No. 13-255

IN THE

Supreme Court of the United States

WILDTANGENT, INC.,

Petitioner,

v.

ULTRAMERCIAL, LLC & ULTRAMERCIAL, INC.,

Respondents.

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

BRIEF FOR *AMICUS CURIAE* COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION IN SUPPORT OF PETITIONER

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BRIEF *AMICUS CURIAE* OF COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION IN SUPPORT OF PETITIONER

The Computer & Communications Industry Association (CCIA) submits this brief as *amicus curiae* in support of Petitioner WildTangent, and respectfully requests that the Federal Circuit be reversed.

INTEREST OF *AMICUS*[1]

The Computer & Communications Industry Association (CCIA) is a trade association dedicated to open markets, open systems, and open networks, whose members participate in the information and communications technology industries, ranging from small entrepreneurial firms to the largest in the business. CCIA members employ nearly one million people and generate annual revenues exceeding $200 billion.[2] CCIA members are substantially affected by the patent system and depend upon it to fulfill its constitutional purpose.

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1. Pursuant to this Court's Rule 37.6, *amicus* affirms that 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 this brief. No person other than the *amicus*, or its counsel, made a monetary contribution intended to fund the preparation or submission of this brief. The parties' letters consenting to the filing of this brief have been filed with the Clerk's office.

2. A complete list of CCIA's members is available online at http://www.ccianet.org/members.html.

SUMMARY OF ARGUMENT

The patent system is in crisis.

Today human thought and activity is commonly mediated by information technology. Ironically, the very power, versatility, and democratic nature of the information revolution has become a rapidly expanding source of risk, uncertainty, and liability – simply because its functional richness and many levels of abstraction are faced with hundreds of thousands of patents issued under the lax eligibility standards of the Court of Appeals for the Federal Circuit. Only a tiny fraction of these patents will be upheld in court, but few can afford to question them.

This fundamental problem was recognized in *Gottschalk v. Benson*, 409 U.S. 63 (1972), and implicitly in this Court's subsequent decisions. In a world in which everybody is a user of the same techniques, functions, and devices, questionable patents serve to attack not only producing companies but mere users of technology as well: retailers, hotels, small businesses, and individuals. The symptoms are graphically embodied in trolls – assertion specialists who take advantage of the vast miasma of abstract patents to surprise and threaten unknowing multitudes with exorbitant costs, risks, and distraction. The result is a failure of the disclosure function that patent law is intended to provide, while simultaneously rewarding speculation and strategic behavior.

The crisis is now fully on display in the general press, replete with accounts of nuisance assertions against thousands of businesses. For the first time in 47 years, the President has launched an initiative on patent reform,

and, for the very first time, with an economic analysis by three White House agencies.[3] But this Court's guidance is needed to clarify how deep the reach of the patent system extends into everyday life and the basic functionality of the information age.

Furthermore, the decision below reveals a sharp split within the Federal Circuit on the question of patent-eligibility of software. While about half of the court is clearly following this Court's guidance in *Bilski* and *Mayo*, several members of the Federal Circuit are using a test that results in nearly any software patent being eligible for patentability. Namely, the decision below used a test that considers a claim to be patent-eligible so long as it can be tied to a machine that must be specifically programmed to implement the claim. But because every software patent requires specific programming on some machine, this test reduces 35 U.S.C. § 101 to a near-nullity with respect to software. The lower court's decision is therefore inconsistent with this Court's decision in *Mayo*.

Only this Court can resolve the division within the Federal Circuit. Accordingly, WildTangent's petition for certiorari should be granted.

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3. Executive Office of the President, Patent Assertion and U.S. Innovation (June 2013), available at http://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf.

ARGUMENT

A. THE FEDERAL CIRCUIT IS SPLIT ON HOW TO DETERMINE PATENT-ELIGIBILITY OF SOFTWARE PATENTS

The Court of Appeals for the Federal Circuit ("Federal Circuit") is split almost down the middle with respect to determining patent-eligibility of software patents under 35 U.S.C. § 101. There are two conflicting approaches that the court has used: (1) the reasoning of this Court's decisions in *Bilski v. Kappos*, 130 S. Ct. 3218 (2010), and *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012); and (2) whether the claim is limited to a specific machine. This second approach ("the specific machine test") considers a claim to be limited enough if the machine requires complex programming to implement the claim, regardless of how specifically the machine itself is claimed. That is, a general-purpose computer (which is an abstract concept) that is programmed to implement the claim is patent-eligible under the specific machine test.

1. Federal Circuit Panel Decisions Since *Mayo* Are Split On The Standard For Patent-Eligibility Of Software

Since this Court's decision in *Mayo*, the Federal Circuit has issued four decisions on patent-eligibility of software or business method patents, and these decisions are nearly impossible to reconcile. Moreover, when the Federal Circuit recently sat *en banc* to consider patent-eligibility of software, it was unable to reach a majority opinion. Only this Court can resolve this division within the Federal Circuit.

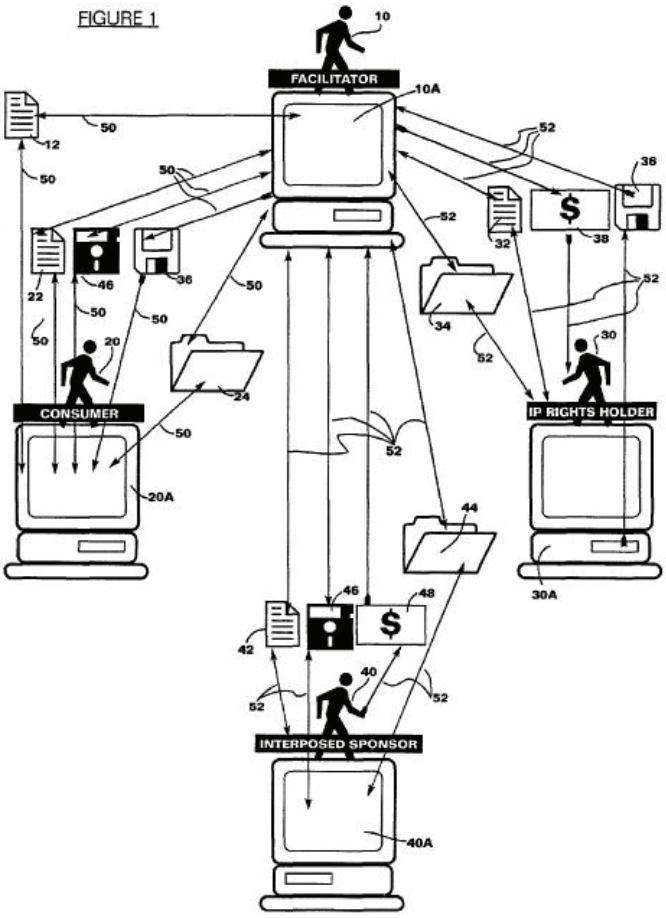
Two decisions, *Accenture Global Services v. Guidewire Software, Inc.*, No 2011-1486, slip op. (Fed. Cir. Sept. 5, 2013), and *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Canada*, 687 F.3d 1266 (Fed. Cir. 2012), correctly applied *Bilski* and *Mayo*. In *Accenture*, which was decided on September 5, 2013, the Federal Circuit determined that a claimed system for generating tasks to be performed in an insurance organization was not patent-eligible because the claims "fail[ed] to include limitations that set them apart from the abstract idea of handling insurance-related information." *Accenture*, slip op. at 14. Similarly, in *Bancorp*, the court held that the claims at issue were not patent-eligible because they added nothing to "the abstract idea of managing a stable value protected life insurance policy by performing calculations and manipulating the results." *Bancorp* at 1280.

In contrast, the panel in this case reasoned that the claim at issue was patent-eligible because it was limited to a specially-programmed computer:

> This court does not need the record of a formal claim construction to see that many of these steps require intricate and complex computer programming….
>
> [I]t is clear that several steps plainly require that the method be performed through computers, on the internet, and in a cyber-market environment. One clear example is the third step, "providing said media products for sale on an Internet website." ['545 patent] col. 8, ll. 20-21. And, of course, if the products are offered for sale on the Internet, they must be

> "restricted"—step four—by complex computer programming as well.

Ultramercial, Inc. v. Hulu, LLC, No. 2010-1544, slip op. at 27-28 (Fed. Cir. June 21, 2013). The court reached this conclusion even though the '545 patent does not disclose anything other than generic computer components:



'545 Patent, Fig. 1.

2. The Federal Circuit Sitting *En Banc* Split On The Standard For Patent-Eligibility Of Software

It is clear that the Federal Circuit is split on patent-eligibility of software because when the Federal Circuit considered the issue *en banc* in *CLS Bank Int'l v. Alice Corp.*, 717 F. 3d 1269 (Fed. Cir. 2013), no opinion garnered a majority of votes, leaving the question of the correct standard undecided. In *CLS Bank*, five judges joined the plurality opinion, which applied the *Mayo* standard:

> With the pertinent abstract idea identified, the balance of the claim can be evaluated to determine whether it contains additional substantive limitations that narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself.

CLS Bank at 1283 (Lourie, C.J. concurring).

Three judges joined Chief Judge Rader's opinion, which applied the specific machine test:

> The key to this inquiry is whether the claims tie the otherwise abstract idea to a *specific way* of doing something with a computer, or a *specific computer* for doing something; if so, they likely will be patent-eligible, unlike claims directed to *nothing more than the idea* of doing that thing on a computer. While no particular type of limitation is necessary, meaningful limitations may include the computer being part of the solution, being integral to the performance of

> the method, or containing an improvement in computer technology.[4]

CLS Bank at 1301 (Rader, C.J., concurring in part and dissenting in part).

As a result, there is no clear standard for determining whether a software patent is abstract. The makeup of the panel is the deciding factor, not a legal test. Only this Court can provide needed clarity on the question of patent-eligibility of software.

B. THE SPECIFIC MACHINE TEST USED BY THE LOWER COURT IS INCONSISTENT WITH THIS COURT'S DECISION IN *MAYO*

The specific machine test sharply conflicts with this Court's decision in *Mayo.* This test is an incorrect interpretation of *Mayo* because whether a claim is limited to a generic type of machine has nothing to do with the abstractness of the claim.

For example, a patent that claims a computer-implemented method of converting decimal numbers into binary numbers is limited to applications on specially-programmed computers. But this Court held that such a method is not patent-eligible subject matter. *Benson* at 71–72.

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4. This language is nearly identical to language in the lower court's majority opinion, meaning that a precedential panel decision adopted an opinion that failed to garner even a plurality of the *en banc* court. *See CLS Bank Int'l v. Alice Corp.*, 685 F.3d 1341, 1351 (Fed. Cir. 2012).

As this Court held in *Benson*, an algorithm is like a law of nature. *Parker v. Flook*, 437 U.S. 584, 588–89 (1978) (quoting *Benson* at 67). *Mayo* held that a patent claim must add enough to a law of nature (or, analogously, an algorithm) to make the claim patent-eligible.

The Federal Circuit made no attempt to determine what the claim at issue adds beyond the general idea of requiring a user to view an advertisement before being allowed to download content. Instead, it found that the fact that the claim had to be implemented using "complex computer programming" limited the claim to a specific machine, and therefore made it patent-eligible. *Ultramercial*, slip op. at 27-28.

The Federal Circuit's failure to apply the test that this Court described in *Mayo* strongly supports granting the petition for certiorari.

C. THIS CASE HAS A BROAD IMPACT

This case is critically important to the thousands of businesses that are the targets of patent assertion entities ("PAEs"), also called patent monetization entities ("PMEs"). PAEs are companies whose business is licensing and enforcing patents, typically using purchased patents. PAEs cost the U.S. economy billions of dollars per year, targeting businesses of all sizes and in a wide variety of industries.

The decision below makes the PAE problem even worse. First, because the court held that patent-eligibility requires factual determinations, it will be much harder to successfully dismiss a case on the pleadings, even if a

patent claims patent-ineligible subject matter. And the near-impossibility of determining whether a patent is abstract due to the conflicting decisions in the Federal Circuit gives PAEs additional leverage to extract settlements.

The root cause of this problem is that the 1952 Patent Act could not account for the explosive growth of information technology that has happened in the last 60 years. Software, by its nature, tends to lead to overclaiming, resulting in vague, overbroad, abstract patents.

Software is simply different from other areas of technology, and, as this decision shows, there is a crucial need for clarity in how to determine the abstractness of software patents in particular. Software fosters an explosive and rapid creativity, and overbroad software patents risk stifling that creativity.

It is vital that the Court provide needed clarity, and grant WildTangent's petition for certiorari.

1. Patent Assertion Entities Are Draining Billions Of Dollars A Year From Operating Companies

The PAE business model relies on the difficulty of proving patents invalid. PAEs are profitable because accused infringers have a strong incentive to settle. It is extremely expensive to defend against a patent infringement claim, in large part because there are few ways to dismiss even a weak claim on the pleadings. Accordingly, nearly every such case will require discovery,

which costs hundreds of thousands, or even millions of dollars. In 2012, the mean cost through the end of discovery for cases filed by PAEs worth less than $1 million was $516,000; for such cases with $1-10 million at risk, that figure was $998,000; and for cases with $10 million to $25 million at risk, the mean cost through the end of discovery was over $1.7 million.[5]

In contrast, PAEs have little financial exposure because they make no products and therefore are not subject to countersuit for infringement. And many PAEs transfer their patents to shell companies with no assets in order to make them essentially judgment-proof even if the defendant is awarded fees.

Increasingly, PAEs have turned to software and business method patents, precisely because those patents tend to be abstract and overly broad. A recent study showed that 41% of PAE lawsuits use business method patents.[6] And the Government Accountability Office (GAO) found that 93% of PME cases from 2007–2011 involved software or business method patents.[7] The GAO also

5. AIPLA, *Report of the Economic Survey 2013*, at I-145 (July 2013), *available at* http://www.aipla.org/members/Documents/AIPLA%202011%20Report-%20Summary%20102411.pdf.

6. Patent Freedom, *Investigations into NPE Litigation involving Business Method Patents* (Sept. 2013), *available at* https://www.patentfreedom.com/wp-content/uploads/2013/09/NPE-Ligitations-involving-Business-Method-Patents_Sept-4-2013.pdf.

7. U.S. Government Accountability Office, *Assessing Factors That Affect Patent Infringement Litigation Could Help Improve Patent Quality* (Aug. 2013), at 22, *available at* http://www.gao.gov/assets/660/657103.pdf.

identified vague patents as a major driver of litigation by PMEs.[8]

PAEs cost the U.S. economy over $80 billion in losses in 2011.[9] A recent study noted that startups in particular are heavily affected by PAE suits.[10] It also found that many PAE suits are strategically timed to take advantage of situations such as attempts to raise funding or potential acquisitions, which force startups to settle more quickly.[11]

The connection between PAE behavior and software patents is well-documented. Using a conservative measure, Bessen *et al.* report that software patents are involved in some 62% of the lawsuits filed by patent assertion entities (PAEs).[12] Using the PTO's expansive measure, GAO found that 89% of the increase in PAE litigation was attributable to software patents.[13] The Chien study showed evidence of

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8. *Id*. at 27.

9. James Bessen, *et al*., *The Private and Social Costs of Patent Trolls*, Boston Univ. School of Law, Law & Econ. Research Paper No. 11-45 (Sept. 19, 2011), at 2, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1930272.

10. Colleen Chien, *Patent Assertion and Startup Innovation*, New America Foundation Open Technology Institute (Sept. 2013), *available at* http://newamerica.net/sites/newamerica.net/files/policydocs/Patent%20Assertion%20and%20Startup%20Innovation.pdf.

11. *Id.* at 4.

12. Bessen, *The Private and Social Costs of Patent Trolls*, at 12.

13. The sole recommendation of the GAO report is focused on software patents. Yet this recommendation is made in the face of staunch denials by the USPTO that software patents are a

contagion: 40% of the patent assertions against startups were claims against technology supplied by third parties.[14] On the other hand, startups reported being subject to demands for indemnification in contracts that they felt that they could not afford.[15]

The information asymmetries and uncertainty characteristic of abstract patents are reflected in a marketplace where value is based on infringement. As Ron Epstein, CEO of IPotential, noted at an FTC hearing, there is "increasing value in capturing patents that have demonstrated value, that is, there are issued claims that you can show actually are infringed by folks." He also acknowledged that the market was driven by uncertainty: "Yes, unpredictability is a bad thing. But unpredictability is the only thing that's allowing these patent owners to get the access to capital which allows them to actually try and get a return on the patents."[16]

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problem. *See* David Kappos, Under Secretary of Commerce for IP & Director of USPTO, Keynote Address at Center for American Progress (Nov. 20, 2012) *available at* http://www.uspto.gov/news/speeches/2012/kappos_CAP.jsp; Stuart Graham & Saurabh Vishnubhakat, *Of Smart Phone Wars and Software Patents,* 27 J. OF ECON. PERSP. 67 (2013).

14. Chien, *Patent Assertion and Startup Innovation, supra* note 10 at 4.

15. *Id*. at 14.

16. Ron Epstein, CEO, IPotential, LLC, Remarks at The Evolving IP Marketplace: The Operation of IP Markets at the FTC 169 (May 4, 2009), *available at* http://www.ftc.gov/bc/workshops/ipmarketplace/may4/090504transcript.pdf.

2. The Decision Below Makes the PAE Problem Worse By Forcing More Cases To Go Through Fact Discovery

The decision below only serves to exacerbate the PAE problem, in at least two ways. First, the uncertainty created by the split in the Federal Circuit leaves accused infringers in an even more difficult position when attempting to determine potential liability. This will lead more defendants to settle cases for higher amounts than they otherwise would.

Second, the decision below makes it nearly impossible to dismiss a patent infringement suit on the pleadings, because it holds that patent-eligibility is a mixed question of law and fact, rather than a purely legal question as the Federal Circuit had previously held in *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1369 (Fed. Cir. 2011). *See Ultramercial*, slip op. at 6. If factual determinations are required to determine patent-eligibility, the question cannot be resolved without at least some fact (and probably expert) discovery.

The result is that even a lawsuit asserting a clearly abstract patent will have to wait for a summary judgment motion, which will drastically increase costs for defendants. This increased cost gives PAEs even greater leverage when demanding settlement.

3. The 1952 Patent Act Did Not Account For The Information Age

Today the patent system is embroiled in a crisis that threatens the information economy while undermining

confidence in the patent system as a whole. For the first time in 47 years, the President has launched an initiative on patent reform, and, for the very first time, with an economic analysis by three White House agencies.[17] The analysis supports a pragmatic reform agenda, but it does not address the contentious underlying (and fundamentally jurisdictional) problem of abstract subject matter.

However, the abstractness problem was recognized in *Benson* and subsequent decisions. While the *Benson* Court recognized that the algorithm was a "basic tool" that could be used in many different applications, it could not foresee how rich and ubiquitous information technology and computer programming would become – how everybody would use the same techniques, functions, and devices, with vernacular technology blending seamlessly in everyday work, play, and learning. Quoting with approval from the Report of the President's Commission on the Patent System (1966), the Court squarely handed the ball to Congress to consider whether it made sense to extend patents to computer programs. *Benson* at 72-73.

This Court could see more clearly in 1972 than Congress saw in 1952. Yet today, the Federal Circuit's subject matter jurisprudence still hangs doggedly on the word "any" in Section 101. *See Ultramercial*, slip op. at 8; *CLS Bank* at 1294; *State Street Bank & Trust Co. v. Signature Fin. Grp., Inc.,* 149 F.3d 1368, 1373 (Fed. Cir. 1998). The conversion of "art" to "process" in the 1952 Act was engineered without evidence that Congress intended to expand the reach of patents toward abstraction. The

17. Executive Office of the President, Patent Assertion and U.S. Innovation, *supra* note 3.

statute, legislative history, and canonical commentary[18] were drafted by three patent attorneys (two in private practice and one on loan from the Patent Office), hired because patent law was deemed too technical for a generalist Congress and its staff to handle on their own. As detailed in Giles S. Rich, *Congressional Intent–Or, Who Wrote the Patent Act of 1952?*, *in* PATENT PROCUREMENT AND EXPLOITATION 61 (The Sw. Legal Found. ed., 1963), it was these contracted attorneys who defined the agenda. Neither the patent attorneys nor the Congress had any idea of the impact that digital technology would have on everyday economic and social life.

The 1952 Act was an effort motivated by a larger project of codifying federal law, but it was a detailed "revision" as well as a codification. However, when the final bill was presented on the floor of the Senate, it was still described innocuously as a codification rather than a revision.[19] Yet it was crafted to reflect the aspirations of the patent bar for a system that was friendlier to applicants and patentees.[20] Any illusion of the omniscience of Congressional intent was laid to rest by Giles Rich,

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18. P.J. Federico, Commentary on the New Patent Act, 35 U.S.C.A. § 1 (1954), reprinted in 75 J. PAT. & TRADEMARK OFF. SOC'Y 162 (1993).

19. Giles S. Rich, *Congressional Intent – Or, Who Wrote the Patent Act of 1952?* in PATENT PROCUREMENT AND EXPLOITATION 61, 76 (1963).

20. "[I]t is believed that some modification was intended in the direction of moderating the extreme degrees of strictness exhibited by a number of judicial opinions over the past dozen or more years; that is, that some change of attitude more favorable to patents was hoped for." Federico, *supra* note 17.

one of the principal drafters, in an article that makes clear that the principal intent of Congress was to trust the patent attorneys it had enlisted in the project.[21] Most importantly, the 1952 Act and its committee reports fail to acknowledge any limits to the reach of the patent system. Although the work behind the Act was chartered as a codification of case law, including Supreme Court decisions on eligible subject matter, there was no effort to address fundamental limitations.

Fortunately, this Court has never accepted the proposition that by adopting Section 101 as written, Congress intended to abandon limits on patentable subject matter. *See, e.g.*, *Mayo* at 1293; *Bilski* at 3233-34; *Diamond v. Diehr* at 185; *Diamond v. Chakrabarty,* 447 U.S. 303, 309 (1980)*; Benson* at 67 (1972).

4. The Functionality Of Software Makes It Vulnerable To Overpatenting

For many years, the Federal Circuit worked to undo the limitations on abstract subject matter. Along with the spread of functional claiming based on common computer components,[22] this has led to an explosion of software and system patents of varying abstraction. Following the measure of software-related patents developed by the

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21. Rich, *Congressional Intent–Or, Who Wrote the Patent Act of 1952?*, at 77-78.

22. Executive Office of the President, Patent Assertion and U.S. Innovation, *supra* note 3, at 7-9; Mark Lemley, *Software Patents and the Return of Functional Claiming* (Stanford Public Law Working Paper No. 2117302, 2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117302.

USPTO Chief Economist,[23] the GAO Report mandated by the America Invents Act counts some 125,000 software-related patents issued in 2012, roughly half of all patents issued.[24] Following the more conservative set of classes used by economist James Bessen,[25] CCIA fellow Brian Kahin counted 68,000 software patents issued in 2012, a figure that rose a full 75% over the previous three years.[26] RPX has estimated that some 250,000 patents may read on a smartphone, although not all are software patents.[27]

These astounding numbers are a product of opportunity and behavior. The opportunity is a product of extraordinarily rich functionality of information technology, especially software, the low barriers to entry and the large number of developers, and easy-to-get patents. The behavior includes portfolio races, originally for defensive purposes but increasingly as barriers to competition; the emergence of assertion specialists; and

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23. Graham & Vishnubhakat, *Of Smart Phone Wars and Software Patents*, *supra* note 12.

24. GAO, *Assessing Factors That Affect Patent Infringement Litigation Could Help Improve Patent Quality*, *supra* note 7.

25. James Bessen, *A Generation of Software Patents* (2011), Boston Univ. School of Law, Law & Econ. Research Paper No. 11-31, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1868979.

26. Brian Kahin, *Software Patents: Separating Rhetoric from Facts*, Science Progress (May 15, 2013), *available at* http://scienceprogress.org/2013/05/software-patents-separating-rhetoric-from-facts.

27. RPX Corp., Registration Statement (Sec. & Exch. Comm'n Form S-1), at 59 (Sept. 2, 2011).

demands for monetization from investors, creditors, aggregators, and failing businesses. Positive feedback loops among these factors lead to a rapidly growing thicket of patents of questionable validity and value. Part of the problem, especially in software, is the large volume of prior art, which makes evaluation uncertain and costly. As noted by the President's Commission (nearly half a century ago) in advising against patents for computer programs, "reliable searches would not be feasible or economic because of the tremendous volume of prior art being generated." Report of the President's Comm'n on the Patent Sys., "'To Promote the Progress of . . . Useful Arts' In the Age of Exploding Technology," S. Doc. No. 90-5, at 13 (1966).

The immense scale of this problem necessarily results in a breakdown of the notice and disclosure functions of the patent.[28] Thorough searches are impractical, inconclusive, and unaffordable, especially for small entities.[29] As a result, patents are ignored[30] and inadvertent infringement is commonplace.[31]

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28. Christina Mulligan & Timothy B. Lee, *Scaling the Patent System*, NYU Ann. Surv. Am. L. (forthcoming), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2016968.

29. Benjamin N. Roin, Note, *The Disclosure Function of the Patent System (Or Lack Thereof)*, 118 Harv. L. Rev. 2007 (2005).

30. Mark Lemley, *Ignoring Patents*, 2008 Mich. St. L. Rev. 19 (2008).

31. Christopher Cotropia & Mark Lemley, *Copying in Patent Law*, 87 N. Carolina L. Rev. 1421 (2009).

5. Differences In Software Abstraction Reflect Real-World Issues

Patents on software-enabled functions on industrial robots are not the software patents that stir controversy and debate. Patents that purport to cover simple methods of advertising are, as are patents on office procedures or word processing features. Patents like Ultramercial's are especially dangerous because they are monopolies on enabling speech. The algorithm behind the patent is not just a business method but a platform for information, and vesting exclusive control in one entity would constrain access to new markets for expression.

Old rules limiting the scope have been funneled into the abstract ideas exclusion, although as Justice Stevens noted, the Court has not offered "a satisfying account of what constitutes an unpatentable abstract idea." *Bilski*, 130 S.Ct. at 3236 (Stevens, J., concurring). Given the conspicuous differences of interpretation within the Federal Circuit, it is clear that elaboration is needed.

Most importantly, exposition of abstractness is needed because the explosion of abstract functionality and creativity surrounding digital technology is at odds with a unitary patent system optimized for those industries where patents are most valued. Explication is needed because patents appear to work best where the subject matter is least abstract (molecules), while they create controversy and discord where algorithmic functions, whether mathematical, economic, or social, can be conjured by many out of thin air.[32] Economist Edwin

32. *See* James Bessen & Michael Meurer, Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk 143 (2008).

Mansfield long ago (but well after the 1952 Patent Act) discovered that in roughly half the industries he surveyed, virtually all inventions would have been made without the inducement of patents.[33] Yet the refrain is still heard that nobody would invent anything without the benefit of patents, and human ingenuity labors under self-serving dogma that claims to have been engineered into law by an omniscient Congress at one point in time.

While it is often heard that the patent system should be open to new technologies, it should also be open to new insights about itself and its effects on innovation in the real world, including empirical evidence on what promotes "progress of science and the useful arts." The legacy interests of incumbents and intermediaries should be recognized for what they are, not as oracles that do no more than extrapolate the future from the past. The regime should adapt but its capacity to do so should not be limited to exponential expansion.

The patent system should not be allowed to merely free-ride on explosive innovation in the real world. The system imposes a complex, astronomically costly hybrid regulatory regime on ingenuity and innovation – a system in which one size must fit all. As a consequence, the matter of what fits inside the patent system is of enormous importance to those innovating at the edge. New forms of programming (such as HTML for displaying pages), libraries of code, and developer tool kits demystify and democratize the technology, blurring the line between invention and expression. This vast and growing zone is already regulated by copyright. But the pretensions of the patent system to managing clear, complete,

33. Edwin Mansfield, *Patents and Innovation: An Empirical Study*, 32 Management Science 173 (1986).

certain, centralized knowledge under the supervision of a government agency and under the rule of strict liability are at odds with the tens of millions of creative individuals who independently weave ideas and code together.

6. The Need For Clarity Of Purpose And A Safe Harbor

We urge that the Court engage the dimensions of abstractness head-on, and rescue this important issue from the apparently sterile debate at the Federal Circuit. The decision in this case represents a faction of the lower court that does not understand the technology it regulates, that confuses simplicity with abstraction, and embraces complexity as an antidote to abstraction. It mistakenly sees ambient complexity – the need for complex programming to implement the claims – as a further argument that this is not an abstract idea. Its lack of understanding of computer programming enables it to see abstraction only at the very highest level,[34] although abstraction is in fact used at many different levels of granularity in computer science.[35]

This narrow understanding would allow Ultramercial to fully regulate a simple high-level function. As Appendix A of the *amicus* brief of Public Knowledge shows, Brief of Amicus Public Knowledge, *WildTangent, Inc. v.*

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34. It would not be unfair to compare the decision to *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222 (3d Cir. 1986), the notorious case that briefly enabled a very high level of abstractness to be controlled under copyright.

35. *See, e.g.*, Al Aho & Jeff Ullman, Foundations of Computer Science (1992), *available at* http://infolab.stanford.edu/~ullman/focs.html.

Ultramercial, LLC, No. 13-255, App'x A (Sept. 23, 2013), the essence of the claims can be implemented very simply in code, and in text no longer than the claim language in the patent.

Allowing complexity (in the form of additional abstract limitations) to excuse abstraction is to force developers into the patent system while inducing prolixity and obfuscation that increase the cognitive opacity of patents. Similarly, adding "manifestly" to "abstract," as in the decision below, *Ultramercial*, slip op. at 33, forces additional indeterminacy into the system; it effectively doubles the problem of definition and interpretation.

The Court's guidance on the dimensions of abstractness is needed to help innovators (and the Federal Circuit) understand the jurisdictional limits of the patent system. Innovators in today's digital economy, such as the hundreds of thousand of developers of smartphone applications ("apps"), deserve a much clearer idea of whether they must assume the burden and expense of dealing with patents. For that reason, subject matter eligibility should be a front-end inquiry, before the innovators have to tangle with the intricate technical issues of Sections 102, 103, and 112. The costs of patent counsel are famously astronomical, and clarity at the front end is needed to minimize the billable hours that full investigation would incur.

For similar reasons, the Court should not only consider the line between abstract ideas and patent-eligible subject matter, but also the possibility of a safe harbor for software developers and small businesses that minimizes the need to seek legal assistance.

CONCLUSION

For the foregoing reasons, the petition for certiorari should be granted.

Respectfully submitted,

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