

# Preliminary Patent Searches: New and Improved Tools for Mining the Sea of Information

by Lisa A. Schultz

Effective patent searching is a difficult skill to master. Navigating the millions of patent documents can be complicated and frustrating. With the number of patent filings steadily increasing,<sup>1</sup> this task will likely become even more difficult. However, Google™ and the U.S. Patent and Trademark Office (USPTO) have recently introduced resources with upgraded functionality that will help legal researchers conduct more efficient patent document searches.

While complete patent searches should be conducted by patent attorneys who have specialized training, there are tools that allow other attorneys and researchers to conduct preliminary patent searches. These preliminary patent searches can be used in the beginning stages of a patent application to ascertain whether prior art exists. Prior art refers to any information relevant to a patent's claims of originality that is reasonably available at the time of the invention. The inventor is assumed to have knowledge of all prior art, including previously issued patents or patent applications. If such prior art exists, the patent application will fail due to lack of novelty.<sup>2</sup> Therefore, when an inventor wishes to patent her invention, she must conduct a prior art search, and one of the first steps in that inquiry is to conduct a patent search.

There are many tools that enable researchers to conduct a preliminary patent search. Westlaw,™ LexisNexis,® and Bloomberg Law all offer patent searching databases. Additionally, the USPTO offers PubEAST and PubWEST, databases that are available at any designated Patent and Trademark Resource Center (PTRC).<sup>3</sup> There are also a number of free resources that can assist a novice researcher in conducting a preliminary patent search. Two of these resources, Google Patent Search (Google Patent) and the USPTO's PatentsView, are the focus of this article.

## Google Patent

When it was introduced in 2006, Google Patent stated its mission was to make “public domain government information more easily accessible using Google’s search technology.”<sup>4</sup> It began that mission with 7 million U.S. patents and a promise to expand coverage over time. Since then, Google Patent has grown to include all granted patents and published patent applications from the USPTO, the European Patent Office (EPO), and the World Intellectual Property Organization (WIPO). Its full-text search functionality allows researchers to search by keyword, grant, or application number. The Advanced Patents search page allows searches by patent number, inventor, classification, and filing date. Additionally, the Prior Art Finder identifies key phrases in the patent documents and forms a search query, which displays results from Google Scholar and the entire web.<sup>5</sup>

On July 16, 2015, Google introduced a new version of its patent search engine.<sup>6</sup> The new functionality includes the use of Google Translate to enable researchers to search for foreign patent documents using English key words and field searching to give the user more control over the results. Additionally, non-patent prior art has been cataloged using the Cooperative Patent Classification (CPC) system, which has been adopted by both the USPTO and the EPO. The CPC system includes approximately 250,000 classification symbols, enabling researchers to locate related patents and patent applications with greater ease.<sup>7</sup>

By connecting the CPC classification that is assigned to a patent to related non-patent prior art, Google Patent is attempting to become a one-stop shop for preliminary patent law research. While this is a worthwhile goal, Google has some fine-tuning to do before a researcher will be able to rely entirely on the results. In the mean-



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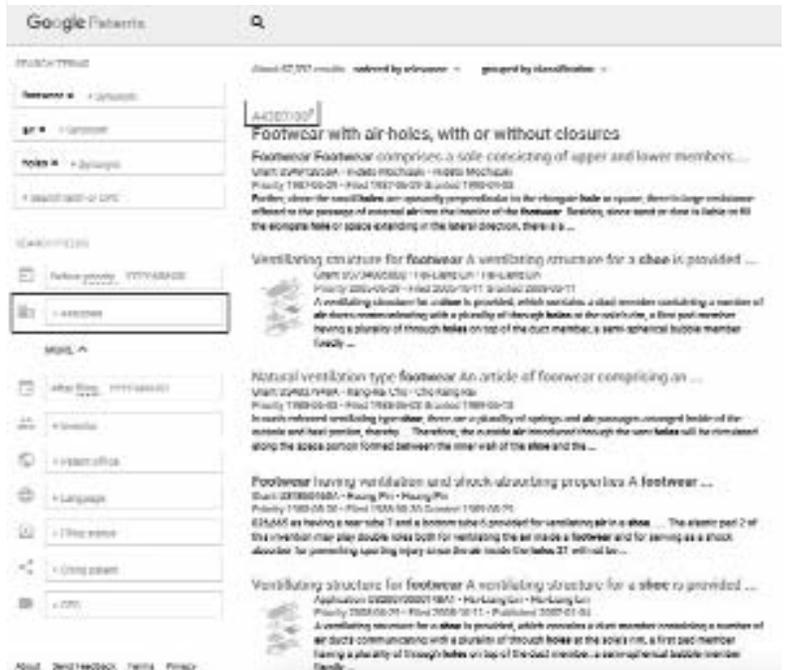
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time, researchers still have access to the previous version of Google Patent,<sup>8</sup> which includes a prior art search function without the new CPC feature.

### Sample Search in Google Patent

The best way to illustrate the new functionality is to conduct a search. Suppose a researcher wants to conduct a prior art search for a pair of sneakers with air holes along the top of the shoe that allow for greater ventilation and air flow, something similar to a pair of Crocs.<sup>TM</sup> In the new version of Google Patent, [www.patents.google.com](http://www.patents.google.com), the researcher enters the terms *footwear with air holes*. The results are now grouped by CPC classification, which makes them much easier to understand. (See Fig. 1.) Additionally, the researcher can tailor the results using the fields along the left-hand side. In this case, he might be interested in limiting the results to patents in which the assignee is Crocs, Inc. Adding *Crocs, Inc.* to the Assignee field limits the results from over 67,000 to only 14. After selecting the most relevant patent, the researcher can look for non-patent prior art based on the CPC classification assigned to the patent that he selected.

Figure 1.



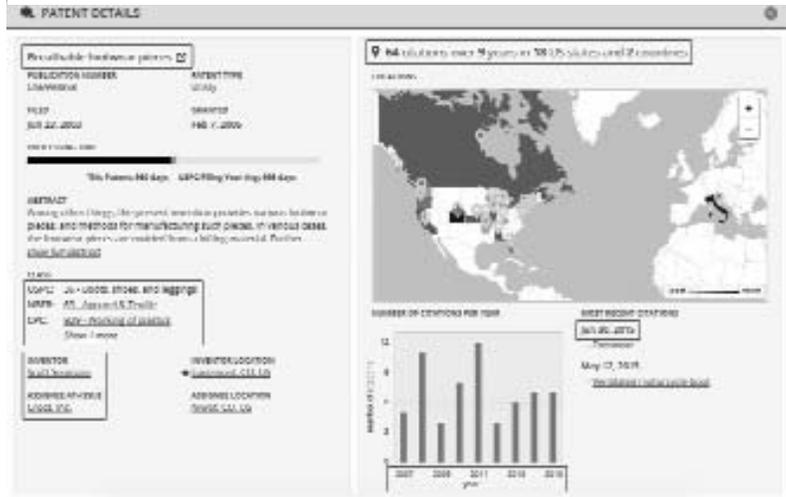
### USPTO PatentsView

Another new tool that will assist patent researchers is USPTO PatentsView, [www.patentsview.org/web](http://www.patentsview.org/web). This patent data visualization platform allows users to analyze 40 years of patent data by inventor, organization, location, and patenting activity.<sup>9</sup> PatentsView produces information that used to take multiple steps and searches to obtain. This resource can be used to find information about a specific inventor or assignee, or to analyze technological or regional trends.

### Sample Search Using PatentsView

Begin with the patent located in the last search, US6993858B2. Note that the database requires a specific format. In this case, the researcher would enter 6993858 in the Patent field. From the search results, the researcher can see that this is a patent for “Breathable footwear pieces,” which were invented by Scott Seamans and assigned to Crocs, Inc. The U.S. Patent Classification (USPC) and CPC classes assigned to this patent, as well as the filing date and the date the patent was granted, are easily ascertainable. This patent has been cited 64 times in the past nine years, in 18 different states and in Italy. This patent was cited most often in 2011 and was cited seven times last year, most recently on June 30, 2015. (See Fig. 2.)

Figure 2.



PatentsView also allows the researcher to further analyze specific pieces of the patent profile. For example, she can click on the link for the inventor and discover that Scott Seamans was the inventor of 20 patents, all of which have been assigned to Crocs, Inc. (See Fig. 3.)

From here (or from the previous Patent Details Page), she can click on the link for “Crocs, Inc.” to receive more details about the assignee. For example,

Figure 3.



Crocs, Inc., of Niwot, Colorado, is the assignee on 289 patents from 178 inventors, the top three of whom are Stefano Del Biondi, Kenji Yoneda, and Scott Seamans. (See Fig. 4.)

From the Patent Details page, the researcher can also access details about the assignee location. Here, she would discover that Niwot is home to 213 inventors who are responsible for 828 patents. The most cited patent out of Niwot is a method of playing electronic poker video games. Crocs, Inc. is the top assignee, but there are 18 other assignees, including PhatRat® Technology, Inc. 2014 was a particularly creative year in Niwot, as 91 patents were granted to its residents. Based on the most mentioned USPC classes, the researcher can ascertain what types of inventions are most common in this location. (See Fig. 5.)

### Conclusion

While conducting a patent search can be a daunting research task, the tools available to researchers continue to evolve and simplify the process. Google Patent gives us the ability to search prior art by the CPC classification assigned to each patent, as well as the ability to search foreign patents using English key words, thanks to the integration of Google Translate with the power of the Google search engine. Researchers can control the number and relevancy of the results through the use of newly enabled field searching.

Once the researcher has located a relevant patent or CPC classification, the USPTO's PatentsView makes it possible to analyze the data surrounding that patent or classification. Figuring out how a patent fits into the broader scheme of assignees and industries used to be a complicated and time-consuming endeavor. Using this new visualization platform, the ability to connect inventors to assignees, assignees to other inventions, and geographical locations to their most active businesses and industries is now simply a few clicks away.

### Notes

1. Patent filings increased from 537,171 in FY 2011 to 617,216 in FY 2015. See USPTO, "Performance and Accountability Report Fiscal Year 2015" at 32 (2015), [www.uspto.gov/sites/default/files/documents/USPTO\\_FY15PAR.pdf](http://www.uspto.gov/sites/default/files/documents/USPTO_FY15PAR.pdf).
2. Mills III et al., 3 *Patent Law Fundamentals* § 10:2 (2d ed. Supp. 2016).
3. The Denver Public Library is a PTRC. For more information, visit [www.denverlibrary.org/patents](http://www.denverlibrary.org/patents).
4. Banks, "Now You Can Search for U.S. Patents," Google Official Blog (Dec. 13, 2006), [googleblog.blogspot.com/2006/12/now-you-can-search-for-us-patents.html](http://googleblog.blogspot.com/2006/12/now-you-can-search-for-us-patents.html).

Figure 4.

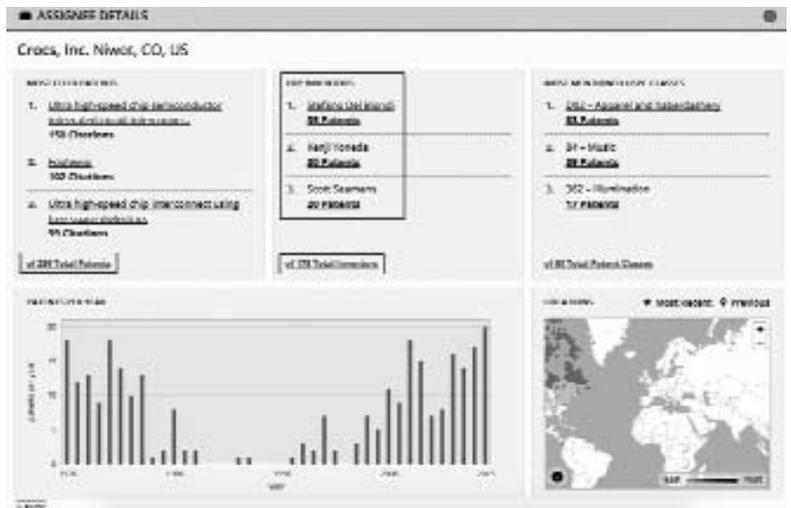
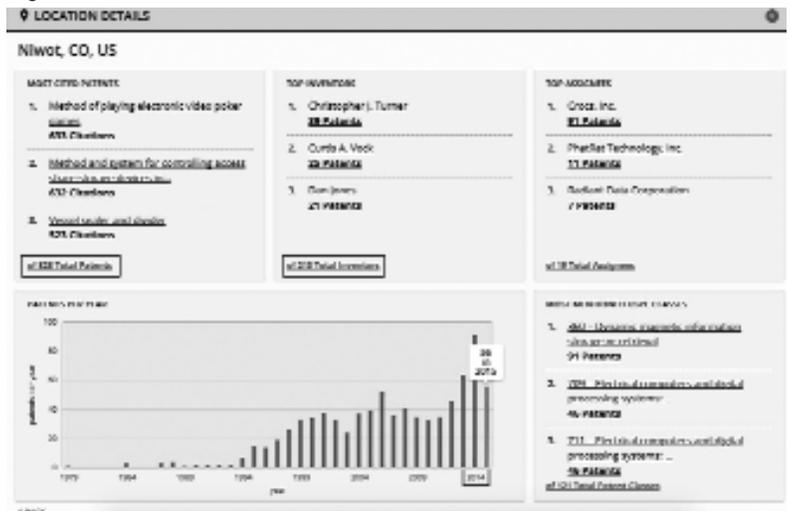


Figure 5.



5. See "About Google Patents," [support.google.com/faqs/answer/2539193?hl=en](http://support.google.com/faqs/answer/2539193?hl=en).
6. Available at [patents.google.com](http://patents.google.com).
7. Mills III et al., 1 *Patent Law Fundamentals* § 1:29.55 (2 ed. Supp. 2016).
8. Available at [www.google.com/patents](http://www.google.com/patents).
9. "New USPTO Tool Allows Exploration of 40 Years of Patent Data," USPTO Press Release 15-17 (Sept. 17, 2015), [www.uspto.gov/about-us/news-updates/new-uspto-tool-allows-exploration-40-years-patent-data](http://www.uspto.gov/about-us/news-updates/new-uspto-tool-allows-exploration-40-years-patent-data). ■