

From: Keith Kupferschmid [Email Redacted]
Sent: Wednesday, May 06, 2015 4:01 PM
To: WorldClassPatentQuality
Subject: SIIA Comments on the PTO's Enhancing Patent Quality Initiative

The Software & Information Industry Association (“SIIA”) appreciates the opportunity to respond to the U.S. Patent and Trademark Office’s request for comments on its *Enhancing Patent Quality Initiative* pursuant to the notice published in the Federal Register on February 5, 2015 and hereby files the attached comments on behalf of itself and its members. If you have questions regarding these comments or would like any additional information please feel free to contact me at the email or phone number below.

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By Electronic Mail

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RE: SIIA Comments on Enhancing Patent Quality

Dear Mr. Cygan:

The Software & Information Industry Association (“SIIA”) appreciates the opportunity to respond to the U.S. Patent and Trademark Office’s (“PTO”) request for comments on its *Enhancing Patent Quality Initiative* pursuant to the notice published in the Federal Register on February 5, 2015.¹ SIIA files the following comments on behalf of itself and its members.

SIIA is the principal trade association for the software and digital information industries. The more than 700 software companies, data and analytics firms, information service companies, and digital publishers that make up our membership serve nearly every segment of society, including business, education, government, healthcare and consumers.² As leaders in the global market for software and information products and services, they are drivers of innovation and economic strength – software alone contributes \$425 billion to the U.S. economy and directly employs 2.5 million workers and supports millions of other jobs.³

¹ 80 Fed Reg. 6475 (Feb. 5 2015).

² A list of SIIA’s member companies may be found at: <http://www.siiia.net/membership/memberlist.asp>.

³ Software & Information Industry Association, *The U.S. Software Industry: An Engine for Economic Growth and Employment*, Prepared for SIIA by Robert J. Shapiro, 2014 at <http://www.siiia.net/Admin/FileManagement.aspx/LinkClick.aspx?fileticket=ffCbUo5PyEM%3d&portalid=0>.

SIIA and its members have a significant interest in patent issues. On the one hand, SIIA members use the patent system to protect their products and services, which improve the global competitiveness of our nation. At the same time, SIIA members increasingly face frivolous and harassing patent infringement suits from Patent Assertion Entities (“PAEs”) who exploit low-quality patents and gaps in the patent litigation system and force SIIA members and numerous other industries to divert critical resources away from innovation.

At the outset we want to thank Director Lee and the PTO leadership and staff for your sustained and continuing efforts to improve the quality of patents being issued by the PTO. We very much appreciate the steps taken by the PTO to date, as outlined in detail in the Federal Register notice, and the opportunity to provide our comments. We also strongly agree with the PTO that additional action by the PTO – in cooperation with patent applicants – can and needs to be taken to improve patent quality.

Correct, Vigorous and Consistent Enforcement of Section 112 is the Most Important Component to Enhancing Patent Quality

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 office that frequently issues poor quality patents will generate uncertainty in the market and contribute to problematic, speculative litigation.

The issuance of high-quality patents, therefore, is critical to a strong and effective patent system and should be the primary goal of the PTO. High-quality patents must include:

- patent claims that have a clear and unambiguous scope;
- patent specifications that are enabling and contain a complete written description that supports the full breadth of the claims; and
- patent application prosecution records that clearly explain the reasons for allowance and the extent of consideration of the cited prior art in a manner that provides certainty and clarity of the scope of the patent.

SIIA believes that the PTO and patent applicants can do more to reach these goals.

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 invention⁴ and that the specification contain at least one claim pointing out and distinctly claiming the subject matter that the applicant considers as the invention.⁵ 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 that these law, rules and procedures for examining patents be applied correctly, vigorously and consistently by the PTO.

The PTO should require applicants to clearly define the scope of their patent claims. Unfortunately, there are many patents issued by the PTO over the years that contain unclear claims which fail to comply with the requirements of Section 112. 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 currently this burden falls most heavily on the PTO, SIIA views this as a shared responsibility between the PTO and patent applicants.

We continue to recommend that applicants be required to identify and define key claim terms. Cutting-edge industries often use terms that are ambiguous, distinctive, and/or specialized, and the software field is no exception. Because applicants are in the best position to identify and define claim terms on the record, encouraging them to define key claim terms in their applications should help alleviate the ambiguities inherent in these types of applications. This can be accomplished, for example, by the PTO requiring the use of applicant-generated glossaries to define key claim terms and/or the use of designated or preferred dictionaries. If applicants do not use a glossary then at the very least, they should be required to point or link all key terms back to the specification or to a specific dictionary. After filing, rarely, if ever, should an applicant be permitted to add new terms in amended or later-filed claims. However, if this is the case, the applicant needs to define those terms and identify support as with the original claims.

To further help achieve these quality goals 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. In these programs, the PTO should encourage examiners to more frequently use Rule 105 and applicant interviews to clarify claim meaning and ensure that applicants define key claim

⁴ 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.”)

⁵ 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.”)

terms, and to reject claims that are not clear or supported in the specification (see further comments on applicant interviews in the discussion of proposal six, below).

Comments on the PTO's Proposals

In the Federal Register notice, the PTO requested comments on three Quality "Pillars": (1) Excellence in Work Product, (2) Excellence in Measuring Patent Quality, and (3) Excellence in Customer Service, each of which includes proposals, for a total of six proposals. As should be apparent from our comments above we believe that Pillar One – excellence in work product – is far and away the most important of these quality initiatives.

Proposal Two: Automated Pre-Examination Search

We are supportive of the pre-examination search because it can help educate examiners about prior art in a manner that can help improve the efficiency and focus of a prior art search. As the PTO has recognized, prior art searching can also be improved by ensuring that the scope of the claims are clear, and (as discussed above) in particular by requiring applicants, at the outset, to define terms used in their claims (which will lead to better pre-examination searching).

Another way to improve the search is to improve the corpus of and accessibility to prior art. Just at SIIA's predecessor organization the Software Publishers Association (SPA) did many years ago when it helped create the Software Patent Institute, the PTO should look to industry and academia for support in improving the accessibility of software prior art by digitizing it and making it publicly available.

Lastly, while it may be obvious, we think it is worth noting that a pre-examination search should never substitute for full searches by examiners (assisted by advanced search tools). If examiners were to rely solely on automated pre-examination searches, they would likely miss relevant prior art that only a manual search would have revealed. Thus, to improve the quality and efficiency of examinations – and thus, to better ensure the issuance of high-quality patents – the PTO must continue to provide examiners with manual search tools and require their use.

Proposal Three: Clarity of the Record

As indicated in our comments above, we believe that patent application prosecution records that clearly explain the reasons for allowance and the extent of consideration of the prior art of record are an essential element of quality patents. We appreciate the PTO's recognition of the importance of this issue and support the PTO's efforts to address problems associated

with ambiguous claim language during examination. However, we also want to take this opportunity to stress that it is also essential that any clarification of claim *meaning* and *scope* be captured in the public record.

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 crucial 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 be clearly discerned from the file history. In the examiner's reasons for allowance he or she should not only state their understanding of claim scope, but also clarify the meaning of key terms. To be clear, we are not suggesting that examiners should be *interpreting* what applicants consider to be his or her definitions, rather that examiners should clear up any ambiguity during the prosecution.

When the record is unclear, there may be incorrect assumptions made that a patent overcame the cited prior art even when that prior art may not have been considered in detail or in a certain way. The PTO can help address this problem by requiring examiners to specify in the record which prior art references that form the basis of claim rejections were considered in greater detail by the examiner than those references that were not.

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 assert and record his or her disagreement with that view and to take whatever steps are necessary to force compliance with Section 112 requirements. Although applicants may often 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, it is important for examiners to urge applicants' cooperation.

Proposal Four: Quality Metrics

We support increased transparency of the prosecution process. There exists a wide range of examiner performance within and across art units. The PTO should look at the different rejections used in each art unit,⁶ and assess how those rejections are being applied, how frequently they are being applied and how often they are overcome. Through this type of inquiry, the PTO can determine which art units are doing a better job of applying certain rejections, and which ones are not. This will help the PTO identify the art units and potential areas of rejections that are the most appropriate focus for increased training.

We also recommend that the PTO use advanced text analytic tools to identify applicant-generated errors. Using these tools will help the PTO better identify structural flaws and

⁶ There are numerous automated tools available to help the PTO with this type of investigation.

other application deficiencies. By applying these analytic tools prior to and during examination and identifying application shortcomings, the PTO could improve both the quality and efficiency of the examination process. Such tools are commercially available in the marketplace today and available from many SIIA members.

As we've said throughout these comments, quality is not only the responsibility of the PTO – it is a shared responsibility. The quality, completeness and accuracy of the information provided by applicants to the PTO will have a direct bearing on the quality of the examination process. The examination process can be a long process that may involve numerous modifications to application specifications and claims. The length and complexity of this process is a breeding ground for applicant errors. Each year, applicants make millions of classification, procedural and other errors in their submissions to the PTO. The PTO has post-grant processes in place that filter and correct documentation submitted by applicants that are critical and should be retained. Applicants also need to do their part to help reduce these errors and improve patent application quality.

An often overlooked aspect of high-quality patents is the accuracy of the text and other searchable components of published patent documents that appear in the public record. A large number of documents are processed by the PTO using Optical Character Recognition (“OCR”) technologies. OCR'ed text often contains a significant amount of errors.⁷ This is especially true for patents granted in technology fields because algorithms and spelling dictionaries used by automated processes often lag far behind these technologies. Failure to correct errors caused by OCR would adversely affect stakeholders who rely on the accuracy of patent data.

Commercial providers add value by enhancing raw data to create new features and functionality. For example, LexisNexis's Semantic Search feature analyzes a phrase or a paragraph of text entered by a searcher, makes intelligent connections to other words and phrases and then provides the searcher with additional terms and phrases that may be related. The intelligent connections made by Semantic Search are supported by a massive database that was created by a proprietary algorithm. The algorithm examined the text of millions of PTO patents (and Elsevier scientific journals) to find connected terms and phrases. If these patents contained billions of OCR errors, the effectiveness of the Semantic Search would be jeopardized.

Thomson Reuters also offers a patented “Smart Search” tool that leverages the significant quality in the Derwent Worlds Patent Index. The “Smart Search” uses the Semantic Search technology to execute patent searches using human enhanced quality controlled knowledge built into the enhanced data fields of the Derwent database. The PTO should maintain its

⁷ Human review prior to publication of patent documents that were OCR'ed corrects an estimated 200 million text errors each year.

current contractor-operated text correction processes and patent text quality checks to ensure the continuing high quality of published patent content.

Likewise, the PTO should also continue to use outside contractors to ensure consistency across patent publications. Over 30,000 patent agents/attorneys file patent applications. This would result in a significant variation in the way similar materials (e.g., tables or chemical structures) are presented to the public. These outside contractors play an important role in ensuring that these materials are presented in a similar way across all patent records.

Proposal Five: Compact Prosecution

We understand the need for faster, more streamlined prosecution. However, where there is a conflict between the need for high-quality patent and compact prosecution, we strongly believe that quality consideration should prevail.

Some have suggested that the PTO should consider changing the present prosecution system, which limits the applicant to two office actions. With some hesitancy, SIIA supports further consideration by the PTO of allowing for multiple office actions with increasing fees that would take effect after the second (now referred to as the final) office action. Presumably a limit would have to be placed on the number of additional office actions that an applicant would be entitled to and if that limit is reached the applicant would be allowed to bring the matter to a panel of examiners, and possibly to an appeals process.

While we support further consideration of this approach we are concerned that setting a limit of two offices action in a case, followed by increasing fees for additional office actions, could be a disincentive to applicants to pursue an otherwise patentable innovations – this would be especially true for small applicants with limited resources. Accordingly, any additional rounds of prosecution should be available without adding significant burdens of cost and additional process.

We would also encourage the PTO to consider other potential changes to the prosecution system that could improve patent quality. This could include working in partnership with the patent office professional association and applicants to re-evaluate the examiner “count system.”⁸ The PTO should also evaluate whether alternatives or adjustments to the count system would result in more high-quality patents. For example, the PTO should recognize that the results of this enhanced quality initiative might place additional burdens and increased workloads on examiners that need to be reflected in the count system, and that failure to do so might dissuade examiners from effectively applying any new quality initiative. The PTO should also consider whether the current count system creates incentives

⁸ The “count system” evaluates an examiner’s performance by measuring whether the examiner has met his or her case-load requirements (i.e., “numbers”) over a two-week period.

to issue undeserving patents or to reject deserving patents (in order to prolong the prosecution and artificially increase an examiner's "numbers").

Proposal Six: Interviews

With regard to interviews, what's most important is that an adequate and clear record of the interview be included in the prosecution record and that examiners be adequately trained in effective interview practices, including the necessity of recording the interview and recognizing and responding to common negotiating tactics used by counsel.

While we understand that some applicants prefer in-person interviews, such interviews may not always be the most effective use of the examiner's limited time. It is SIIA's preliminary view that, considering the new advanced technologies for video interviews that are available as well as recent improvements in video interviews by the PTO, video interviews should be an acceptable alternative to in-person interviews and therefore it should not be necessary for the PTO to arrange for interviews at the regional libraries. Ultimately, however, what is most important is that the interviews between examiners and applicants take place because they are usually helpful to the prosecution and the record. Therefore, if, in the judgment of the PTO, the inability to hold an interview at a repository library is a real deterrent to the occurrence of interviews, then we would support this proposal.

Conclusion

We would like to thank you for the opportunity to provide these comments. SIIA looks forward to continuing to work 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. 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@siia.net.



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