Before the
United States Patent and Trademark Office
Alexandria, VA 22313

In re: )
Request for Comments Regarding )
Prior Art Resources for Use in the )
Examination of Software-Related )
Patent Applications )
)

COMMENTS OF GOOGLE INC.

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Introduction

Google commends the Office for initiating the Software Partnership and engaging with the software community to explore ideas for improving the examination and quality of software patents. It has been widely acknowledged that many issued software patents are of poor quality because they are obvious over prior art that was not identified during prosecution, or because their scope is overbroad and unclear. The problem that poor quality claims present for software innovators is magnified by the large number of patents, often numbering in the tens-of-thousands, that are relevant to most software and high-tech products. Poor quality software patents have driven a litigation boom that harms innovation. Lawsuits brought by patent assertions entities (PAEs) have quadrupled since 2005 and now account for a majority of patent litigation. Most of these cases—84% by one estimate—involves software and Internet patents. This litigation boom places a heavy burden on innovative companies. Besides fueling unnecessary litigation, invalid patents deter innovation by generating unwarranted license payments and discouraging R&D investment.

For these reasons, we thank the Office for providing information through its December 5, 2013 roundtable and seeking input on an issue of great importance to software patent quality: prior art. Making more software-related prior art accessible to examiners and the public and improving the ability of examiners to identify the most relevant prior art are of paramount importance to the goal of improving patent quality. Improved searches of

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2 See, e.g., Christina Mulligan & Timothy B. Lee, Scaling the Patent System, 68 N.Y.U. ANN. SURV. AM. L. 289, 304-05 (2012) (noting that in order to assess infringement across the software industry, “it would require roughly 2 million patent attorneys, working full-time, to compare every firm’s products with every patent issued in a given year. At a rate of $100 per hour, that would cost $400 billion. For comparison, the software industry was valued at $225.5 billion in 2010.”).


4 See GAO Report at 22 (reporting that 84% of litigation brought by PAEs involved software patents).

an expanded prior art corpus will make examination in the Office more robust to ensure that valid claims issue. It will also improve the public’s ability to challenge any invalid claims through post-issuance procedures.

In these comments, we outline several suggestions to expand the corpus of software-related prior art and improve examiners’ ability to identify the most relevant art: (1) the Office should lead efforts to make more software prior art accessible to examiners and the public; (2) the Office should improve its ability to identify relevant prior art by searching new repositories of technical disclosures and utilizing third party search tools; and (3) the Office should seek early input relevant to prior art searches from applicants. We look forward to working with the Office on these initiatives.

I. The Office Should Lead Efforts to Make More Software Prior Art Accessible to Examiners and the Public

A significant amount of software-related prior art does not exist in common databases of issued patents and published academic literature. For instance, some of the most useful software prior art may be embedded in computer code or detailed in non-digitized user manuals or technical disclosures. The Office can increase the availability of hard-to-access software prior art by encouraging industry and academia to digitize and make this prior art accessible and searchable. Leadership by the Office is needed to make this initiative successful. Although most companies will likely digitize their own materials, the Office can help match those companies and institutions that need assistance with this task and those willing to provide it.

Leadership by the Office is also needed to help identify those categories of prior art that are most likely to be relevant during examination and to provide guidance on what formats will be most useful to examiners. Open source software represents a category of prior art that is not always accessible in a format that is conveniently searchable by examiners. Previous work has been done in this area that supplies a platform on which to build, but much remains to be done. This could include making searchable the design documents and technical algorithm descriptions for these prior software projects, as well as

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the comment fields for the source code. Office leadership bringing together interested companies and parties to solve problems related making open source software usable as a source of prior art is needed. Google would welcome the opportunity to support the Office and collaborate with other companies in building a corpus to facilitate this.

One source of prior art that is not always accessible is the corpus of printed Ph.D. theses in university libraries. Through the Google Books project, Google has made searchable hundreds of thousands of Ph.D. theses from numerous academic libraries, and we are continuing this work. The theses are available through Google Books, and also can be surfaced by searching with Google Scholar and Google Prior Art Finder.

Finally, we suggest that the office expand the body of software prior art accessible to examiners by creating its own searchable collection to which examiners can contribute prior art received from applicants through Information Disclosure Statements that is not otherwise available to the examining core. Other than in the specific application for which it was submitted, such prior art is not currently readily available for application to cases by other examiners. The Office should also explore whether it could make this collection searchable by the public in a format that accommodated copyright concerns.

II. The Office Should Improve Its Ability to Identify Relevant Prior Art

The office should improve its ability to identify the most relevant software prior art by including more prior art sources in its searches and by increasing its use and understanding of third-party search tools.

A. Additional Prior Art Sources

Repositories of technical disclosure documents can be a good source of software prior art and should be fully utilized in patentability searches. Technical disclosures publish descriptions of technology that a company decides to disclose publicly without pursuing a patent application. For instance, a company may view an invention as too incremental to be patented, but may publish it to share the idea with the public while preventing patenting by others. The Office recognizes the value of technical disclosures through its inclusion of IP.com as one of the databases for patentability searches.7

7 IP.com manages a Prior Art Database, described at https://publish.ip.com/.
We encourage the Office to include additional sources of technical disclosures in its prior art searches. One such resource is a relatively new and growing defensive publication repository developed by the Brooklyn Law School Incubator & Policy (BLIP) Clinic: FirsttoDisclose.org. FirstToDisclose.org is a free, community-powered online repository for inventors to disclose their inventions to the public. Sources like this could prove fruitful in examining software patent applications. By including these sources in patentability searches, and citing to them in Office Actions, the Office will demonstrate to the public the effectiveness of publishing technical disclosures as a viable alternative to the patent process.

**B. Third Party Search Tools**

The Office should expand its prior art search capabilities by promoting the use of third-party search tools. Third-party search tools can provide information from larger and different corpora, as well as different search approaches, which may provide better search results in certain circumstances. This is especially important in searching for non-patent literature, which is often the most relevant prior art in the software space, as well as providing ranked search results that blend both patent and non-patent results.

The Office and public would benefit from the collection and publication of metrics that show how often patent examiners use the various search tools available to them, and how the results compare across different tools. For instance, how often do examiners use internal search tools versus third-party search tools? And how many invalidating references are found using each tool? Additional granularity would also be beneficial, including the art unit and experience level of the searcher, the field of search and the time spent. By collecting and sharing this data, the Office could improve its internal search tools and help the providers of third party tools to improve also.

One available third party search tool is Google Prior Art Finder. Google is working to improve the Prior Art Finder as we develop a better understanding of how to analyze patent claims and how to make results more useful to patent searchers. We welcome the Office’s feedback to help improve this tool.

To the extent that the Office is concerned about maintaining the confidentiality of unpublished applications when subjecting them to third party search tools, Google would
welcome the opportunity to advise the Office on how best to address this concern while still taking advantage of third-party tools like Google Prior Art Finder. One possible solution is for a third-party tool to generate a local summary of the patent application to be searched, and to allow the patent examiner to modify the local summary to remove or edit any information that is considered too revealing. Once the examiner has modified the local summary, it can then be sent to the third-party servers for analysis. Using an approach like this, the Office can benefit from the use of third-party search tools for unpublished applications, while still maintaining those applications in confidence.

III. The Office Should Seek Input Relevant to Prior Art Searches from Software Patent Applicants

To make prior art searching more efficient and effective, the Office should encourage examiners to interact with applicants early in the examination process and preferably prior to a first action on the merits. Important tools for facilitating that interaction include requests for information under Rule 105 and interviews. Increased technical training of examiners in cooperation with industry will also support examiners’ ability to conduct effective prior art searches.

Applicants often have information and expertise concerning the state of the prior art beyond what they must disclose under Rule 56 that could improve the prior art search and examination. For example, applicants may have technical expertise and knowledge that may be pertinent to the claimed subject matter and that may help focus the examiner’s search on what the applicant considers to be novel over the prior art.

Applicants may also be aware of potential sources of relevant non-patent prior art (such as commercial databases, industry and academic conferences, experts in the field, etc.) and have general knowledge about the state of the art at relevant points in time.

Early interaction between examiners and applicants can draw out this information. This can help examiners grasp the technology at issue and understand applicants’ claim terminology. Early interaction between examiners and applicants will also provide an opportunity for an examiner to clarify what an applicant believes distinguishes the claims.

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8 See, e.g., MPEP 904.02(c) on Internet Searching.
from the prior art. With that better understanding, an examiner can identify relevant search terms and prior art sources that he might not otherwise consider.

An important but under-utilized mechanism to facilitate early interaction between examiners and applicants is 37 CFR 1.105. Rule 105 provides the Office broad authority to seek information outside the ambit of Rule 56. Rule 105 requests could be particularly useful in helping examiners understand an application’s terminology and formulate relevant search terms. An examiner could also use these requests to obtain other information on potential sources of prior art. The Office should encourage examiners to use Rule 105 and publish statistics on its usage to improve transparency of the examination process and help the Office improve its processes.

The Office should also encourage examiners to use interviews, preferably prior to a first action under Rule 133 and Section 713.02 of the MPEP, to facilitate early interaction between examiners and applicants and make prior art searching more effective. The Office should encourage examiners to initiate such interviews with applicants. The full first action interview pilot program provided another mechanism for examiners to interact with applicants early in the examination process. The Office may wish to consider making that program permanent in light of the efficiency that it provided for those applicants who took advantage of it. In that case, examiners should be instructed to use the interview opportunity to obtain information that would make a prior art search more effective.

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9 37 CFR 1.105 states, “In the course of examining or treating a matter in a pending or abandoned application . . . the examiner or other Office employee may require the submission, from individuals identified under § 1.56(c), or any assignee, of such information as may be reasonably necessary to properly examine or treat the matter . . . .”

10 37 CFR 1.133(a)(2) states, “An interview for the discussion of the patentability of a pending application will not occur before the first Office action, unless the application is a continuing or substitute application or the examiner determines that such an interview would advance prosecution of the application.”

11 MPEP 713.02 states, “A request for an interview prior to the first Office action is ordinarily granted in continuing or substitute applications. In all other applications, an interview before the first Office action is encouraged where the examiner determines that such an interview would advance prosecution of the application . . . .”

12 See Memo from Peggy Focarino to Patent Examining Corps issued August 31, 2010, "FY 2011 Examiner-Initiated Interviews” (noting that “Since early interviews often lead to early allowances and fewer actions per disposal, this policy is intended to encourage examiners to reach out to applicants, resolve issues and work toward indicating allowable subject matter earlier in prosecution.”).
Technical training provided by industry and academia is another way that applicants can help examiners be prepared to conduct efficient and effective prior art searches. A deeper understanding of the prior art technology obtained through training sessions will help examiners fashion searches in particular applications and put the art they find in the proper context. Therefore, we applaud the recent White House and Patent Office Executive Action\textsuperscript{13} to make technical training for examiners more robust and systematic. Google looks forward to participating in the Office’s training efforts.

Rule 105 requests, questioning relevant to prior art searches during interviews and additional examiner training will make the Office’s prior art searching more efficient and effective and result in higher-quality patents. These results, achieved early in examination, also support the Office’s goal of compact prosecution.