



# U.S. Patent and Trademark Office (USPTO) Makes Patent Data Searchable

USPTO transitioned from an outdated database system to an open-source data analytics platform to make results searchable and data analysis easier for users.



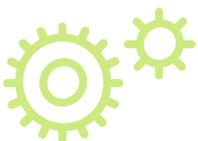
## Challenge

USPTO manages a growing database of more than 6.7 million records. There's a great demand for the bulk assignment data that USPTO makes available via its [online search tool](#), appropriately named Assignment Search. "We get between 2,000 and 3,000 searches a day," said Ted Parr, Director of the Public Information Services Group at USPTO. "There are about 6,000 different users each week who use the tool."

The tool allows users to search for the "assignments," or legal paperwork, that document the transfer of a patent from a previous owner to the new owner. It could be a will or a contract that includes the name of the previous owner, the new owner, their addresses and the type of transfer being made.

While USPTO has long had a system in place for searching assignments online, it didn't have any more than the most basic functionality. For example, in the old system, a search for a common assignee could yield hundreds of pages of results and require hours of analysis. To see all the assignments from Motorola to Google using the old system, a user would have to search for Motorola as the assignor. That search alone produces 685 assignments; and each one would have to be opened to see if it was assigned to Google.

There were searches that even USPTO employees couldn't do without engaging a developer to concoct a specific query for them.



## Solution

In an effort to make data more transparent to the public and easier for people to find, and to enhance innovation, facilitate technology transfers and reduce abusive patent litigation and lawsuits stemming from patent infringement, USPTO focused its attention on enhancing the search functionality of patent assignments. In 2015, USPTO created a new system using Solr open source, indexed searching software.

"The new system allows searching by several additional data fields, including execution date, conveyance type, correspondent and assignee address, as well as allowing wild card and Boolean searches for greater precision," Parr said. "The net result is that customers can be very precise with their searches and can filter and analyze results in many different ways."

**Solution (cont.)**

Remember the Google and Motorola example we gave earlier? Using the new system, users simply enter both names in their respective fields, and within a few seconds they will see the 271 assignments from Motorola to Google, rather than having to sift through more than twice that number of less precise search results.

The project kicked off in September 2014 and was completed by the start of the following year. That timeline is rare in government, but there were a number of factors key to the project’s success. White House officials and policymakers were involved early on, and they supported the project. Parr and his team used

agile development to add user capabilities in rapid increments; they worked early and often with people who file assignments and other users to incorporate their feedback; and they were able to use an existing contract rather than creating a new one.

After initial success, major upgrades were rolled out in December 2015, including an application programming interface that allows users to build their own tools to access USPTO’s assignment system and the data behind it. Users can also now view the underlying legal documents related to their searches, rather than just a coversheet.



**Tips for Success**

**1. Seek open software**

The underlying software for the assignment data system is also used for a number of other searching functions across USPTO, saving the agency maintenance and deployment costs.

**2. Involve agency business units in the decision-making**

Throughout development, Parr’s team worked with the teams running the public search team, as well as patent officers who create the data, to ensure their business needs were met by the new system.

**3. Explore iterative development**

To meet constrained timelines, USPTO complete six agile “sprints” where functionality was deployed, tested and updated in an iterative fashion. All stakeholders actively participated in daily scrum and project meetings to stay up-to-date on releases.



**Project Outcomes**

**6.7**  
million records

managed in a single database

**6K**  
users per week

leverage the system

**3K**  
searches per day

are executed on the new platform

**4**  
months timeline

from project kickoff to successful implementation of indexed search

**Contact**

Ted Parr  
Director of the Public Information Services Group  
Office of the CIO at USPTO

**Tools Used**

[Apache Solr](#)  
An open source tool to power search and navigation features of large databases