Sample e-brief

United States Court of Appeals
For the Federal Circuit

CLS Bank International,
Plaintiff-Appellee,
and
CLS Services LTD.,
Counterclaim-Defendant Appellee,

v.

Alice Corp. PTY. LTD.,
Defendant-Appellant.

Appeal from the United States District Court for the District of Columbia in Case No. 07-cv-0974, Judge Rosemary M. Collyer

Brief of Amici Curiae

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Case No. 2011-1301

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FOR THE FEDERAL CIRCUIT

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BRIEF OF AMICI CURIAE ELECTRONIC FRONTIER FOUNDATION AND PUBLIC KNOWLEDGE IN SUPPORT OF APPELLEES AND REMAND

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December 7, 2012

CERTIFICATE OF INTEREST

Pursuant to Federal Circuit Rules 29(a) and 47.4, counsel for Amici Curiae certifies that:

1. The full names of the amici represented by me are:

Electronic Frontier Foundation and Public Knowledge

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

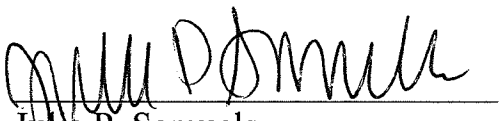
N/A

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the amicus curiae represented by me are:

None.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or are expected to appear in this Court are: Julie P. Samuels and Michael Barclay, Electronic Frontier Foundation, San Francisco, California.

December 6, 2012



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Other Authorites

John R. Allison, Mark A. Lemley & Joshua Walker, *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 Geo. L.J. 677, 694 (2011) 12

John R. Allison, Emerson H. Tiller, Samantha Zyontz and Tristian Bligh, *Patent Litigation and the Internet*, 2012 Stan. Tech. L. Rev. 1, 6 (January 20, 2012) 7

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Brian T. Yeh, *An Overview of the "Patent Trolls" Debate*, Congressional Research Service (August 20, 2012) 8, 12

STATEMENT OF IDENTITY AND INTEREST OF AMICUS CURIAE

The Electronic Frontier Foundation ("EFF") is a non-profit civil liberties organization that has worked for more than 20 years to protect consumer interests, innovation, and free expression in the digital world. EFF and its nearly 20,000 dues-paying members have a strong interest in helping the courts and policy-makers in striking the appropriate balance between intellectual property and the public interest. As part of its mission, EFF has often served as *amicus* in key patent cases, including *Microsoft Corp. v. i4i Ltd. P'ship, et al.*, 131 S. Ct. 2238 (2011); *Bilski v. Kappos*, 130 S. Ct. 3218 (2010); *Quanta Computer, Inc. v. LG Electronics Corp.*, 128 S. Ct. 2109 (2008); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007); and *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006).

Public Knowledge is a non-profit public interest organization devoted to protecting citizens' rights in the emerging digital information culture and focused on the intersection of intellectual property and technology. Public Knowledge seeks to guard the rights of consumers, innovators, and creators at all layers of our culture through legislative, administrative, grassroots, and legal efforts, including regular participation in patent and other intellectual property cases that threaten consumers, trade, and innovation.

EFF and Public Knowledge filed an amicus brief in this case supporting CLS Bank's petition for rehearing *en banc*. *See* Docket Entry 57, September 10,

2012. This brief is filed pursuant to Fed. R. App. P. 29(a) and to the Court's October 9, 2012 order permitting the filing of amicus briefs ("*En Banc* Order").[1]

INTRODUCTION AND SUMMARY OF ARGUMENT

Section 101 of the Patent Act properly serves its function when it provides clear guidance to litigants. 35 U.S.C. § 101. Despite two recent Supreme Court cases on point, and at least eight recent cases before this Court, such guidance does not exist, particularly with regard to software or business method patents. This failure has helped foster a dangerous and dramatic increase in patent litigation over the last several years, especially involving those types of patents. Many of these software or business method patents are drafted in broad, purely functional language—often sounding abstract, with few if any non-functional claim terms (other than perhaps a "general purpose computer"). The recent increase in litigation over such patents has burdened the district courts, this Court, and litigants alike.

Below, *amici* offer an overview of the recent sharp increase in patent litigation and the resulting problems. Patent litigation has increased generally, to a record high of more than 4,000 actions filed in 2011. This increase is particularly

[1] No party's counsel authored this brief in whole or in part. Neither any party nor any party's counsel contributed money that was intended to fund preparing or submitting this brief. No person other than *amici*, their members, or their counsel contributed money that was intended to fund preparing or submitting this brief. Web sites cited in this brief were last visited on December 5, 2012.

noticeable in cases involving non-practicing entities (comprising almost 40 percent of the total in 2011), software and business method patents, or both. These lawsuits burden innovators large and small: large companies such as Apple and Google now spend more money on patents than they do on research and development, and small innovators are often driven out of business by litigation costs. Simply put, the patent system is too often serving as a tax on innovation, when it should be *spurring* innovation. To stem this tide, the technology industry needs more certainty in the interpretation and validity of dubious patents.

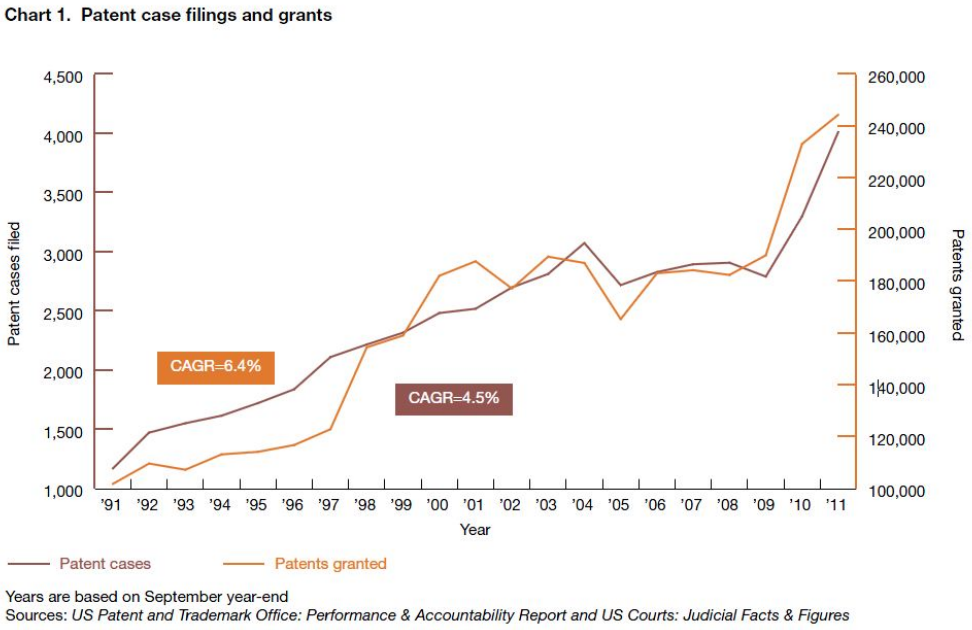
Amici also offer a practical solution to the questions presented by the *En Banc* Order, one that may avoid the difficulty of defining "abstract" for § 101 purposes. Professor Mark Lemley has suggested that properly applying 35 U.S.C. § 112(f) to step-plus-function claims will restrict the broad functional claiming so common to software and business method patents. A claimed step for performing a broad function should be limited to the specific structures disclosed in the specification and their equivalents. If there is no corresponding structure in the specification, the claim is invalid as indefinite under well-established law. If there is corresponding structure, that specific structure can more easily be examined as abstract or not. If not abstract, the claim would then be appropriately limited for any further analysis of validity or infringement.

ARGUMENT

I. INNOVATORS NEED CLEAR STANDARDS TO DETERMINE PATENT VALIDITY

A. The Amount of Patent Litigation Has Been Drastically Increasing, Particularly Cases Brought By NPEs and Litigation Surrounding Software Patents.

In recent years, the amount of patent litigation dramatically increased. Price Waterhouse Coopers, *2012 Patent Litigation Survey* at 6.[2] Compare the 4,015 patent actions filed in 2011 with the fewer than than 3,000 such actions filed in in 2009:



[2] Available at: http://www.pwc.com/us/en/forensic-services/publications/2012-patent-litigation-study.jhtml.

Id.[3] In particular, patent cases brought by non-practicing entities (NPEs), also known as patent assertion entities (PAEs), patent monetizers, or colloquially, "patent trolls," have significantly increased. As Judge Posner put it, NPEs "are companies that acquire patents not to protect their market for a product they want to produce—patent trolls are not producers—but to lay traps for producers, for a patentee can sue for infringement even if it doesn't make the product that it holds a patent on." Richard A. Posner, *Why There Are Too Many Patents in America*, The Atlantic (July 12, 2012).[4]

NPEs accounted for only about five percent of patent litigation in 2000-2002. James Bessen, Jennifer Ford and Michael Meurer, *The Private and Social Costs of Patent Trolls*, Boston Univ. School of Law, Working Paper No. 11-45, 2011 ("Bessen 2011"), at 6.[5] This figure increased to about 22 percent in 2007, and then to almost 40 percent in 2011. Sara Jeruss, Robin Feldman & Joshua Walker, *The America Invents Act 500: Effects of Patent Monetization Entities on US Litigation* (2012) at 5, 25.[6] NPE litigation affected more than 5,800 defendants in 2011:

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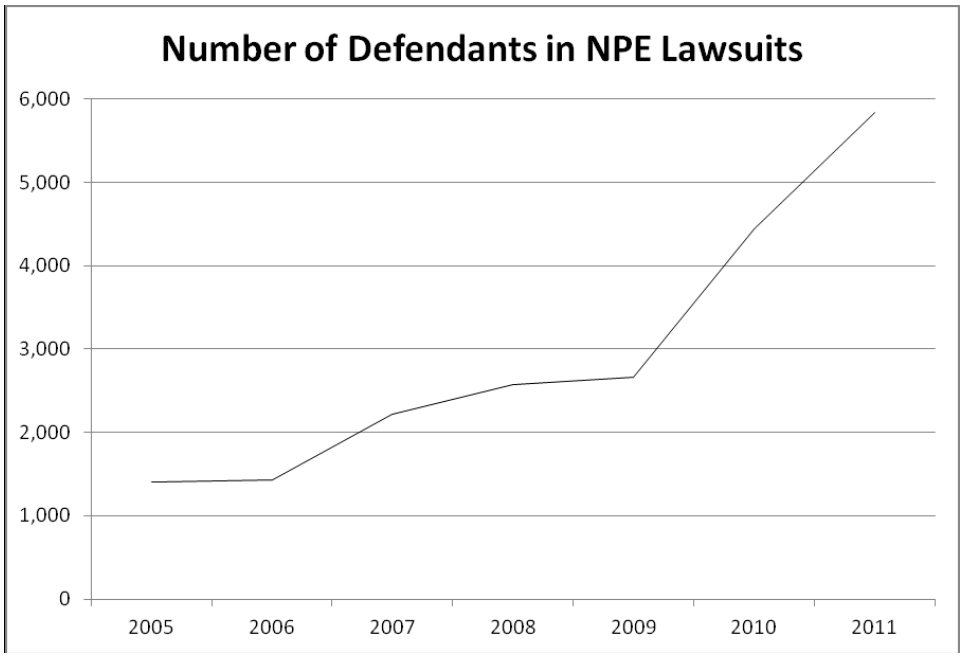
[3] Because of the September 2011 passage of the America Invents Act, the 2011 figure might be somewhat inflated. However, the PWC chart shows a sharp increase from 2009 to 2010, and the 2011 figure would still be quite large even if adjusted for the AIA.

[4] Available at: http://www.theatlantic.com/business/archive/2012/07/why-there-are-too-many-patents-in-america/259725/.

[5] Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1930272.

[6] Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2158455.

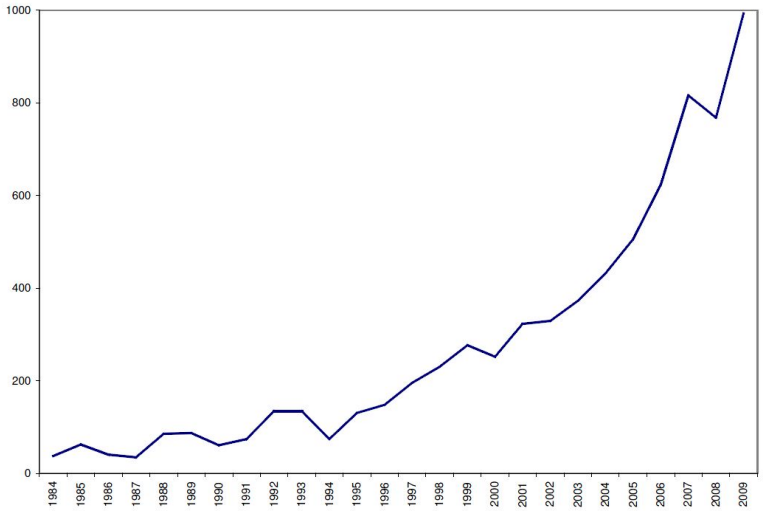


James Bessen and Michael Meurer, *The Direct Costs from NPE Disputes*, Boston Univ. School of Law, Law and Economics Research Paper No. 12-34 (June 25, 2012) ("Bessen 2012") at 2, 33.[7]

Not coincidentally, litigation involving software patents has also rapidly increased. James Bessen, *A Generation of Software Patents*, Boston Univ. School of Law, Working Paper No. 11-31 (June 21, 2011), at 19: [8]

[7] Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2091210.
[8] Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1868979.

Figure 3. Number of patent lawsuit filings involving software patents



Similarly, Internet-related business patents generally are litigated at a far higher rate than non-Internet patents. John R. Allison, Emerson H. Tiller, Samantha Zyontz and Tristian Bligh, *Patent Litigation and the Internet*, 2012 Stan. Tech. L. Rev. 1, 6 (January 20, 2012)[9] (Internet patents are between 7.5 and 9.5 times more likely to end up in infringement litigation).

B. Patent Litigation Imposes a Disproportionate Burden on Technology Firms, Especially Small Innovators.

This explosion of litigation has been costly. According to a congressional study, NPEs "generated $29 billion in revenues from defendants and licensees in 2011, a 400 percent increase over $7 billion in 2005, and some researchers suggest these costs are primarily deadweight, with less than 25 percent flowing to support innovation and at least that much going towards legal fees." Brian T. Yeh, *An Overview of the "Patent Trolls" Debate*, Congressional Research Service (August

[9] Available at: http://ssrn.com/abstract=1989106.

20, 2012) ("Yeh") at Summary, 2;[10] Bessen 2012 at 2. Indeed, the research *does* show that that "NPE lawsuits are associated with half a trillion dollars of lost wealth to defendants from 1990 through 2010. During the last four years the lost wealth has averaged over $80 billion per year." Bessen 2011 at 2. Even assuming *arguendo* that some of that transferred wealth is not "deadweight," it at least is clear that the funds are being transferred from innovative companies to their non-innovative counterparts. And, in what has become a theme, the high-tech industry bears the large percentage of the costs. As the Congressional study noted:

> Experts attribute the proliferation of PAEs over the past 10 to 15 years to the explosion of the information technology (IT) industry and patent law's struggle to adapt to the unique issues presented by this new frontier of innovation. They indicate that the PAE business model is not about licensing patents generally but *high-tech* patents in particular, including those on software and business methods or processes related to software, as well as computers and electronics.

Yeh at 8 (footnotes omitted).

Technology-related patent litigation burdens both large and small companies. Large companies must engage in an "arms race," where they "jockey to obtain more and more patents not in order to enforce those patents, but to protect themselves against the risk that competitors will enforce *their* patents." Mark A. Lemley, *Software Patents and the Return of Functional Claiming*, Stanford Public Law Working Paper No. 2117302 (July 25, 2012), Wis. L. Rev. (forthcoming)

[10] Available at: https://www.eff.org/sites/default/files/R42668_0.pdf and http://www.fas.org/sgp/crs/misc/R42668.pdf.

("Lemley") at 26-27.[11] It has been estimated, for example, that a modern smartphone might implicate up to 250,000 patents—which could mean, in turn, the potential for 250,000 patent infringement claims, too many for even a well-resourced company to defend. *Id*. at 24. As a result, in the last few years companies in the smartphone industry "have spent $15-20 billion buying patents to use in defending themselves against each other, and hundreds of millions paying their lawyers." *Id*. at 26-27 (footnotes omitted).

Thus, for the first time in 2011, spending by both Apple and Google on patents exceeded the two firms' spending on new product research and development. Zak Islam, *Smartphone Industry Spent $20 Billion on Patents in 2011*, tom's hardware (October 9, 2012).[12] Another large company apparently believes that the NPE situation is so serious that it recently filed a racketeering suit against certain NPEs. Ashby Jones, *Cisco Calls Patent Trolls Racketeers*, Wall Street Journal (November 11, 2012).[13]

Small companies face a far worse situation. While companies like Apple and Google can afford to spend billions on patent acquisition and hundreds of millions on legal fees, such expenses can kill small startups entirely, and the mere

[11] Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117302.
[12] Available at: http://www.tomshardware.com/news/Patents-Smartphone-Apple-Google-Motorola,18231.html.
[13] Subscription needed, but partially available at: http://online.wsj.com/article/SB10001424127887324073504578113082258844080.html.

threat of those expenses can chill innovation. A large company also can devote employee time to a lawsuit more easily than a small company, whose key management and engineers must deal with an NPE claim. Colleen Chien, *Startups and Patent Trolls*, Santa Clara Univ. School of Law, Accepted Paper No. 09-12 (September 28, 2012), at 10-13 ("Chien").[14] Professor Chien noted:

> Although large companies tend to dominate patent headlines, most unique defendants to PAE suits are small. Companies with less than $100M annual revenue represent at least 66% of unique defendants and the majority of them make much less than that: at least 55% of unique defendants in PAE suits make under $10M per year. Suing small companies appears [to] distinguish PAEs from operating companies, who sued companies with less than $10M of annual revenue only 16% of the time, based on unique defendants.

Id. at 1-2. This results in small cash-poor companies becoming vulnerable targets that lack leverage to deal with an NPE claim, leaving them stuck paying nuisance settlements regardless of the merits of the underlying claim. *Id*. at 3. With small- and medium-sized companies making up 90 percent of the defendants in NPE suits, Bessen 2012 at 11, such nuisance settlements are widespread.

C. Software Patent Litigation Is a Particular Problem Due to NPE Assertions and Overbroad Claiming.

Sixty-two percent of NPE lawsuits feature software patents that are "notoriously difficult to interpret." Bessen 2012 at 5. As Professor Lemley notes:

> A related problem is the uncertainty associated with the meaning and scope of a software patent. Unlike chemistry and biotechnology,

[14] Available at: http://ssrn.com/abstract=2146251.

> where we have a clear scientific language for delineating what a patent claim does and doesn't cover, there is no standard language for software patents. Accordingly, no one can really know what a software patent covers until the court has construed the language of the patent claims.

Lemley at 24-25 (footnote omitted).

In other words, "software patents have 'fuzzy boundaries': they have unpredictable claim interpretation and unclear scope . . . and the huge number of software patents granted makes thorough search to clear rights infeasible, especially when the patent applicants hide claims for many years by filing continuations. This gives rise to many situations where technology firms inadvertently infringe." Bessen 2011 at 23. This lack of clarity directly feeds into the NPE business model and, consequently, the recent increase in both NPE and software patent litigation. Specifically, "there is a business opportunity based on acquiring patents that can be arguably read to cover existing technologies and asserting those patents, litigating if necessary in order to obtain a licensing agreement. . . . the patent troll business model only makes economic sense when there is such inadvertent infringement." *Id*.

D. Innovators Should Have the Ability to Obtain Prompt Disposal of Unmeritorious Suits, Particularly at Early Stages of Litigation.

This inability to discern a patent's metes and bounds or assess its validity leads to two distinct unfortunate results: (1) it drives parties to litigate cases that might otherwise fairly settle; and/or (2) it encourages parties to accept settlements

that do not reflect the real value of the technology at issue (or the merits of the case). Thus, the present state of confusion surrounding § 101 blunts an otherwise powerful incentive to dispose of cases at the summary judgment stage (or earlier), before the need to engage in expensive and lengthy discovery.

Widespread agreement exists that the harm from NPEs outweighs any benefit they provide. Yeh at Summary, 2, 6. Despite this, there is an apparent lack of consensus as to the best way to fix the problem. One crucial way to stem abuse by NPEs is to create incentives for those facing litigation (or litigation threats) to pursue their meritorious defenses of noninfringement and invalidity. *Id.* at 5 (*citing* John R. Allison, Mark A. Lemley & Joshua Walker, *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 Geo. L.J. 677, 694 (2011)[15] ("Studies suggest that [non-practicing entities] rarely prevail on the merits. Their win rate in cases decided on the merits is just 8 percent, versus 40 percent for other entities . . .. But they persist with litigation nonetheless, apparently supported by the licensing fees obtained by posing a credible threat of extended litigation.").

Indeed, the most troubling aspect of the NPEs' business model—the push to deter meritorious litigation in lieu of cheaper licensing deals—is necessarily discouraged by additional opportunities for potential defendants, particularly those of limited means, to make their case at early stages of litigation (particularly before

[15] Available at: http://georgetownlawjournal.org/files/pdf/99-3/AllisonLemleyWalker%20677-712.PDF.

expensive discovery). Moreover, the ability to address § 101 issues at early stages of litigation will not harm the rights of any non-practicing entity (or of any plaintiff) who attempts to enforce a patent that is sufficiently non-abstract.

Thus, several cases have properly decided § 101 issues at an early stage, either by summary judgment or on a motion to dismiss. *See, e.g.*, *Bancorp Servs., L.L.C. v. Sun Life Assurance Co.*, 687 F.3d 1266, 1273-74 (Fed. Cir. 2012); *OIP Techs., Inc. v. Amazon.com, Inc.*, No. C-12-1233 EMC, 2012 WL 3985118 (N.D. Cal. Sept. 11, 2012); *Glory Licensing, L.L.C. v. Toys "R" Us, Inc.*, Case No. 09-4252 FSH, 2011 WL 1870591 (D. N.J. May 16, 2011). This trend should be encouraged, and this case serves as a proper vehicle to do just that.

II. THE COURT SHOULD USE SECTION 112(F) AS A VEHICLE TO ANALYZE AND RESOLVE POTENTIALLY ABSTRACT CLAIMS

This case is only one of many where this Court and the Supreme Court have struggled to define when a claim is impermissibly abstract under § 101. *See, e.g.*, *Mayo Collaborative Servs. v. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012); *Bilski v. Kappos*, 130 S. Ct. 3218 (2010). Many of the patents attacked under § 101—including the patents at issue here—are software or business method patents that use broad, functional claim language that purportedly covers the goal of the alleged invention without claiming any particular steps that accomplish that goal. Instead of claiming an actual solution to the problem, the claims only cover the problem itself. It is as if, in another field, someone tried to claim any generic

arrangement of molecules in a pill to cure headaches without specifying the particular drug that accomplished that goal. That would obviously be insufficient for a pharmaceutical patent, and the same should be true for software and business method patents.

Thus, rather than try to figure out whether a broad functional claim is abstract or not, a court may first use § 112(f) of the patent statute and existing caselaw to narrow the claim as a coarse filter before reaching § 101. Once a patent survives a § 112(f) functional claiming challenge, it will be far easier to determine if it is impermissibly abstract under existing § 101 caselaw.

A. Overview of Professor Lemley's "Functional Claiming" Analysis.

Professor Lemley's recent paper, *Software Patents and the Return of Functional Claiming*, suggests using 35 U.S.C. § 112(f) (formerly § 112, ¶ 6) as a tool to narrow overly broad functional patents. Lemley at 4, 38-43.

Historically, patent holders were making "widespread" use of broad functional claiming by 1940. *Id*. at 5-10. The Supreme Court effectively outlawed the practice in *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946). Congress *partially* reinstated functional claiming in the Patent Act of 1952 by enacting § 112(f):

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be

> construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112(f).

This statute does not permit "unfettered" functional claiming. Lemley at 12. Rather, a court interprets a means-plus-function claim element by (1) determining the particular structure in the patent's specification that performs the claimed function, and (2) limiting the element to that structure and its equivalents. *Id*. at 13.

While the statute has traditionally been applied to apparatus claims, its express language makes clear that it covers method claims as well. For instance, the statute refers to "structure, material, or *acts* in support" of the function, and construes the claim as limited to "the corresponding structure, material, or *acts* described in the specification and equivalents thereof." "Acts" clearly refers to method or process claims. *Id*.

Although Congress intended § 112(f) to apply to method claims, in practice it has not stopped patentees from trying to seek broad, functional claims, particularly in software and business method patents. Lemley at 16-17. Professor Lemley rightly concludes that "[s]oftware patents, then, have brought back functional claiming as it existed before 1952." *Id*. at 19. This broad claiming results in many of the problems noted in Section I of this brief. Lemley at 23-31.

B. Section 112(f) Should Limit Overbroad Functional Claims to the Steps Actually Disclosed and Their Equivalents.

Taking § 112(f) "seriously," as Professor Lemley argues, *id*. at 38-43, will have two benefits: it will solve many of the problems with broad software or business method patents, and at the same time make it easier to resolve the remaining (limited) § 101 issues.

To begin, this Court has recognized that § 112(f) applies to steps in a method claim. *O.I. Corp. v. Tekmar Co. Inc.*, 115 F.3d 1576, 1582-83 (Fed. Cir. 1997) (the "combination" in the statute applies to "steps in a process claim"); *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1373 (Fed. Cir. 2003) (agreeing with *O.I. Corp.*). While these cases did not apply § 112(f) to their facts, this Court has provided guidance on when that section should apply. *See Seal-Flex, Inc. v. Athletic Track & Court Constr.*, 172 F.3d 836, 848-50 (Fed. Cir. 1999) (Rader, J., concurring). To understand, one must look first to *O.I. Corp.*:

> Of course, [§ 112, ¶ 6] is implicated only when means *plus function* without definite structure are present, and that is similarly true with respect to steps, that the paragraph is implicated only when steps *plus function* without acts are present. The statute thus in effect provides that an element in a combination method or process claim may be recited as a step for performing a specified function without the recital of acts in support of the function.

O.I. Corp., 115 F.3d at 1583; *Seal-Flex*, 172 F.3d at 849 (emphasis in original). The question then becomes: how does one tell if claim elements without express step-plus-function language fall within the statute? (Unlike structural "means-

plus-function" claim elements, step-plus-function claim elements don't neatly use a phrase such as "means for.") As Chief Judge Rader explains in his concurring opinion in *Seal-Flex*, method claim elements fall within § 112(f) "if they merely claim the underlying function without recitation of acts for performing that function." *Id*. Specifically, Chief Judge Rader concurred:

> In general terms, the "underlying function" of a method claim element corresponds to *what* that element ultimately accomplishes in relationship to what the other elements of the claim and the claim as a whole accomplish. "Acts," on the other hand, correspond to *how* the function is accomplished. Therefore, claim interpretation focuses on what the claim limitation accomplishes, *i.e*., its underlying function, in relation to what is accomplished by the other limitations and the claim as a whole. If a claim element recites only an underlying function without acts for performing it, then § 112, ¶ 6 applies even without express step-plus-function language.

Id. at 849-50 (emphasis in original). So if a functional claim element recites its ultimate goal (what that element accomplishes), but does *not* contain an explanation for "how the function is accomplished," then § 112(f) will apply.

Next, Professor Lemley looks to this Court's well-established § 112(f) jurisprudence. Lemley at 40-42. Section 112(f) claims must disclose sufficient structure corresponding to the related structures or acts. However, software patents containing claim elements subject to § 112(f) that "do not detail actual algorithms implementing those functional steps are invalid for indefiniteness." *See, e.g., Aristocrat Techs. Australia v. Int'l Game Tech.*, 521 F.3d 1328, 1333-34, 1337-38

(Fed. Cir. 2008); *Ergo Licensing, LLC v. Carefusion 303, Inc.*, 673 F.3d 1361, 1363-65 (Fed. Cir. 2012).

Cases like *Aristocrat Techs.* and *Ergo Licensing* confirm another point relevant to this *en banc* appeal: that a "general purpose computer" is not sufficient structure to comply with § 112(f). *Aristocrat Techs.*, 521 F.3d at 1336-37; *Ergo Licensing*, 673 F.3d at 1365. Thus, one must answer "no" to the second half of the *En Banc* Order's Question 3(a): "the presence of a computer in a claim" does *not* "lend patent eligibility to an otherwise patent-ineligible idea." *See* Lemley at 41. More structure is required than simply a general purpose computer.

Should a § 112(f) claim element disclose sufficient structure in support of its acts that it survives an indefiniteness claim, one would then interpret and apply the claim—limited to the actual algorithms disclosed in the specification and their equivalents—in the usual manner. Lemley at 42. Such a narrow, specific claim will be much easier to analyze under § 101. *Id*. at 56.

This approach would provide a workable fix to the problems currently surrounding an often-unworkable § 101 standard. Since it merely requires interpreting an existing, 60-year old statute, it will be retroactive. It will apply to existing software and business method patents, addressing many of the problems with such patents discussed in Section I. *Id*. at 43.

C. Application of Section 112(f) in this Case.

For instance, consider the claims here. Alice Corp.'s U.S. Patent No. 5,970,479 (the "'479 Patent") is a business method patent directed to financial risk management. Representative claim 33 is directed to the financial intermediary portion of the risk management system (the payment process), and contains four method steps. '479 Patent col.65 ll.23-50; *CLS Bank Intern. v. Alice Corp.*, 685 F.3d 1341, 1343-44 (Fed. Cir. 2012). Applying Chief Judge Rader's *Seal-Flex* analysis, one can understand the steps of claim 33 to contain four "underlying functions": (a) "creating" two shadow records, (b) "obtaining" a balance for each of the records, (c) "adjusting" each party's records in a particular way, and (d) "instructing" an exchange institution to exchange credits or debits to the records in a particular way. As Judge Prost's panel dissent puts it, one can translate these functions into more easily understood English as putting "the idea of a financial intermediary into four steps: (a) creating a debit and credit account for each party, (b) checking the account balances in the morning, (c) adjusting the account balances through the day, and (d) paying the parties at the end of the day if both parties have performed." *Id.* at 1357-58.

Crucially, these claim steps contain no explanation whatsoever of *how* to accomplish any of these functions. Therefore, under *Seal-Flex*, 172 F.3d at 849-50, claim 33 contains steps without "acts," and § 112(f) applies.

Under § 112(f), a court should next determine if the claim contains algorithms or other sufficient structure corresponding to each of these functions. For instance, for details on how to implement claim 33's payment process, look to the specification following the heading, "Description of Consideration/Entitlement Payment Process," at col.24, l.56 through col.28, l.10 of the '479 patent. Among other things, claim 33's transaction steps use a "CONTRACT APP" structure to implement the financial intermediary. The patent also discloses a "start of day" management flowchart in Fig. 25 (*see* col.51, ll.16-25); an "end of day" management flowchart in Fig. 37 (*see* col.53, ll.38-47); and a Process 7 flowchart in Fig. 38 (*see* col.53, ll.48-64). These portions of the specification rely on specific data files used to implement each of those processes, such as "PAYACC SHADOW," "PAYACC FINAL," "HISTORY," "INFO," "ADMIN," AND "INTREG" data files.

Taken together, these structures, flowcharts and data files describe specific acts showing how to implement claim 33, and Alice Corp. would doubtless argue that these specific structures are not impermissibly abstract. At this point, the court would be left with a simplified § 101 inquiry. For instance, the § 101 question may ask whether these specific structures preempt all use of the financial intermediary process of claim 33. *Mayo*, 132 S. Ct. at 1294, 1296, 1299, 1301; *Bilski*, 130 S. Ct. at 3230-31. Assuming those specific structures do not preempt

the general abstract process of using a financial intermediary to mitigate risk, they may not be abstract, and any infringement of claim 33 would then be limited to those structures and their equivalents. Other simplified § 101 tests could apply in a given case. *See, e.g., Bilski,* 130 S. Ct. at 3218.

As the above analysis suggests, giving § 112(f) the teeth Congress intended would simplify the § 101 inquiry by limiting the scope of the question and eliminating from contention many patents that this Court has already found to be impermissibly abstract. For instance, in the *Dealertrack* case, this Court found claims abstract when they were: "silent as to how a computer aids the method, the extent to which a computer aids the method, or the significance of the computer to the performance of the method," even though the patent at issue limited the claims to "computer-aided." *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012); *see also Fort Properties, Inc. v. American Master Lease LLC*, 671 F.3d 1317, 1323-24 (Fed. Cir. 2012) ("operating an electronic device that features a central processing unit" is not a "meaningful" limitation). Claims like these could first be considered under § 112(f) and if they lacked any meaningful structure as to how they accomplish their function, they would be invalidated without even getting to § 101. If they had sufficient structure, the invention would accordingly be limited, and so too would be the § 101 inquiry.

Importantly, these determinations under both § 112(f) and § 101 could be made early in litigation, before lengthy and expensive discovery. Even if § 112(f) might require some claim construction, it could be done in a limited fashion as part of either a motion to dismiss or an early motion for summary judgment. This will particularly benefit parties with limited resources who feel they have strong claims of invalidity or non-infringement that could be made at these early stages. Giving these companies additional tools to raise their meritorious claims will not only directly benefit those companies, it will also strike a blow to one of the most egregious aspects of the NPE business model, namely using the threat of costly litigation to force settlements that do not remotely reflect the actual value of the patents at issue.

CONCLUSION

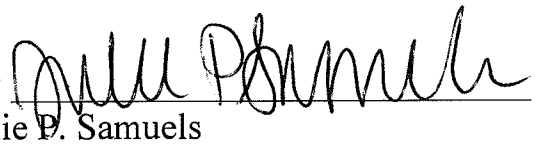
The recent rise in patent litigation—particularly in the high-technology industries—has caused great harm to companies of all sizes, with smaller companies bearing the brunt. Without intervention from the courts, this trend promises to continue unabated. Creating a clearer standard under § 101 would help solve this problem, but doing so has proved to create difficulties for this Court and the Supreme Court. Implementing a more stringent interpretation of functional claiming under § 112(f) would help to narrow the scope of the § 101 problem

while protecting efficient and less expensive litigation vehicles that allow those with more limited resources to make meritorious defenses in court.

December 6, 2012

Respectfully submitted,

ELECTRONIC FRONTIER FOUNDATION

By 

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing BRIEF OF AMICI CURIAE ELECTRONIC FRONTIER FOUNDATION AND PUBLIC KNOWLEDGE IN SUPPORT OF APPELLEES AND REMAND will be filed on December 7, 2012 pursuant to Fed. R. App. P. 25(a)(2)(B)(ii) by dispatch of the original and 30 copies by Federal Express for delivery to the clerk on the next business day, addressed as follows:

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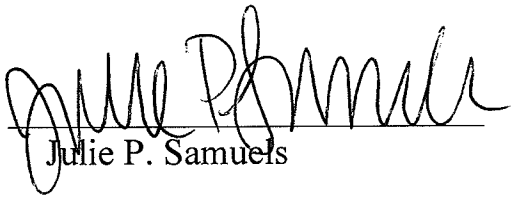
I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on December 6, 2012 in San Francisco, California.



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CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATION, TYPEFACE REQUIREMENTS, AND TYPE STYLE REQUIREMENTS PURSUANT TO FED. R. APP. P. 32(a)(7)(C)

I hereby certify as follows:

1. The foregoing Brief of Amicus Curiae of Electronic Frontier Foundation and Public Knowledge complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B). The brief is printed in proportionally spaced 14-point type, and there are 4,934 words in the brief according to the word count of the word-processing system used to prepare the brief (excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii), that is, the tables of contents and citations, and certificates of counsel, and by Fed. Cir. R. 32(b), that is, the certificate of interest, the statement of related cases, and the addendum in an initial brief of an appellant).

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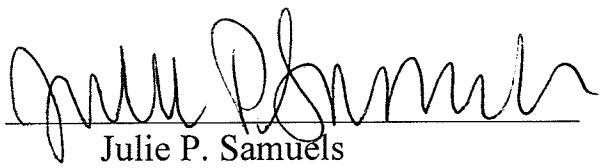
December 6, 2012



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