

**From:** Keith Kupferschmid  
**Sent:** Monday, April 15, 2013 12:14 PM  
**To:** SoftwareRoundtable2013  
**Subject:** SIIA Comments on Partnership for Enhancement of Quality of Software-Related Patents

The Software & Information Industry Association (“SIIA”) appreciates the opportunity to respond to the request for comments on the *Partnership for Enhancement of Quality of Software-Related Patents* published by the PTO in the Federal Register on January 3, 2013. SIIA files the following attached comments on behalf of itself and its members. We understand that this is the first stage of what will be an ongoing dialogue between the PTO and the software patent community. SIIA looks forward to continuing to work constructively with the PTO and other interested parties to improve the quality of the U.S. patent system as it continues to consider these important issues in future Roundtable and related events. If you have questions regarding these comments or would like any additional information please feel free to contact me at (202) 789-4442 or [keithk@siia.net](mailto:keithk@siia.net).

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*By Electronic Mail*

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RE: SIIA Comments on the Partnership for Enhancement of Quality of Software-Related Patents

To Whom It May Concern:

The Software & Information Industry Association (“SIIA”) appreciates the opportunity to respond to the request for comments on the *Partnership for Enhancement of Quality of Software-Related Patents* published by the U.S. Patent and Trademark Office (“PTO”) in the Federal Register on January 3, 2013. We commend the PTO for launching this new partnership with the software community and for the Office’s willingness to consider new approaches aimed at improving the patent system generally and the quality of software-related patents more specifically.

SIIA is the principal U.S. trade association for the software and digital content industries. With over 700 member companies SIIA is the largest association of software and content publishers in the country. Our members range from start-up firms to some of the largest and most recognizable corporations in the world. SIIA member companies are leading providers of, among other things:

- software publishing, graphics, and photo editing tools
- corporate database and data processing software
- financial trading and investing services, news, and commodities exchanges
- online legal information and legal research tools
- protection against software viruses and other threats
- education software and online education services
- open source software
- and many other products and services in the digital content industries.

The innovative companies that make up SIIA's membership rely upon patent protection to protect their inventions, but also depend upon the ability to manufacture, develop, and sell their products free from improper assertions of patent rights. Consequently, SIIA's members are involved in patent litigation as both patentees and accused infringers; they cannot be categorized as generally plaintiffs or generally defendants.

SIIA members have benefited from owning thousands of patents. Yet they also rely on the boundaries to patent protection, as these boundaries preserve and protect their ability to innovate. As such, SIIA's collective membership sits at the crossroads of the countervailing interests in the ongoing debate on patent litigation reform and the evolving patent marketplace.

SIIA files the following comments on behalf of itself and its members.

## **Establishing Clear Boundaries for Claims that Use Functional Language**

The ability of a nation's patent system to promote innovation is largely dependent upon the quality of patents issued by that country's patent office. A patent regime built on a foundation of high quality patents will lead to increased innovation, economic efficiency, and market certainty. On the other hand, a patent examination system that frequently issues poor quality patents may generate uncertainty in the market and contribute to problematic, speculative litigation, giving litigious patent owners, such as Patent Assertions Entities (PAEs), more ammunition. For instance, the amount of PAE litigation grew by 500% from 2001 to 2011<sup>1</sup> and now accounts for a majority of all patent litigation.<sup>2</sup> This litigation boom places a significant drain on innovative companies,<sup>3</sup> including small companies and start-ups.<sup>4</sup>

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<sup>1</sup> See *PricewaterhouseCoopers' Patent Litigation Study*, available at <http://www.pwc.com/us/en/forensic-services/publications/2012-patent-litigation-study.jhtml>

<sup>2</sup> See *Tracking PAE Activity: A Post-script to the DOJ Review* at <http://www.rpxcorp.com/index.cfm?pageid=14&itemid=29> (PAE suits accounted for 62% of all patent litigation).

<sup>3</sup> See James Bessen and Michael J. Meurer, *The Direct Costs from NPE Disputes*, Boston University School of Law (June 28, 2012) at [http://www.bu.edu/law/faculty/scholarship/workingpapers/documents/BessenJ\\_MeurerM062512rev062812.pdf](http://www.bu.edu/law/faculty/scholarship/workingpapers/documents/BessenJ_MeurerM062512rev062812.pdf) (reporting the direct cost of PAE suits for targets at \$29 billion in 2011 and the total cost to be \$80 billion).

<sup>4</sup> *Id.* (reporting that 55% of PAE suits are brought against small companies).

The issuance of high-quality patents, therefore, is an essential ingredient to a strong and effective patent system and should be the primary goal of the PTO. Essential features of high-quality patents are claims that have clear and unambiguous scope and specifications that are enabling and contain a complete written description that supports the full breadth of the claims. Under U.S. law this is accomplished through Section 112 of the Patent Act.

Section 112, U.S. case law and the Manual for Patent Examining Procedure (“MPEP”) all require that a written description be sufficiently full, clear, concise and defined to enable a person skilled in the art to make and use the invention;<sup>5</sup> that the specification contain at least one claim pointing out and distinctly claiming the subject matter that the applicant considers as the invention;<sup>6</sup> and that a functional claim shall be construed to cover the corresponding structure, material, or acts described in the specification.<sup>7</sup> All applications -- regardless of the underlying type of invention claimed -- are subject to this standard. We urge that the law, rules and procedures for examining patents be applied correctly, vigorously and consistently by the PTO across all types of applications.

We cannot stress enough the importance of enforcing Section 112 requirements to ensuring the vibrancy and efficacy of the U.S. patent system to the software industry. Enforcement of Section 112 supports the important public notice function of the patent system and promotes certainty in markets driven by innovation -- and thus helps mitigate speculative litigation. SIIA strongly urges the PTO to encourage its examiners to use all the tools at their disposal to ensure compliance with Section 112 and capture their views in the public record for future use by the public in determining the scope and validity of the patent at issue.

The PTO’s request for comments specifically asked for input on the application of Section 112(f) of the Patent Act to software claims. It is well established that claims that cover a function are invalid if that function can be accomplished by any means or by using any structure.<sup>8</sup> Claims may include functional language, but the claim must be fully supported

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<sup>5</sup> 35 U.S.C. 112(a) (providing that the “specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.”)

<sup>6</sup> 35 U.S.C. 112(b) (providing that the “specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.”)

<sup>7</sup> 35 U.S.C. 112(f) (providing that “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.”)

<sup>8</sup> See *Halliburton Oil vs. Walker*, 329 U.S. 1 (1946) in which the Supreme Court noted that the broadness and ambiguity of functional claims threatens innovation and undermines the notice aspect of patents.

and enabled from the perspective of the person having ordinary skill in the art (“phosita”), which is likely to present a high bar for broadly functional limitations. Section 112(f) allows applicants to use functional claims without reciting supporting structure or acts in the claim but the scope of those claims is expressly limited to the structure or acts (and their equivalents) as described in the patent specification. If sufficient structure or acts cannot be found in the specification, the claim must be found invalid on grounds of indefiniteness under 112(b).

For functionally claimed software elements performed on a general purpose computer under 112(f), sufficient structure or acts may be provided by an algorithm.<sup>9</sup> In some cases, sufficient structure to support the function can also be supplied by special purpose hardware. But when section 112(f) applies to a claim covering a function performed by a general purpose computer, the examiner must check the specification to determine whether it contains a sufficient algorithm as the structure or acts that limit the claim. Consequently, a functional software claim running on a general purpose computing device must contain sufficient structure either within the claim or within the specification to meet the requirements of section 112.

Unfortunately, we have encountered many patents issued by the PTO over the years that contain unclear and/or functional claims that do not comply with the requirements of section 112. To address this concern, we encourage the PTO to use the tools available to examine these applications more effectively. One important step is for examiners to better recognize when Section 112(f) applies. Appropriate enforcement of Section 112(f) during examination can result in claims that provide better notice to the public and help reduce problems associated with broad and vague claims in software patents. A determination of whether Section 112(f) applies to functional software claims requires a careful case-by-case analysis, the results of which should be included in prosecution history.

To be clear, we are not recommending that software-related patent applications be treated differently than other applications or that special rules be put in place for software-related inventions. What we are recommending is that the PTO work with applicants to take steps to ensure compliance with Section 112 requirements, including in software claims. SIIA’s view is that both current law and PTO procedure already provide long-standing requirements for full, clear, precise descriptions in the specification and avoidance of all indefiniteness in the claims. The real challenge here is one of rigorous enforcement of current requirements, through education of applicants and examiners.

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<sup>9</sup> See *Aristocrat Technologies Ltd. v. International Game Technology*, 521 F.3d 1328 (Fed. Cir. 2008). (holding that the claims in the patent at issue invalid for indefiniteness because they lacked a “specific algorithm” or any step-by-step process for performing the claimed functions.)

## Preparation of Patent Applications

*Clarifying the Scope of the Claims:* The best way to improve the clarity of the scope of claims is through rigorous enforcement of current statutory requirements for clarity, enablement, and written description. While this burden falls most heavily on the PTO, SIIA views this more as a shared responsibility between the PTO and, with the right incentives, patent applicants.

For the PTO's part it can do several things to ease this burden. For instance, the PTO could improve the frequency and focus of training programs the PTO presently offers examiners, especially as they relate to enforcement of Section 112 and the scope of claims for software-related patents. The PTO should also encourage examiners to more frequently use Rule 105 and applicant interviews to clarify claim meaning, and to reject claims that are not clear or supported in the specification. Regardless of what tool(s) the examiner uses to determine the ultimate scope and meaning of the claim -- via Rule 105, interview or through other means during the course of substantive exam -- it is essential that the examiner fully document (through the examiners' interview summaries and/or reasons for allowance) the reason the claims were allowed as well as their scope so that the metes and bounds of the claims can subsequently be clearly discerned from the file history.

During the course of an application's prosecution, an applicant is likely to state that examples contained in the specifications are not limiting. It is then up to the examiner to voice and record his or her disagreement with that view and to take whatever steps are necessary to force compliance with Section 112 requirements. This will not be easy. Applicants may be reluctant to provide information about their inventions beyond what is provided in the patent application because doing so could lead to risk of prosecution history estoppel.

One way to approach this problem might be to provide incentives for applicants to draft complete specifications through the use of a pre-screening application process. For instance, this can be accomplished by incentivizing applicants to use semantic analysis software tools (prior to filing) to help the applicant determine whether terms in the claims are found in the specification.<sup>10</sup> If the applicant does this pre-screening they can then address any Section 112 issues identified by the software tool prior to filing, thereby avoiding the risk of prosecution history estoppel. The PTO could provide incentives for applicants to file claims that successfully undertake this type of pre-screening, such as requiring an examiner to conduct an interview before making a Section 112 rejection, to try and resolve issues expeditiously without protracted examination.

*Clarifying the Meaning of Claim Terms in the Specification:* We support the PTO's efforts to address problems associated with ambiguous claim language during examination.

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<sup>10</sup> These pre-screening tools could also be used by examiners to analyze claims under Section 112 before substantive examination.

Clarification of claim meaning and scope should be captured in the public record. There are several ways to accomplish this, for example by making sure that examiners clearly state in their reasons for allowance their understanding of claim scope and meaning of key terms.

Other steps the PTO should be taking to address this problem include the use of applicant generated glossaries to define key claim terms and/or the use of designated or preferred dictionaries. Cutting-edge industries often use terms that are ambiguous, distinctive, and/or specialized, and the software field is no exception. Thus, encouraging the applicant to reference some type of lexicography in its application should help alleviate the ambiguities inherent in these types of applications.

### **Future Discussion Topics for the Software Partnership**

Although addressing the problems associated with functional claiming will help improve the patent system, this is not the only step that should be taken. Other areas the PTO should consider addressing at future roundtable discussions include other aspects of vigorous Section 112 enforcement, including the enablement, written description and definiteness requirements, the obviousness standard and access to prior art, and the problems of non-uniform terminology used in software patents.

### **Conclusion**

We would like to thank you for the opportunity to provide these comments. We understand that this is the first stage of what will be an ongoing dialogue between the PTO and the software patent community. SIIA looks forward to continuing to work constructively with the PTO and other interested parties to improve the quality of the U.S. patent system as it continues to consider these important issues in future Roundtable and related events. If you have questions regarding these comments or would like any additional information please feel free to contact Keith Kupferschmid, SIIA's General Counsel and Senior Vice President of Intellectual Property, at (202) 789-4442 or keithk@sii.net.



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