No. 13-298

IN THE

Supreme Court of the United States

ALICE CORPORATION PTY. LTD.,

Petitioner,

v.

CLS BANK INTERNATIONAL AND CLS SERVICES LTD.,

Respondent.

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

BRIEF OF PUBLIC KNOWLEDGE AND THE APPLICATION DEVELOPERS ALLIANCE AS *AMICI CURIAE* IN SUPPORT OF RESPONDENT

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INTEREST OF *AMICI CURIAE*

Public Knowledge is a non-profit organization that is dedicated to preserving the openness of the Internet and the public's access to knowledge; promoting creativity through balanced intellectual property rights; and upholding and protecting the rights of consumers to use innovative technology lawfully. As part of this mission, Public Knowledge advocates on behalf of the public interest for a balanced patent system, particularly with respect to new and emerging technologies.[1]

Public Knowledge has previously served as *amicus* in key patent cases. *E.g.*, *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238 (2011); *Bilski v. Kappos*, 130 S. Ct. 3218 (2010); *Quanta Computer, Inc. v. LG Elecs. Corp.*, 553 U.S. 617 (2008).

The Application Developers Alliance (ADA) is a non-profit industry association comprising more than 25,000 individual software developers and more than 135 companies who design and build applications ("apps") for consumers to use on mobile devices like smartphones and tablets. Apps run on software platforms, including Google's Android, Apple's iOS, and Facebook, and are sold or distributed through virtual stores like Google's Play Store. ADA is dedicated to meeting the needs of app developers as creators, innovators, and entrepreneurs, by delivering essential information and resources and

[1]Per Supreme Court Rule 37(6), no counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of the brief. No person or entity, other than *amici*, their members, or their counsel, made a monetary contribution to the preparation or submission of this brief. Per Rule 37(3)(a), consent has been granted for the filing of this brief, as indicated by the blanket consents from counsel for petitioner and counsel for respondents docketed December 11, 2013.

by advocating for public policies that promote the app ecosystem.

App developers are both central to innovation and vulnerable to the patent laws that surround innovation. By innovating rapidly and cheaply, app developers represent an increasingly robust force in the economy. The app economy is now globally valued at over $53 billion and has created approximately 466,000 jobs in the United States since 2007.[2] But many app developers, including ADA members, are struggling as a result of abusive patent assertion, especially that originating from patent assertion entities (PAEs). Such entities often assert overly broad patents, propounding unfounded infringement allegations and aggressive litigation threats, which deeply chill innovation.

Inconsistency and uncertainty in areas of patent law, such as subject matter eligibility, are enabling factors in PAE litigation, as they enable aggressive patent assertors to take improper, overbroad positions. *E.g.*, *Eon-Net LP v. Flagstar Bancorp*, 653 F.3d 1314, 1326–28 (Fed. Cir. 2011). This forces app developers to conclude that innovation is not worth the expensive baggage of defending against such claims, resulting in delays to and deficiencies in app development and overall innovation.[3] Thus, ADA and its members have a strong interest in this Court providing clarity in this area of patent law.

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[2]Andreas Pappas, VisionMobile Ltd., *App Economy Forecasts 2013–2016* (2013); Michael Mandel, *Where the Jobs Are: The App Economy* 13 (2012).

[3]*See, e.g.*, Colleen V. Chien, New Am. Found., *Patent Assertion and Startup Innovation* 17 (2013), http://www.newamerica.net/publications/policy/patent_assertion_and_startup_innovation.

SUMMARY OF ARGUMENT

Abstract ideas are not eligible for patenting because, as this Court has steadfastly maintained, certain fundamental subject matter must be fixed in the public domain, so that patents may serve their constitutional mandate to "promote the Progress of Science and the useful Arts." Being the basic tools of innovation, abstract ideas must remain available to the public; to do otherwise would impede innovation more than promote it.

The case today tests how far a patent may encroach on that valuable domain reserved to innovators, creators, and the public. Petitioner holds patents to computer technology. The patent claims at issue are lengthy and detailed, some with over two hundred words. But those claims actually cover very simple ideas. The verbose language is a mere facade masking basic concepts.

To demonstrate this, *amici* have implemented one of those 200-word claims—in only 7 lines of computer code.

This computer program implementation shows that the patent claims are directed to nothing more than an abstract idea implemented on a general-purpose computer, which should not be patent-eligible. To hold otherwise would contravene Court's precedent and undermine the rationale for unpatentability of abstract ideas. Such "abstract-idea-plus-computer" patents would be effective monopolies on the basic tools of innovation, a result that the Court has adamantly rejected.

To prevent further errors of this sort, *amici* identify points of clarification on the law of subject matter eligibility. Enunciating these specific points not only will correct the judgment below and guide the lower courts, but also will ensure that those valuable basic tools of innovation remain available to all.

ARGUMENT

This case presents the recurrent question of what constitutes patentable subject matter, particularly with regard to the fields of computer software and business methods. *Amici* address two aspects of this question as they relate to the present case. First, this brief shows that the patented claims at issue are directed to ineligible abstract ideas, by implementing one of those claims is used to assist in this demonstration. Second, in view of the fractured opinions of the Federal Circuit below, *amici* suggests principles for guiding the lower courts in deciding future cases.

I. The Claims at Issue Are Ineligible for Patenting Because They Preempt an Abstract Idea

The question presented is whether Petitioner's claims are directed to patent-eligible subject matter. Generally, "any new and useful process, machine, manufacture, or composition of matter" is eligible for patenting. 35 U.S.C. § 101 (2013). But three exceptional fields are nevertheless ineligible: laws of nature, physical phenomena, and abstract ideas. *E.g.*, *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012) (quoting *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)).

The claims of these patents, as with many patents in the computer technology field, are full of complex technical language. But these claims actually present vary basic concepts—so basic, in fact, that *amici* have prepared a seven-line computer program that implements all the features of one of the most complex claims. The program demonstrates that the claims recite not specialized, technical systems, but rather a broad, general, sim-

ple algorithm that reduces to nothing more than an abstract idea run on a computer. Because mere application of a general-purpose computer should not render an otherwise abstract idea patentable, *amici* urge the Court to find the present claims ineligible.

A. The Claims Can Be Implemented in Just Seven Lines of Computer Code

Much of the disagreement in the lower court's fractured decision stemmed from a disagreement over the nature of the patent claims at issue. Judge Lourie, writing for five judges, found the claims to recite "a handful of computer components in generic, functional terms that would encompass any device" and unduly preempt an abstract idea. *See CLS Bank Int'l v. Alice Corp.*, 717 F.3d 1269, 1290 (Fed. Cir. 2013) (en banc). Judge Rader, writing for four judges, found those same claims narrowly tailored, "limited to an implementation that includes at least four separate structural components" rendering the claim patent-eligible. *See id.* at 1307.

The claims at issue do use technical-sounding, complex language, making them appear to be directed to a narrowly tailored invention. One of the claims at issue recites, among other things, a "communications controller," a "data storage unit," and an "instruction being an irrevocable, time invariant obligation." U.S. Patent No. 7,725,375 claim 26, cols. 66–67 (filed June 27, 2005).[4]

[4]Claim 26 of the '375 Patent is considered in this brief because it was found patentable by the greatest number of judges of the lower court decision. *See CLS Bank*, 717 F.3d at 1309 (Rader, Linn, Moore & O'Malley, JJ.); *id.* at 1327 (Newman, J.). *Amici* could have easily used any other claim at issue. For reference, Claim 26 is reprinted in Appendix B *infra* p. 8a.

But beneath this veneer of technical language is a very simple, basic idea being patented. As a demonstration, the computer program shown in Figure 1 implements all the features of Claim 26 of the '375 Patent. A complete explanation of the working of this program as it relates to Claim 26 of the '375 Patent is presented in Appendix A *infra* p. 1a.

As the Court will observe, the computer program is only seven lines long, indicating that the verbose language of the claims does not in fact demand specific, particular implementations but rather expansively preempts all uses of a simple, basic idea. A seven-line computer program is remarkably simple in comparison to ordinary computer programming:

- A single page of the Supreme Court's website is 926 lines long, including 145 lines of computer code.[5]
- A fourteen-year-old wrote an iPhone app with over 11,000 lines of code.[6]
- The computer program that formatted the citations and table of authorities of this brief is 7,932 lines long.[7]

Certain judges below were misled by the language of the claims and the patent. Judge Rader believed that Claim 26 involved "a complex problem" that could only be solved with a specialized system with "at least four separate structural components." *CLS Bank*, 717

[5] *Supreme Court of the United States* (last updated Feb. 21, 2014), http://www.supremecourt.gov/.

[6] Taylor Buley, *World's Youngest iPhone App Developer?*, Forbes, Mar. 30, 2010, http://www.forbes.com/2010/03/30/apple-iphone-developer-technology-teenager.html.

[7] That program, which was written by counsel of record to this brief, is available at https://github.com/charlesduan/alice-brief.

```
10 LET account1 = 200.00
20 LET account3 = 300.00
30 INPUT "Value to exchange for transaction"; exchange
40 IF account1 < exchange THEN PRINT "Inadequate
     value" : STOP
50 account1 = account1 − exchange
60 account3 = account3 + exchange
70 PRINT "Instruction to 1st institution: adjust 2nd
     account by "; −exchange
```

Figure 1: Implementation of Claim 26 of the '375 Patent.

F.3d at 1307. He reviewed the "at least thirty two figures which provide detailed algorithms" to conclude that "[l]abeling this system claim an 'abstract concept' wrenches all meaning from those words." *Id.* at 1309. Judge Moore similarly found a similarly-worded claim "limited to one that is configured to perform certain functions in a particular fashion" and, based on one of the flowcharts, she suggested that the claims demanded a dizzyingly long and complex algorithm. *Id.* at 1318. And Judge Linn concluded that, while they may be based on an abstract idea, "the claims here are directed to very specific ways of doing that." *Id.* at 1741.

The common thread among all of these judges is an assumption that, given the heavy use of technical language in the specification and claims, only a specific, complex, technical computer program could infringe the patents. As the above seven-line computer program demonstrates, this assumption was in error.

The computer program devised by *amici* reads the claim as a whole, as this Court requires. *See Diamond v. Diehr*, 450 U.S. 175, 188 (1981). As the detailed appendix shows, every claim limitation is considered and implemented appropriately in the computer code, so it cannot be said that details or limitations have been stripped from the claim. *See* Appendix A *infra* p. 1a; *cf. Diehr*, 450 U.S. at 188 ("It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis."). Furthermore, because the computer program is a functional, working implementation of the claim, it cannot be argued that it is a mere abstraction or generalization of the claims.

Thus, Claim 26 of the '375 Patent is directed not to a complex system requiring specialized hardware, but rather to a basic, seven-line computer algorithm.

B. The Claims Cover All Computer Implementations of an Abstract Idea

The example computer program shows that the asserted claims, though lengthy and technical in appearance, are actually directed only to a very simple, basic computer procedure. *Amici* now proceed to use this example computer program to show that the asserted claims are directed only to the abstract idea of accounting by a third-party escrow.

This Court's precedent lays out several guidelines for determining whether a claim is directed to an abstract idea. "A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented." *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (quoting *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1853)). Furthermore, "conventional or obvious" post-solution or pre-solution activity cannot render a claim eligible, because otherwise "a competent draftsman could attach some form of post-solution activity" to "transform an unpatentable principle into a patentable process." *Parker v. Flook*, 437 U.S. 584, 590 (1978); *see also Mayo*, 132 S. Ct. at 1300 (holding "conventional steps, specified at a high level of generality," to similarly not confer patent eligibility).

Following these guidelines, *amici* will analyze Claim 26, line by line, to determine that every claim element is (1) an inherent aspect of the abstract idea of third-party escrow, (2) a conventional component of a general-purpose computer, or (3) insignificant pre- or post-solution activity. Thus, following this Court's precedent, *amici* will have shown the claim to be ineligible.

Elements[8] 1–2 of the claim describe ordinary compo-

[8]Elements will be referenced by numbers corresponding to the

nents of a general-purpose computer. *See* Appendix A *infra* p. 2a. The "communications controller" and "first party device" are broad, general terms that encompass basic computer components for interacting with users.[9] Furthermore, these two components are only recited in conjunction with a step of receiving data, which as explained below is insignificant pre-solution activity.

Elements 3–5 describe basic record-keeping operations inherent in the idea of third-party escrow. Although the claim language verbosely describes a "data storage unit" with "information about a first account" and second account, the computer program demonstrates that these elements in fact require nothing more than recording two numbers in a computer. *See* Appendix A *infra* p. 3a. Certainly one would necessarily store such account information as part of an escrow service.[10]

Element 6 recites "a computer," and as such only further describes a general-purpose computer.

Element 7 states that the computer must "receive a transaction." This Court and others have repeatedly held that steps of obtaining data to be used for processing constitute insignificant pre-solution activity. *See, e.g.*, *Mayo*, 132 S. Ct. at 1297–98 (treating as pre-solution activity a step of determining a level of metabolites prior to adjusting a treatment); *In re Meyer*, 688 F.2d 789, 794 (C.C.P.A.

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claim reprinted in the appendix. *See* Appendix B *infra* p. 8a.

[9] *See* Alan M. Turing, *On Computable Numbers, with an Application to the* Entscheidungsproblem, 42 Proc. London Mathematical Soc'y 230, 231–32 (1936) (describing the Turing machine, a fundamental model for all computers, as including a "paper tape" for communicating with the user).

[10] The "data storage unit" is an essential part of a general-purpose computer. *See* Turing, *supra*, at 231–32 (further explaining that the Turing machine includes an *m*-configuration for storing the state of the machine).

1982) ("[A] data gathering step . . . cannot make an otherwise nonstatutory claim statutory."). As such, this claim element does not contribute to the eligibility of the claim.

Element 8 describes two steps to be performed by the computer, both of which are inherent in the idea of third-party escrow. First, the computer is tasked with "ensuring that said first party and/or said second party have adequate value" in their accounts. The computer code shows that this amounts to nothing more than a comparison, checking whether an account balance is greater than an amount to be transferred out of that account. *See* Appendix A *infra* p. 5a. This is the basic purpose of a third-party escrow broker, who must ensure that the parties' accounts contain sufficient funds.

Second, element 8 requires the computer to "electronically adjust said first account and said third account." This operation, which amounts to only two lines of computer code, is inherent in any third-party escrow service, which must adjust account balance records to account for a transaction.

Element 9 instructs that the computer "generate an instruction to said first exchange institution and/or said second exchange institution to adjust said second account and/or said fourth account." Despite the fifty-nine-word length of this element, it reduces to a single operation: printing out a message describing the transaction that was just completed. *See* Appendix A *infra* p. 6a. This elementary output step is quintessential post-solution activity that should not contribute to the eligibility of the claim. *Cf. Flook*, 437 U.S. at 590 (treating as post-solution activity a step of adjusting an alarm limit in response to a computation).

This claim is directed to nothing more than an abstract idea of third-party escrow, in conjunction with

insignificant pre-solution and post-solution activity, and ordinary—albeit verbosely described—components of a general purpose computer. This Court should accordingly hold the claim, and others like it, unpatentable.

C. Claims that Preempt Substantially All Computer Implementations of an Abstract Idea Should Be Ineligible

In the claims at issue, the Court should hold that the recitation of a general-purpose computer does not render the claims eligible under § 101. This follows, first, from the goal of promoting innovation that lies at the heart of the Court's § 101 doctrine, and second, from the rules of law the Court has derived from these principles.

The abstract ideas exception is grounded in the principle that certain fundamental subject matter must be fixed in the public domain, so that patents may serve their constitutional mandate to "promote the Progress of . . . the useful Arts." U.S. Const. art. 1, § 8, cl. 8. Abstract ideas are unpatentable because they are "the basic tools of scientific and technological work," *Benson*, 409 U.S. at 67, and must remain "free to all men and reserved exclusively to none," *Bilski v. Kappos*, 130 S. Ct. 3218, 3218 (2010) (quoting *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948)). "[M]onopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it." *Mayo*, 132 S. Ct. at 1293; *accord Bilski*, 130 S. Ct. at 3228 (patent law must avoid "granting monopolies over procedures that others would discover by independent, creative application of general principles").

Permitting patents on abstract ideas merely tied to general-purpose computers would eviscerate this principle. Computers are in widespread use today, and they

are essential to innovation and a productive economy. *See, e.g.*, Erik Brynjolfsson & Adam Saunders, *Wired for Innovation: How Information Technology Is Reshaping the Economy* 4 (2010). Allowing patents on abstract ideas merely tied to computers would relegate innovators to practicing abstract ideas on pencil and paper. Needless to say, given the general importance of computers, such an absurd state of affairs would severely hamstring innovation. The basic tools of innovation must remain basic tools, available to all even when they are, or must be, implemented on general-purpose technologies.

As an analogy, consider a patent claim directed to long division performed with pencil and paper. Long division can, in theory, be practiced in the mind, but as a practical matter no ordinary person can do so. Thus, this pencil-and-paper patent would effectively make the abstract idea of long division unusable. Similarly, computers are capable of tasks that ordinary humans cannot perform unaided, even though those tasks may be abstract ideas. The public must be able to apply these abstract ideas to computers if those abstract ideas are to remain "free to all men and reserved exclusively to none."[11]

In view of this important principle, this Court has eschewed formalistic exegesis in favor of a practical analysis of the actual, effective scope of the claims. So, for example, "limiting the reach of the patent . . . to a particular technological use" does not render an abstract idea patentable. *Diehr*, 450 U.S. at 192 n.14. Nor does attachment of "post-solution activity," *Flook*, 437 U.S. at 584,

[11] Advances in computer hardware are of course themselves eligible for patent protection. *See CLS Bank*, 717 F.3d at 1292 (Lourie, J., concurring) (observing in dicta that computers *per se* are "surely patent-eligible machines"). Equally so would be advances in pencil technology. But these are distinguishable from mere annexation of abstract ideas to computers or pencils.

or recitation of "well-understood, routine, conventional activity previously engaged by researchers in the field," *Mayo*, 132 S. Ct. at 1300.

Based on this clear precedent, the Court should hold that attachment of a general-purpose computer does not render an abstract idea patentable, in the present claims or otherwise. Implementing an abstract idea in the form of an algorithm on a general-purpose computer is a "well-understood, routine, conventional activity," *id.*, that merely applies the algorithm in a "particular technological environment," *Bilski*, 130 S. Ct. at 3230 (quoting *Diehr*, 450 U.S. at 191–92). Any "competent draftsman" could append elements of a general-purpose computer to any algorithm. This case is distinguishable from *Diehr*, which found patentable an algorithm intimately tied to a specialized device, namely a rubber-curing machine, *see* 450 U.S. at 187, because unlike a rubber-curing machine, a computer is able to perform any possible algorithm or mathematical procedure. Thus, in the claims at issue, the recitation of a general-purpose computer should not render the claims eligible under § 101.

II. To Avoid Further Errors in the Lower Courts, the Court Should Proactively Clarify the Law of Patent Eligibility

The Supreme Court has taken numerous subject matter eligibility cases recently. It does so because the Federal Circuit is in a confused state about the law of § 101, primarily because a small faction of that court repeatedly applies incorrect analytical techniques to improperly find patents eligible even when this Court's precedents demand otherwise.

To clearly enunciate the law for the Federal Circuit and to prevent the need for further appeals, this Court

should explicitly reject those improper analytical techniques, some of which have been catalogued below.

A. Courts Should Not Rely on Specification Details to Evaluate Eligibility

In assessing whether a claim is ineligible under § 101, courts must consider the entire breadth of the claim. Claims directed to an abstract idea will still cover specific, concrete implementations of that abstract idea, so the mere fact that a claim covers a concrete implementation is no indicator that a claim is directed to eligible subject matter.

Nevertheless, certain judges of the Federal Circuit persistently err by relying on specific examples to find patent claims eligible. In the present case, the plurality opinion justified its finding that the system claims of the patents at issue were eligible, by selecting a complex-looking flowchart from the specification to point to the supposed complexity and concreteness of the claim. By doing so, they failed to contemplate the possibility that other, simpler, abstract ideas were *also* covered by that same claim—ideas such as the 14-line computer program presented in this brief.

Ironically, those same judges of the Federal Circuit criticize their opposed colleagues for failing to read the "claims as a whole." It is in fact those opposed colleagues who have actually read the claims as a whole, contemplating the vast scope of what they cover. It is that plurality of the Federal Circuit, instead, who fails to read the claims as a whole, focusing wrongly on specific examples and obfuscatory language that misleadingly make abstract ideas appear patentable.

B. System Claims Are No More Eligible for Patenting than Method Claims

The formalistic approach favored by some judges of the Federal Circuit lends to easy circumvention by clever patent drafting. For example, the suggestion that the method claims in the present case are ineligibile, while system claims directed to the same technology are eligible, simply encourages patent applicants to use system claims in order to skirt the abstract ideas test.

Granting such weight to mere formal drafting practices ignores the basic rationale behind the Supreme Court's exceptions to § 101. In explaining the basis for the three exceptions to § 101, this Court has applied the fundamental principle that patents must ultimately incentivize innovation. While patents on many inventions do serve this principle, patents to abstract ideas, laws of nature and physical phenomena would in fact deter innovation by taking away those "basic tools of research available to all."

Several judges of the Federal Circuit ignore this basic rationale. Judge Rader, for example, has intimated that the three exceptions to § 101 are essentially tautological, because one "cannot invent an abstract idea, law of nature or physical phenomenon" since they have been around the whole time.

This unduly narrow, formalistic view of the exceptions to § 101 fails to adequately protect the concerns about incentives for innovation explicitly relied upon by this Court. Under Judge Rader's view, mere addition of even the most insignificant step to an otherwise abstract method would suddenly make that abstract method patentable, because the combination would

not have existed before. The Court has specifically denounced this possibility, in holding numerous times that insignificant post-solution activity and pre-solution activity cannot render an otherwise abstract idea patentable.

See In re Johnson, 589 F.2d 1070, 1077 (C.C.P.A. 1978) ("*Benson* applies equally whether an invention is claimed as an apparatus or process, because the form of the claim is often an exercise in drafting.") (quoted in *In re Alappat*, 33 F.3d 1526, 1542 (Fed. Cir. 1994)).

C. Recitation of Details of a General-Purpose Computer Does Not Affect Eligibility

This Court should make clear that a clever draftsman cannot turn an abstract idea into patentable subject matter simply by reciting aspects of a general-purpose computer, regardless of the level of detail with which the claims describe the general-purpose computer. Several of the opinions below were unduly impressed by detailed, technical language that in fact recited nothing more than parts of a general-purpose computer, *supra* p. 6, and the Court should seek to counteract that position.

Consider a hypothetical ineligible claim to a method of performing long division using pencil and paper, as explained above. It would be possible to recite at length the physical attributes of the pencil and paper ("a pencil comprising a wooden shaft surrounding a cylindrical graphite barrel, the wooden shaft having a distal end including a rubber eraser, etc."). But such a recitation would affect neither the tendency of such a claim to effectively preempt use of an abstract idea, nor the ineligibility of the claim. Allowing patent eligibility to turn on this sort of insignificant detail "would make the determination of

patentable subject matter depend simply on the draftsman's art," a result that the Court should seek to avoid. *Flook*, 437 U.S. at 593.

Just as recitation of detail about a pencil should not confer patent eligibility, neither should recitation of detail about a general-purpose computer. Thus, language from the claims at issue, such as "data storage unit" and "communications controller," should not affect the ineligibility of the claims. The Court should reaffirm this point clearly.

One reason that the lower courts make this error is that they place undue reliance on the 1994 Federal Circuit decision *In re Alappat*. In that case, the lower court stated in dicta that "a general purpose computer in effect becomes a special purpose computer once it is programmed" with software. 33 F.3d 1526, 1545 (Fed. Cir. 1994),[12] Courts have used this statement to support a mistaken conclusion that recitation of general-purpose computer hardware can confer patent eligibility. *See, e.g.*, *CLS Bank*, 717 F.3d at 1305 (Rader, J.); *Ultramercial, LLC v. Hulu, LLC*, 722 F.3d 1335, 1353 (Fed. Cir. 2013).

This reliance on *Alappat* is mistaken because the Court's precedent regarding the abstract idea exception to § 101 does not turn on whether a computer is labeled "general purpose" or "special purpose."[13] It turns on whether a patented claim would preempt virtually all implementations of an idea, suppressing innovation along

[12] *Alappat* itself did not involve a general purpose computer, but rather a special form of oscilloscope. *Id.* at 1537.

[13] As Judge Archer noted in dissent in *Alappat*, a compact disc becomes special-purpose when music is recorded on it, but no patent should issue on such a "special-purpose compact disc." 33 F.3d at 1553–54.

the way. The Court should thus reject the continued reliance of the lower courts on this dicta from *Alappat*.

By ensuring that patent eligibility does not turn on formal drafting practices, such as recitation of system-style claims or inclusion of details of general-purpose computer hardware, the Court will take § 101 analysis from the metaphysical confusion that the lower courts have created, and return it to first principles. At the core of those first principles, which date back to the drafting of the Constitution, is the imperative that the toolbox of abstract ideas must remain available to all. It is these principles that should guide the Court's decision.

CONCLUSION

For the foregoing reasons, *amici* respectfully submit that the Court should affirm the district court.

Respectfully submitted,

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APPENDIX A

Implementation of Claim 26 of the '375 Patent in Seven Lines of Computer Code

The following seven-line computer program, written in the BASIC programming language, implements Claim 26 of the '375 Patent.[14]

---

10 LET *account1* = 200.00
20 LET *account3* = 300.00
30 INPUT "Value to exchange for transaction"; *exchange*
40 IF *account1* < *exchange* THEN PRINT "Inadequate value" : STOP
50 *account1* = *account1* − *exchange*
60 *account3* = *account3* + *exchange*
70 PRINT "Instruction to 1st institution: adjust 2nd account by "; −*exchange*

The text below reviews the elements of the claim in detail and explains how a general-purpose computer, running the above computer program, would satisfy all the elements of the claim. For convenience, the entirety of the claim is reprinted in the next appendix.

All of the computer programming techniques used here predate the patent. The earliest possible priority date of the patent is 1992. The BASIC language dates back to 1964. *See* Computation Ctr., Dartmouth Coll., *BASIC* (1964), *available at* http://bitsavers.trailing-edge.com/pdf/dartmouth/BASIC_Oct64.pdf. Thus, the computer

[14] A BASIC program interpreter to run this program is available at http://www.vintage-basic.net/.

techniques used in this brief were "well-understood, routine, conventional activity previously engaged in by researchers in the field" as of the priority date of the patent. *Mayo*, 132 S. Ct. at 1294; *cf. CLS Bank*, 717 F.3d at 1310 (Rader, J.) (asserting that the use of computers in the claims did not involve such conventional activity).

CLAIM 26, PREAMBLE:

A data processing system to enable the exchange of an obligation between parties, the system comprising:

The preamble recites that the claim covers a general purpose computing system, called a "data processing system" by the claim language. The recitation that the system is "to enable the exchange of an obligation" is a statement of field of use or intended use, which should not contribute to the scope of the claim. *See Bilski*, 130 S. Ct. at 3231 ("[L]imiting an abstract idea to one field of use . . . did not make the concept patentable."); U.S. Patent & Trademark Office, *Manual of Patent Examining Procedure* § 2103(I)(C) (8th ed., 9th rev. 2012) [hereinafter MPEP] (instructing that "statements of intended use or field of use" "may raise a question as to the limiting effect of the language in a claim").

CLAIM 26, ELEMENTS 1–2:

a communications controller,

a first party device, coupled to said communications controller,

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These elements recite general hardware inherent in a general purpose computer. A "communications controller" broadly refers to a component of a computer that receives and processes communications, and a "first party

device" could refer to any computer hardware.[15] A computer must communicate with its users in order to be useful, so these components are necessary to any computer.

CLAIM 26, ELEMENTS 3–5:

a data storage unit having stored therein

(a) information about a first account for a first party, independent from a second account maintained by a first exchange institution, and

(b) information about a third account for a second party, independent from a fourth account maintained by a second exchange institution; and

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COMPUTER CODE, LINES 10–20:

10 LET *account1* = 200.00

20 LET *account3* = 300.00

These elements of the claim simply require that a computer store two numbers representing account balances. The "data storage unit" might be any computer storage component, such as a hard disk or memory. The "information about" the first and third accounts broadly encompass any account information, such as an account balance.

The recitations that the information be stored "independent from" various accounts maintained by exchange

[15]Petitioner has at least once described the communications controller as a device "that allows communications over a wide-area network." Alice Corp. Pty. Ltd.'s Renewed Cross-Motion for Partial Summary Judgment as to Subject Matter Eligibility at 6, *CLS Bank Int'l v. Alice Corp.*, 768 F. Supp. 2d 221 (Dist. D.C. Sept. 22, 2010) (No. 1:07-cv-974) (Doc. No. 95). But the text of the patent belies that limited definition. *See* '375 Patent col. 7, ll. 46–57 ("A number of communications controllers . . . effect communications between the processing units and various external hardware devices . . . . A large range of communications hardware products are supported, and collectively are referred to as the stakeholder input/output devices." (reference numbers omitted)).

institutions are statements of intended use, which should not contribute to the patentability of the claim. Petitioners have never suggested that the external exchange institutions are necessary parties to infringement of their claims. Furthermore, so long as the two stored numbers reflect actual account balances in external banks, the "independent from" limitations are satisfied.

The computer code implements these elements of the claim by instructing a computer to store two account balances, into variables named *account1* and *account3*.

CLAIM 26, ELEMENT 6:

a computer, coupled to said data storage unit and said communications controller, that is configured to

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This element is simply further recitation of details about a general purpose computer. Any computer would necessarily be coupled to a data storage unit, so that it might access data for processing, and further be coupled to a communications controller, so that it may receive and output information.

CLAIM 26, ELEMENT 7:

(a) receive a transaction from said first party device via said communications controller;

COMPUTER CODE, LINE 30:

30 INPUT "Value to exchange for transaction"; *exchange*

According to this element, the computer receives a "transaction." An exchange of money between two accounts is one type of transaction, and Petitioners have used described an "exchange" as an example of a transaction. (Petr.'s Br. 7.) Thus, this element requires nothing

more than receipt of an instruction to transfer money between two accounts.

The computer code implements this element by requesting the user to input an amount of money to transfer between the first and third account. This is performed by the INPUT command. Upon running this line of code, a computer would print out the prompt message, and then await an outside user to enter a number indicating the amount of money to transfer. The amount to exchange is stored in a variable named *exchange*.

CLAIM 26, ELEMENT 8:

(b) electronically adjust said first account and said third account in order to effect an exchange obligation arising from said transaction between said first party and said second party after ensuring that said first party and/or said second party have adequate value in said first account and/or said third account, respectively; and

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COMPUTER CODE, LINES 40–60:

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40 IF account1 < exchange THEN PRINT "Inadequate
    value" : STOP
50 account1 = account1 − exchange
60 account3 = account3 + exchange
```

This element describes two operations. First, a computer must check that at least one of the accounts has a large enough balance to permit the desired transfer of money ("ensuring that said first party . . . ha[s] adequate value in said first account"). Second, the computer must record the transfer by adjusting the balances of the accounts ("electronically adjust said first account and said third account").

Note the substantial presence of inoperative language in this claim element. The recitation "in order to effect

an exchange obligation arising from said transaction between said first party and said second party" does nothing more than reiterate that the computer is transferring money between accounts. Furthermore, the claim recites that the computer must ensure "adequate value in said first account and/or said third account," and the disjunctive "and/or" means that the claim element is satisfied if only one of those accounts is checked. *See* MPEP, *supra*, § 2103(I)(C) ("Language that suggests or makes optional but does not require steps to be performed . . . does not limit the scope of a claim or claim limitation.").

The computer code implements the step of checking the account balances at line 40, which halts execution (with STOP) if the balance of *account1* is less than the amount to be exchanged. The code implements the step of effecting the transfer at lines 50–60, which deducts the amount to be exchanged from *account1* and adds that amount to *account3*.

CLAIM 26, ELEMENT 9:

(c) generate an instruction to said first exchange institution and/or said second exchange institution to adjust said second account and/or said fourth account in accordance with the adjustment of said first account and/or said third account, wherein said instruction being an irrevocable, time invariant obligation placed on said first exchange institution and/or said second exchange institution.

COMPUTER CODE, LINE 70:

70 PRINT "Instruction to 1st institution: adjust 2nd account by "; –*exchange*

This claim element requires only that a computer display an instruction to perform the desired transfer of money. The claim element recites "an instruction to said

first exchange institution and/or said second exchange institution," but the disjunctive "and/or" means that a single instruction suffices. Similarly, the recitation of an instruction "to adjust said second account and/or said fourth account" only requires an instruction with regard to a single account.

The requirement that the instruction be "an irrevocable, time invariant obligation" is merely a statement of intended use that should not contribute to the patentability of the claim. An instruction is simply a text, and the recipient of the instruction chooses whether to treat that text as irrevocable or time-invariant. Although this claim language could plausibly have been defined in the specification to require some sort of special format for the instruction, Petitioners have never identified any such special definition in any of their briefs to this Court, the Federal Circuit, or the district court,[16] and the text of the specification contains neither term outside of the claims. Furthermore, even if these terms did have some special meaning, it would only dictate the content of the instruction text, and content of text does not contribute to patentability.

The computer code implements this element by causing a computer to print an instruction to adjust the second account. The instruction directs the first institution to deduct the amount *exchange* from the account.

[16]The district court briefs reviewed are identified on the docket as Documents Nos. 53, 54, 68, 95, and 99. The Federal Circuit briefs reviewed are identified on the docket as Documents Nos. 22, 33, 41, and 194.

APPENDIX B

CLAIM 26 OF THE '375 PATENT

Numbers, in square brackets, have been inserted before each element of the claim, to assist in referring to claim elements within the brief.

A data processing system to enable the exchange of an obligation between parties, the system comprising:

[1] a communications controller,

[2] a first party device, coupled to said communications controller,

[3] a data storage unit having stored therein

[4] (a) information about a first account for a first party, independent from a second account maintained by a first exchange institution, and

[5] (b) information about a third account for a second party, independent from a fourth account maintained by a second exchange institution; and

[6] a computer, coupled to said data storage unit and said communications controller, that is configured to

[7] (a) receive a transaction from said first party device via said communications controller;

[8] (b) electronically adjust said first account and said third account in order to effect an exchange obligation arising from said transaction between said first party and said second party after ensuring that said first party and/or said second party have adequate value in said first account and/or said third account, respectively; and

[9] (c) generate an instruction to said first exchange institution and/or said second exchange

institution to adjust said second account and/or said fourth account in accordance with the adjustment of said first account and/or said third account, wherein said instruction being an irrevocable, time invariant obligation placed on said first exchange institution and/or said second exchange institution.