

March 14, 2014

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SoftwareRoundtable2013@uspto.gov

Seema Rao, Director
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Mail Stop Comments—Patents
Commissioner for Patents
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Dear Ms. Rao:

We submit the following comments on behalf of The Clearing House, in response to the U.S. Patent and Trademark Office's Request for Comments Regarding Prior Art Resources for Use in the Examination of Software-Related Patent Applications (79 Fed. Reg. 644).

Established in 1853, The Clearing House is the nation's oldest banking association and payments company. It is owned by the world's largest commercial banks, which collectively employ 1.4 million people in the United States and hold more than half of all U.S. deposits. The Clearing House Association acts as a nonpartisan advocacy organization representing the interests of its owner banks on a variety of important banking issues. Its affiliate, The Clearing House Payments Company L.L.C., provides payment, clearing, and settlement services to member banks and other financial institutions, clearing almost \$2 trillion daily. This is nearly half of the automated clearing-house, funds transfer, and check-image payments made in the United States.

A strong patent system is vital to continued innovation in the United States. The financial services industry collectively holds thousands of patents and the number of patents it owns continues to grow. Ambiguous and invalid patents, however, undermine real innovation and threaten the soundness and security of our nation's financial infrastructure. The patent examination process must be improved to reward actual innovation with appropriately tailored patent protection. A key component of improving patent examination involves improved prior art searching.

The Clearing House is committed to working with the Administration and the U.S. Patent and Trademark Office ("USPTO") to improve the quality of the patent examination process while ensuring that robust patent protection remains available for true innovations. For example, in response to the Administration's recent call for key innovators to enhance and support the

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USPTO, The Clearing House has pledged to develop educational materials and host education sessions with USPTO examiners with a focus on the most critical components of the nation's financial infrastructure. See "TCH Pledges to Support USPTO on Patents," available at <https://www.theclearinghouse.org/press-room/in-the-news/2014/02/tch-pledges-to-support-uspto-on-patents>. As further described below, The Clearing House has also pledged to coordinate with the USPTO to establish a vehicle, such as an existing commercial database, to collect and provide patent examiners with access to non-patent literature ("NPL") describing the United States' financial infrastructure. *Id.*

Patents issued on software and software-related technology, including those directed to financial and business methods performed by software, are an area of particular concern for the financial services industry. Thus, the current initiative for improving the formulation and implementation of prior art searching, especially for applications relating to software-implemented inventions, is of great interest to The Clearing House. Below, we address the two specific questions posed by the PTO.

1. What specific databases, Web sites, tools and other resources do you find useful in searching for software-related inventions? Please indicate the strengths and limitations of each resource.

Improvements to the quality of NPL searches are needed across all areas of technology, but the need is especially acute for patent applications on software-related inventions. NPL including, for example, prior art publications describing software products or systems that are in use or under development as of the effective filing date, are central to the proper review of patent applications on software-related inventions. During examination, however, USPTO frequently fails to identify or lacks access to the most relevant NPL.

One challenge examiners face in this regard is the absence of databases containing documentation reflecting the state of the art in many innovative industries, such as financial services. Another challenge to improving prior art searching for NPL is the lack of a reliable way for the private sector to provide non-patent materials for the USPTO to use when reviewing patent applications.

To help address these problems, The Clearing House has pledged to help establish a better vehicle for examiners to search NPL relating to the nation's financial infrastructure. The availability of such a resource – if coupled with more rigorous examination practices including full application of the broadest reasonable interpretation standard during initial prosecution – would facilitate more initial rejections of the most problematic claims to inventions involving software and, accordingly, a proper narrowing of those claims during patent prosecution.

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Key NPL resources need to not only be available, but easy for examiners to access, in order to ensure they are regularly part of the prior art search process. Therefore, once established, the financial infrastructure NPL resource should be closely integrated with the tools currently utilized by the USPTO when conducting prior art searches, including incorporation in the Examiner's Automated Search Tool (EAST).

In addition to the planned resource described above, there are a number of databases and websites that are useful for locating NPL for software-related inventions. We identify two pertinent websites below, each of which has strengths and weaknesses. These and other databases should be made known to patent examiners reviewing software-related invention applications and should be incorporated into the training provided by Scientific and Technical Information Center (STIC), particularly for use during review of continuation and other applications examined many years after the effective filing date.

A. Internet Archive Software Collection (<https://archive.org/details/software>)

The sister site of the Wayback Machine (another useful web-based tool for locating NPL prior art), the Internet Archive Software Collection "is the largest vintage and historical software library in the world, providing instant access to millions of programs, CD-ROM images, documentation and multimedia." It is primarily useful for finding copies of prior art shareware and other software that is no longer commercially available.

B. Google Books (<http://books.google.com/books>)

Google has archived complete back issues of computer and software-centric magazines in this database, with searchable full-color scanned images. Date-restricted searches can be run based on a technology area, company, or software product of interest. Images and figures from advertisements, detailed product descriptions, and product reviews that are not available in text-only publication databases such as Lexis-Nexus can be searched and located in this database.

2. What are your concerns regarding the manner in which USPTO examiners formulate and implement search strategies to identify prior art for software related inventions? How should these concerns be addressed?

Financial services firms typically encounter a patent with claims directed to a software-related invention for the first time when that patent is asserted against them in patent infringement litigation. Patent assertion entities ("PAEs") bring many of these suits. Often, the PAE did not own the alleged invention at the time of patent prosecution.

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Such PAEs oftentimes assert that the scope of an issued patent is far broader than the interpretation of the claims utilized by the USPTO when formulating the prior art search and examining the claims. The result is that the patent is issued without consideration of prior art that would have been highly relevant if the USPTO understood the claims to extend as broadly as the plaintiff asserts in litigation. However, the examination record typically contains little or no clarity as to how the claims were understood for purposes of formulating the prior art search. In some of the most egregious cases, the USPTO implicitly interprets claim language that is facially ambiguous or capable of being understood as having extremely broad coverage more narrowly than its broadest reasonable interpretation and issues no rejections or remarks focused on the breadth of the claim language. This leaves the public with no record of why the issued claims were allowed notwithstanding their vague language. The lack of a fulsome record from the patent examination process makes it difficult for parties and courts to readily determine that the patent the USPTO issued is not as broad as later contended by a plaintiff, resulting in the expenditure of millions of dollars while claim scope is litigated.

The formulation and implementation of prior art searches – and the quality of issued patents – would be greatly improved by increasing clarity regarding the scope of the pending claims during prosecution. Such clarity can be improved using the tools already available to the USPTO, but those tools must be more consistently applied. Specifically, when reviewing patent applications during initial prosecution, the USPTO should fully embrace the broadest reasonable interpretation standard. Where claims are ambiguous or overly broad when that standard is applied, they must be rejected and the applicant provided with the opportunity to respond.

This process would facilitate better prior art searching. Where the USPTO does not address potential ambiguities in claim scope through application of the broadest reasonable interpretation standard, the result is oftentimes a prior art search that is too narrow to encompass the scope of the claims as later asserted during litigation.

An illustrative example is U.S. Patent No. 8,083,137 (“’137 patent”), owned by the large PAE Intellectual Ventures. Intellectual Ventures is currently asserting the ’137 patent against financial services organizations in six patent infringement lawsuits, including against several members of The Clearing House. *Intellectual Ventures I, LLC, et al. v. PNC Financial Svcs. Group, Inc., et al.*, 2:13-cv-740 (W.D. Pa., filed May 29, 2013); *Intellectual Ventures I, LLC, et al. v. Fifth Third Bancorp, et al.*, 1:13-cv-0378 (S.D. Ohio, filed June 4, 2013); *Intellectual Ventures I, LLC, et al. v. Bank of America Corp., et al.*, 3:13-cv-0358 (W.D.N.C., filed June 12, 2013); *Intellectual Ventures I, LLC, et al. v. Capital One Financial Corp., et al.*, 1:13-cv-0740 (E.D. Va., filed June 19, 2013); *Intellectual Ventures I, LLC, et al. v. M&T Bank Corp.*, 1:13-cv-1274 (D. Del., filed July 24, 2013); *Intellectual Ventures I, LLC et al. v. HSBC USA Inc, et al.*, 1:13-cv-5386 (S.D.N.Y., filed Aug. 1., 2013). Millions of dollars have been spent defending against Intellectual Ventures’ assertion of this patent.

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The '137 patent, titled "Administration of Financial Accounts," states that it pertains to a "processing system [that] provides messages and other information to the user, both on-demand and at the point of sale, based upon the category of the transaction and the [spending] limit set for that category." '137 patent, Abstract. The patent states that the alleged invention addresses the problem that "it is difficult, even for the most disciplined person, to resist the temptation of purchasing a product spontaneously." *Id.* col. 1, ll. 24-25. Thus, the '137 patent describes a credit card processing system that can be configured to disallow, or to require authorization from a third-party (such as a parent or employer) prior to, purchases exceeding pre-set spending limits. *E.g., id.* at col. 4, ll. 1-26.

During prosecution, the USPTO classified the '137 patent application in two subclasses of class 235, "Registers," effectively limiting examination to consideration of whether the claims were novel and non-obvious over existing registers. The Registers class is defined in relevant part as including

machines employed for ascertaining the number of movements of various devices or machines; also, *indicating devices* where the purpose is to disclose the numerical extent or quantity of movement of a machine and where the device is separate and independent of the machine whose movements are to be noted; also *organized machines, such as, cash-registers, fare-registers, voting machines and calculators* having registering or counting devices as essential or important elements and having in addition certain other features necessary to make up the complete machines for the purposes desired. In this class are also *recording calculating machines, as--recording cash-registers, and recording voting-machines*, which are classified herein instead of in classes providing for the particular recording means, by reason of the analogy of the machines as entirities to other machines (cash-registers, etc.), in this class. These recording devices usually, but not invariably, comprise attachments for printing numbers.

(emphasis added).

On October 24, 2010, the USPTO conducted a prior art search, based on the apparent (but not expressly stated) understanding the invention was directed to machines such as point of sale terminals and cash registers for limiting customer spending. The patent and patent application searches were therefore focused on seven subclasses of the "Registers" Classification. The patent issued on December 27, 2011.

In litigation initiated only eighteen months later, however, Intellectual Ventures asserts that the claims of the '137 patent extend broadly to any "computer-implemented system and

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method for providing users with the ability to set spending limits associated with categories and presenting the user with transaction summary data.” *Intellectual Ventures v. Capital One Financial Corporation*, 1:13-cv-00740-AJT-TCB, Dkt. 110 at 19 (Oct. 30, 2013). In other words, rather than viewing the invention as limited to registers such as “cash registers,” “fare registers,” “recording voting machines,” and “calculators,” Intellectual Ventures contends that the claims encompass all software for budgeting using expense categories. Based on this understanding of the claims, Intellectual Ventures has accused banks’ online budgeting tools of infringing the ’137 patent.

To the extent that the claims of the ’137 patent are arguably broad enough to cover software budgeting products (which they are not), the USPTO failed in the first instance by classifying the application solely under subsections of class 235. If, when read under the broadest reasonable interpretation standard, the claims could cover such software, the application should have also been identified with class 705: “Data Processing: Financial, Business Practice, Management, or Cost/Price Determination.”

A number of software products for budgeting were available as of the effective filing date of the application, such as *Quicken 2000* or *Managing Your Money*. These enabled users to set and monitor spending limits associated with categories. Likely because the USPTO did not consider the application to be directed to financial data processing, however, it does not appear to have searched for existing budgeting software, and did not identify any publications describing such software during review of the ’137 patent application.

Instead, consistent with its categorization of the claims in classification 235, the USPTO searched for and identified prior art consisting largely of credit card processing systems and credit cards. Thus, the scope of the prior art search was not commensurate with the now-asserted scope of the claims, with the result that the ’137 patent issued without the USPTO ever considering prior art that would have been highly material to the examination under the claim scope now asserted in litigation.

While the ’137 patent may present a particularly stark example, it illustrates a common problem, particularly for claims that may relate to software: a failure of the USPTO to consistently apply the broadest reasonable interpretation standard during review of patent applications in order to reject claims that are (intentionally or unintentionally) written using ambiguous and potentially overbroad language. Were that standard applied in the case of the ’137 patent application, the USPTO could have issued a rejection of the claims based on a broad reading of the claims, creating a record of claim scope during patent prosecution and helping to ensure that the prior art search was commensurate with the intended scope of the claims.

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In instructing examiners on how to conduct prior art searches, the MPEP recognizes that “[t]he breadth of the claims in the application should always be carefully noted; that is, the examiner should be fully aware of what the claims do *not* call for, as well as what they do require.” MPEP § 904.01. The USPTO must do a better job of creating a record of claim scope during the initial patent prosecution phase by, for example, applying the broadest reasonable interpretation standard to reject in the first instance claims which are not written precisely. Only after the applicant either amends such claims to accurately reflect the alleged invention, or responds to the rejection by expressly setting forth its understanding of the claims’ scope, can the USPTO formulate and execute a proper prior art search.

Building such steps into the patent examination and prior art search process would have several important and beneficial effects. First, more consistent application of the broadest reasonable interpretation standard to reject claims containing broad and ambiguous language prior to conducting a prior art search would help to focus the examination process on the most important issues and most relevant prior art. Second, increased precision in claim language and a more substantial record of the intended scope of the invention would improve the clarity of issued patent claims, a result for which the Administration has already called. Third, improvements to the patent examination process such as these will result in stronger issued patents on real inventions. Where the USPTO understood the full scope of the claims, searched for and reviewed the most relevant prior art, and issued the claims over that art, it will be more difficult to invalidate them in future litigation. Finally, these steps will help contribute to a reduction in unnecessary litigation over issued claims that contain ambiguous language.

The USPTO’s existing rules and examination guidelines already require many of the procedures above, but there is a need for better governance to ensure that they are more regularly applied. Individual examiners should be incentivized to rigorously apply the broadest reasonable interpretation standard and to take a careful look at pending claims to address potentially vague or overly broad claim language during initial review of an application. This could be done, for example, through placing more emphasis on an examiner’s performance in identifying imprecise claim language during the existing quality review process and/or by placing more emphasis on this aspect of the review process when determining bonuses. Likewise, within the current system, the USPTO could consider requiring a “second pair of eyes” review by another examiner of applications containing claims directed to software-implemented inventions. There are numerous ways that the USPTO could improve the examination process simply by more robust execution of its existing policies and practices.

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We again wish to thank the USPTO for pursuing this initiative and for encouraging public participation in this process. The Clearing House is committed to providing any

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assistance it can to help improve the quality of issued patents and protect our nation's innovation economy and financial infrastructure. Please contact us if we can provide any further assistance.

Sincerely yours,

/s/

Donald R. Steinberg