dissected the claim and ignored certain elements. This contradicts the holding in *Ultramercial*. Again, the *Accenture* majority did not define what it means to be an "abstract idea," or why the non-computer elements of the claims at issue were being deemed as directed to an "abstract idea."

Notably, the Chief Judge dissented in *Accenture*, stating that: "The claims require a specific combination of computer components, including an insurance transaction database, a task library database, a client component, and a server component that includes an event processor, task engine, and task assistant." *Id.* at *11. The Chief Judge criticized the majority for "strip[ping] away" limitations and focusing on the purported abstract idea "at the heart" of the claim. *Id.* at *12.

B. The USPTO Applies Yet Another Patentability Standard to Computer-Implemented Inventions After *CLS Bank v. Alice*.

The USPTO has taken its own approach to the patent eligibility of computer-implemented inventions. For instance, in a recent post-grant review decision from the Patent Trial and Appeal Board (PTAB), *SAP America, Inc. v. Versata Development Group, Inc.*, 107 U.S.P.Q.2d 1097, 1108 (PTAB Jun. 11, 2013), the USPTO declared that "the key question is, therefore, whether the claims do significantly more than simply describe the law of nature or abstract idea." Notably, the claims at issue in *Versata* were not directed to a law of nature, natural phe-

nomenon, or mathematical formula. Nonetheless, the USPTO applied authority from this Court's cases that addressed claims directed to a law of nature, natural phenomenon, or mathematical formula. The USPTO held that

> each of the challenged claims involves the use of an abstract idea: determining a price using organizational and product group hierarchies, which are akin to management organizational charts. The concept of organization hierarchies for products and customers is abstract as it represents a disembodied concept, a basic building block of human ingenuity.

Id. at 1110.

The USPTO then held that the claims merely add insignificant, conventional and routine steps that are implicit in the abstract idea itself. *Id.* at 1111. As such, the USPTO held that the claim was patent ineligible.

III. The Decision Below Casts Doubt on Thousands of Patents, Including the Rapidly Growing Number of Computer-Implemented Inventions.

The confusion created by the conflicting camps at the Federal Circuit presents a significant issue impacting many businesses. The current confusion will have many negative impacts on business, including unpredictability at the USPTO regarding which patents it will not allow based on Section 101, un-

predictability in litigation (including litigation involving patents that issued many years ago), unpredictability in new and old licensing transactions and the inability of businesses to efficiently allocate resources to research and development. As noted by Judge Newman in one of the six *CLS Bank v. Alice* opinions:

> Today's irresolution concerning section 101 affects not only this court and the trial courts, but also the PTO examiners and agency tribunals, and all who invent and invest in new technology. The uncertainty of administrative and judicial outcome and the high cost of resolution are a disincentive to both innovators and competitors.

Alice, 717 F.3d at 1321 (Newman, J., dissenting in part).

An ultimate decision on the appropriate test for Section 101 will impact many patents. As noted by Judge Moore in her dissenting-in-part opinion:

> And let's be clear: if all of these claims, including the system claims, are not patent-eligible, this case is the **death of hundreds of thousands of patents, including all business method, financial system, and software patents as well as many computer implemented and telecommunications patents**.
>
> . . . .

> If all of the claims of these four patents are ineligible, so too are the 320,799 patents which were granted from 1998-2011 in the technology area "Electrical Computers, Digital Processing Systems, Information Security, Error/Fault Handling." Every patent in this technology category covers inventions directed to computer software or to hardware that implements software. In 2011 alone, 42,235 patents were granted in this area. This would render ineligible nearly 20% of all the patents that actually issued in 2011. If the reasoning of Judge Lourie's opinion were adopted, it would decimate the electronics and software industries. There are, of course, software, financial system, business method and telecom patents in other technology classes which would also be at risk. So this is quite frankly a low estimate. **There has never been a case which could do more damage to the patent system than this one.**

Alice, 717 F.3d at 1313 & n.1 (Moore, J., dissenting in part) (emphasis added) (citations omitted).[5] *Amici* note that Judge Moore's statement above actually understates the potential impact of the *CLS Bank v. Alice* decision. The art unit cited by Judge Moore handles just a small number of the total number of

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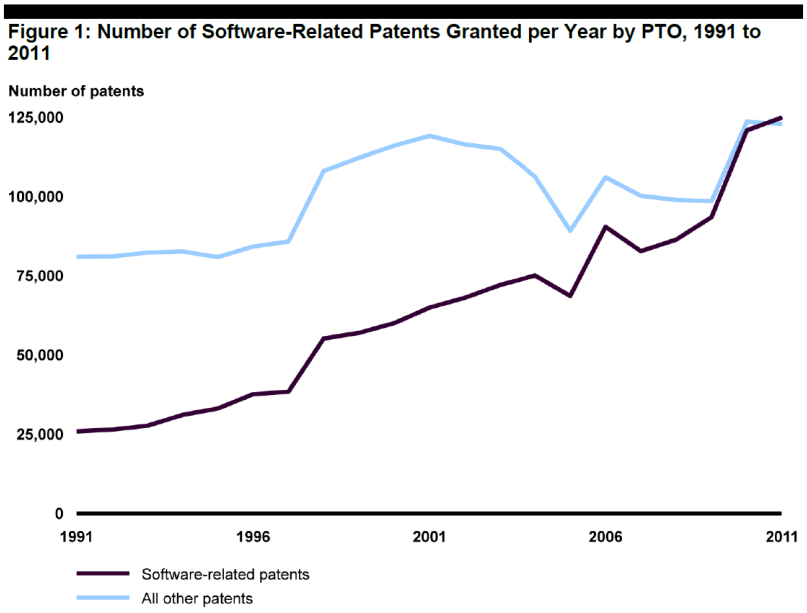
[5] *Amici* express no opinion in the present brief regarding the correctness of Judge Moore's belief that the en banc decision invalidated any patents other than the ones at issue in that particular case.

patents involving software. Furthermore, Judge Moore does not take into account the impact that a definition of "abstract" will have on non-computer-related inventions.

It is important for all parties, including inventors, companies who own patents, entities accused of infringing patents, investors, the USPTO, and the courts, to have clear guidance on the metes and bounds of patent-eligible subject matter. Under the current state of the law, Section 101 will become a litigated issue in at least every lawsuit involving a patent with a method claim and the outcome of each lawsuit on this issue will be impossible to predict. Without clarity, it is nearly impossible for businesses and individuals to make well-informed decisions on issues that implicate the development or use of computer-implemented inventions. This includes all aspects of patent strategy such as conducting research and development, whether to invest in the underlying technology, whether to file a patent application, whether to continue paying maintenance fees on an issued patent, whether to invest in a company relying on protecting its innovations with patents, and whether to license a company's patent or challenge the patent in the court systems.

Over the past twenty years, the number of computer-implemented inventions in the United States has grown at a significant pace relative to other types of inventions, as reflected in the relative growth of patents claiming computer-implemented inventions. This growth trend was recently highlighted in a report by the United States Government Accountability Office (GAO), which showed that ap-

proximately 50% of all granted patents are software-related.[6]



Regardless of whether a company supports or opposes defining "abstract" to encompass computer-implemented inventions, how the bounds of 35 U.S.C. § 101 are defined will have a drastic impact on a significant cross-section of U.S. patents. In addition, the confusion created by the Federal Circuit also impacts many more patents than just those claiming computer-implemented inventions. The meaning

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[6] U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-465, INTELLECTUAL PROPERTY: ASSESSING FACTORS THAT AFFECT PATENT INFRINGEMENT LITIGATION COULD HELP IMPROVE PATENT QUALITY 12 (2013), *available at* http://www.gao.gov/assets/660/657103.pdf.

of "abstract" will impact many patents that do not recite computer elements, such as patents directed to biotechnology and surgical procedures and to methods of playing novel and non-obvious games.

IV. *CLS Bank v. Alice* Is the Best Vehicle for this Court To Address the Scope of Patentability Under Section 101.

Amici realize that there is a pending petition for *certiorari* from another Federal Circuit case that addresses the patentability of computer-implemented inventions under Section 101.[7] Furthermore, on or before November 8, 2013, *Amicus* Bancorp plans to file a petition regarding its own patents that addresses similar issues.[8] *Amici* respectfully submit that Alice's Petition presents the best vehicle for resolving these issues.

First, *Ultramercial* and *Bancorp* each were the result of decisions from a single panel of three judges at the Federal Circuit. On the contrary, *CLS Bank v. Alice* was an en banc case that includes the viewpoints of all camps at the Federal Circuit.

Second, *Bancorp* was decided without the benefit of any of the viewpoints expressed in *Alice*, and *Ultramercial* was decided based upon the analysis of

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[7] *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335 (Fed. Cir. 2013), *petition for cert. filed*, 2013 WL 4495981 (U.S. Aug. 23, 2013) (No. 13-255).

[8] *Bancorp Servs., LLC v. Sun Life Assurance Co.*, 687 F.3d 1266 (Fed. Cir. 2012), *appeal docketed*, No. 13A185 (U.S. Aug. 13, 2013). (Application (13A185) granted by the Chief Justice extending the time to file until November 8, 2013.)

only one of the six viewpoints expressed in *Alice* – Judge Lourie's plurality. On the contrary, granting the petition in this case will allow this Court to review the most recent viewpoints of all members of the en banc Federal Circuit.

Third, *Ultramercial* only addressed the patentability of a computerized method claim, not the patentability of a tangible computer system or computer-readable medium. On the contrary, like Bancorp, Alice has asserted the full range of computer-implemented inventions that cover the three main categories of patent-eligible subject matter – computerized method claims, computer-readable medium claims and system claims requiring computer hardware. Because Alice's Petition raises the patentability of all three forms of computer-implemented inventions, the other petitions raising the same or similar issue, including Bancorp's forthcoming petition, should be held in abeyance for further consideration in light of this Court's decision in the present case. *Lawrence v. Chater*, 516 U.S. 163, 166-67 (1996); *see also WildTangent, Inc. v. Ultramercial, LLC*, 132 S. Ct. 2431 (2012) (utilizing "GVR" order in a Section 101 case).

CONCLUSION

Amici urge this Court to grant Alice's Petition to bring clarity to the meaning of "abstract" under Section 101 and to resolve when claims to computer-implemented inventions (that are not directed to a law of nature, natural phenomenon or mathematical formula) are patent-eligible subject matter within the meaning of 35 U.S.C. § 101.

Respectfully submitted,

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October 7, 2013

APPENDIX

LIST OF *AMICI CURIAE*

Amicus Trading Technologies International, Inc. ("TT"), founded in 1994, makes derivatives trading software and execution solutions for professional traders. TT's software is purchased by premier investment banks, brokers, Futures Commission Merchants, hedge funds, proprietary trading firms and other trading institutions and is used each day by thousands of traders to access dozens of electronic exchanges around the world. TT is headquartered in Chicago and employs approximately 450 people worldwide. TT has additional offices in New York, Stamford, Houston, Sao Paulo, London, Geneva, Frankfort, Singapore, Hong Kong, Tokyo, and Sydney. TT invests heavily in research and development and has obtained patents covering various features of its products. TT relies on its patents to protect its investment in research and development. Most of TT's patents are directed to computer-implemented inventions and many of its patents are directed to novel software-implemented tools used by traders to execute and manage orders.

Amicus CME Group Inc. ("CME"), a publicly traded company, is the world's leading and most diverse derivatives marketplace. The company is comprised of five Designated Contract Markets ("DCMs"): CME, CBOT, NYMEX, COMEX, and KCBT. While CME is headquartered in Chicago, its 2800 employees are located across North and South America, Europe, and Asia. The CME invests heavily in R&D and has developed innovative products and technology. The CME relies on patents, including

many directed to computer-implemented inventions, to protect its innovations.

Amicus Bancorp Services, LLC ("Bancorp"), founded in 1993, assists large financial institutions and Fortune 500 companies by developing innovative structured financial products to meet the unique needs of its clients. The USPTO has granted Bancorp patents on novel computer systems, media, and processes that administer those complex financial products with automated functionality requiring specially programmed computers. Bancorp has placed and currently services and administers structured financial products, with particular emphasis on specialized computer administration platforms. Bancorp's patented computer administration systems are specifically designed to support daily valuation and other automated functionality for hedge funds, nonqualified deferred compensation plans, and separate account life insurance policies with stable value protection.

Amicus Regulatory DataCorp ("RDC") commenced operations in July 2002, as the only compliance company created by the financial services sector. Based on an exclusive license to over two dozen patents, many of which received accelerated examination in the United States Patent and Trademark Office as inventions to combat terrorism, RDC was formed as an industry-owned venture to develop technologies and systems that deliver sophisticated data-aggregation services to combat global threats posed by money laundering, fraud, corruption, organized crime, suspicious activities, and terrorist financing. Under these patents, RDC has developed

processes to help firms identify and determine the risk-relevance of, and resulting actions required for, certain parties attempting to engage in transactions via the international banking and financial system. This patented, risk management technology enables the real-time collection of in-depth, risk-relevant, continually and automatically updated data aggregated from over 15,000 public sources. And since RDC's inception just over a decade ago, these technologies have powered the growth of RDC's "GRID" (Global Regulatory Information Database) from 2 million records, to over 20 million and – growing by approximately 7000 records daily.

Patents (and in particular, patents directed to computer-implemented inventions) are important to RDC because the GRID database and RDC's related processes are predicated on publicly available information. RDC's modeling and detection processes are designed to help prevent suspect transactions from otherwise hiding in plain sight. Without patents, RDC would have been unable to attract investment and continue to develop and implement technologies to stay ahead of the endless creativity of those conducting illicit transactions. Particularly in the highly regulated and technology interconnected worlds of global banking and finance, as cash disappears and digital currency becomes ubiquitous, firms must be permitted to develop – and ultimately patent-protect – their inventions. The very fact of RDC's founding, and indeed its continued operation and attraction of investment, provides a powerful example of the need for a patent system that is flexible enough – and laws that are clear enough – to incentivize and pro-

tect emerging technologies in a dynamic and high-stakes environment.

Amicus CoreLogic (NYSE: CLGX) is a publicly traded company headquartered in Irvine, CA, with over 5,000 employees worldwide. CoreLogic is a leading property information, analytics and services provider in the United States and Australia. The company's combined data from public, contributory and proprietary sources includes over 3.3 billion records spanning more than 40 years, providing detailed coverage of property, mortgages and other encumbrances, consumer credit, tenancy, location, hazard risk and related performance information. The markets CoreLogic serves include real estate and mortgage finance, insurance, capital markets, transportation and government. CoreLogic delivers value to clients through unique data, analytics, workflow technology, advisory and managed services. Clients rely on CoreLogic to help identify and manage growth opportunities, improve performance and mitigate risk. CoreLogic relies on patents, amongst other intellectual property, to protect its innovations and investments in R&D and has various U.S. patents and patent applications covering computer-implemented innovations in its products.

Amicus Aristocrat Technologies Australia Pty. Ltd. ("Aristocrat"), is an Australian-based and publically listed company that employs approximately 800 people in the United States and over 2,000 people across the globe. Aristocrat is a leading manufacturer and supplier of gaming equipment to the casino industry and has major operations in the US, Canada, South America, Europe, Asia and Australia. The

gaming industry is an extremely competitive industry and one that requires relentless product innovation in order to remain competitive. Because of this, Aristocrat invests significant resources into its R&D activities. With a global patent portfolio exceeding 1000 issued patents and pending applications, Aristocrat's future is dependent on a robust and enforceable patent portfolio that maximizes the commercial return on its R&D investment.

Amicus Casino Gaming, LLC is a Chicago-based company that develops and licenses novel games to casinos, equipment manufacturers and online wagering sites. The company relies on patents to protect its innovations.

Amicus Charles River Analytics Inc. ("Charles River"), which was founded in 1983, applies computational intelligence technologies to develop mission-relevant tools and solutions to transform customers' data into knowledge that drives accurate assessment and robust decision-making. Charles River is headquartered in Boston and employs around 130 people. Charles River continues to grow its technology, customer base, and strategic alliances through research and development programs for the Department of Defense and the Intelligence Community, addressing a broad spectrum of mission areas and functional domains, including: sensor and image processing, situation assessment and decision aiding, human systems integration, and cyber analytics. These efforts have resulted in a series of successful products that support continued growth in its core R&D contracting business, as well as the commercial sector. Charles River became an employee-owned com-

pany in 2012, to set the stage for the next generation of innovation, service, and growth. Charles River owns ten patents that protect its innovations.

Amicus Architecture Technology Corporation ("ATCorp") is a high technology small business engaged in research, development, engineering, and services. ATCorp employs approximately 100 people at three different locations in the United States. ATCorp's software-intensive solutions provide government and commercial clients with the flexibility to "customize" new, existing, and legacy systems with features that meet or exceed their next generation requirements. ATCorp has developed innovative software-based products and has distributed them to thousands of users worldwide. ATCorp's Systems Engineering and Software Development groups specialize in specification, development, integration, and evaluation of high-performance, network-centric, safety-critical computing systems for the military and air traffic sectors. Due to the unique design and features of ATCorp software products, more than 15 patents have been granted since 2003. Government and commercial clients rely on ATCorp to provide key software components to next generation network systems providing advanced capabilities and protection against the growing threat of "cyber-attacks."

Amicus Great Lakes NeuroTechnologies Inc. (GLNeuroTech.com) understands that movement disorders, such as Parkinson's disease, represent a complex problem for patients, physicians, and researchers. Great Lakes NeuroTechnologies produces a line of bioinstrumentation products that includes

physiological monitors and patient-centered diagnostic and therapy systems integrated with wireless, remote, and web-based applications. By working together with customers, Great Lakes NeuroTechnologies ensures the delivery of high quality products that fit customers' clinical and research requirements. Great Lakes NeuroTechnologies' activities include R&D, engineering, manufacturing, distribution and the export of research systems and medical devices. It sells its products on all seven continents. Its major markets include physiological monitoring for research and education, movement disorders such as Parkinson's disease, telemedicine and in-home health monitoring. Customers include physicians, medical technicians, healthcare practitioners, researchers, universities, and hospitals. Great Lakes NeuroTechnologies has 26 employees, six issued patents with another about to be issued, eighteen U.S. pending applications, and six PCT applications. The company was incorporated in 2010.

Amicus Miramar Labs, Inc. ("Miramar") is owner of the miraDry System, a breakthrough non-invasive technology that utilizes microwave energy to safely eliminate underarm sweat. The miraDry System is the result of over five years of research and development, including a major long-term clinical study conducted by leading dermatologists across the United States. Miramar has over 80 employees and relies on patents to protect its computer controlled products.

Incorporated in 2007, *Amicus* NeuroWave Systems Inc. ("NeuroWave") is an ISO 13485 medical device company, dedicated to developing innovative,

state-of-the-art signal processing technologies for the next generation of brain monitors for improved and safer patient care. The NeuroSENSE® Monitor, the latest generation of brain monitors for patient-customized anesthesia and sedation, is now cleared for sale in markets recognizing the CE mark. NeuroWave's advanced brain monitors incorporate intelligent algorithms for the automated assessment of brain function for anesthesia/analgesia/sedation monitoring and seizure detection. New products for 1) real-time control and delivery of anesthetics and analgesics using electroencephalograms ("EEG") and 2) miniature EEG machines to help identify mild traumatic brain injury at the point of injury are being developed under United States Army and National Institutes of Health contracts. NeuroWave currently has eight employees, three patents with another about to be issued, twelve U.S. patents pending, and six PCT applications. Patents provide the bulk of the value of the company.

Amicus Flocel Inc. is a biotechnology company formed in 2004, dedicated to innovation towards helping the research community better conduct and advance *in-vitro* drug studies. In contrast to other available models of blood-brain barriers, Flocel's Dynamic In-Vitro Blood-Brain Barrier ("DIV-BBB") respects the anatomical aspects of the *in situ* endothelial cell-astrocyte interactions and replicates the physiological levels of shear stress to which *in situ* endothelial cells are exposed. The DIV-BBB allows formation of physiological transendothelial resistance, and formation of gap junctions that can be easily visualized by an electron microscope or determined experimentally with the use of tracers. Flocel

has one issued patent and three pending patent applications. Even though the technologies are based on cellular testing, they are implemented with computer-based controls and use data processing to implement the results.

Formed in 1990, *Amicus* Cleveland Medical Devices Inc. ("CleveMed") is leading the future in medical services and devices for portable sleep testing. From monitors for home sleep testing to full PSG, CleveMed aims to improve the delivery of care. Its web-based services and devices meet AASM guidelines, are easy for patients to use, streamline operations for healthcare providers, and offer-cost efficient solutions for payers. The company's SleepView product and service lowers the cost for an obstructive sleep apnea test by 75-90%, and the number of tests has been growing at 14% per month for two years. CleveMed has eighteen employees. The company has twelve patents and 23 pending patent applications covering computer hardware and software-based medical devices, data processing, and business methods. A large part of the company's valuation is based on these patents.

Amicus Orbital Research Inc. ("Orbital") was formed in 1990 and has seventeen employees. Orbital develops and commercializes new and innovative custom-engineered solutions using its expertise in Aerodynamic Control Systems, Medical Devices and Micro Electronic Devices for various commercial and military applications. Examples of Orbital's developments include new longer range, higher accuracy, lower cost weapons; chronic ECG electrodes and monitors; oxygen sensors used on high perfor-

mance aircraft; and low cost, high temperature (250C) electronics. Orbital has 42 issued patents and 36 pending patent applications. Algorithms, software, data processing, and computer hardware play a significant role in company valuation.

Amicus TIP Solutions, Inc. ("TIP") is a Chicago-based start-up software company that builds voice-focused software and firmware applications for smartphones. The company's mission is to change the way the world answers a phone call. TIP has multiple U.S. and international issued and filed patents that claim computer-implemented inventions used in the company's products. TIP relies on its patents to protect its innovations and as an important factor to attract investments in the company.

Amicus MONKEYmedia, Inc. ("MONKEYmedia") is a privately-held user interface design studio based in Austin, Texas. Founded in 1994, MONKEYmedia researches, develops, and sells software that facilitates human-computer interaction. Example technologies range from virtual force-feedback interfaces and telescopic video advertising to multi-channel interactive environments that embody novel cinematic paradigms. MONKEYmedia relies on patents that it has obtained to protect its innovations. MONKEYmedia has also licensed patents to other companies.

Amicus Chief Experience Officer, Inc. ("CXO") is a consulting firm that advises start-ups and Fortune 500 corporate executives in intellectual property strategy and the design and development of hardware & software products. CXO was founded in 2005 and has been responsible for establishing user expe-

rience strategies for technologies ranging from medical informatics, financial services, legal research and document management systems to touch screen remote controls, smartphones and other media-rich devices.

Amicus Horizon Digital Finance LLC ("HDF"), through multiple websites (including www.myautoloan.com, www.onehourfinance.com, www.preferreddealer.net, and www.mymotorcycleloan.com), is a Texas-based company that provides a direct-to-consumer, internet-based marketplace that helps consumers take control of the research, finance, and buy processes for automobiles, motorcycles, boats, recreational vehicles, home equity, and mortgages. HDF has been in business since 2003. HDF provides consumers with a secure, confidential process to obtain loan offers and provides a wide range of products and services to simplify the search for information and funding alternatives. HDF facilitates the matching of lenders based upon customer needs through a proprietary analysis and evaluation. These computer-implemented technologies and processes are protected by several U.S. patents (and pending applications) that are critical to the success and viability of HDF.

Amicus Extraordinary Re Holdings, Inc. ("XRe") is a start-up U.S. company that is creating technology to enable the liquid trading of insurance liabilities. XRe has two U.S. patents that protect the innovative methods used in its technology. Securing these patents has consumed a large part of the cost of starting the company. The patents have also been important in helping XRe raise capital. It is in XRe's

interest, as with other start-ups, that the law be clear with respect to what types of inventions are eligible for patentability.

Amicus DDB Technologies LLC ("DDB") is an Austin, Texas-based company that was formed in the late 1990's. DDB (and its predecessor Instant Sports, Inc.) is a pioneer in the design and development of, among other things, technology that enables the broadcasting of live sporting events to a viewer's computer to enable the viewer to watch a computer simulation of that sporting event. This computer-implemented technology was adopted by virtually every sports broadcasting company and sports league. DDB relies on numerous U.S. patents to protect its technology and to attract investments, and would not be in existence without these patents.

Amicus RedTxt.com.au Pty. Ltd. ("RedTxt") makes and sells SMS/TXT solutions for large and small communities. RedTxt's SMS/TXT solutions include, for example, publishing sporting event scores and advertising via SMS, an automated platform for sending Twitter messages to SMS, and a web-based platform that allows users to see in real-time the status of an SMS message. RedTxt has granted and pending U.S. Patents in the field of mobile applications that involve software and computers. Uncertainty in the law relating to patentability affects RedTxt's business strategies and therefore, shareholder value.