UNITED STATES
PATENT AND TRADEMARK OFFICE

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Patent Quality Chat

Unlocking Open Data for our Patent Customers

January 9, 2018

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To send in questions or comments during the webinar, please email:

PatentQuality@uspto.gov

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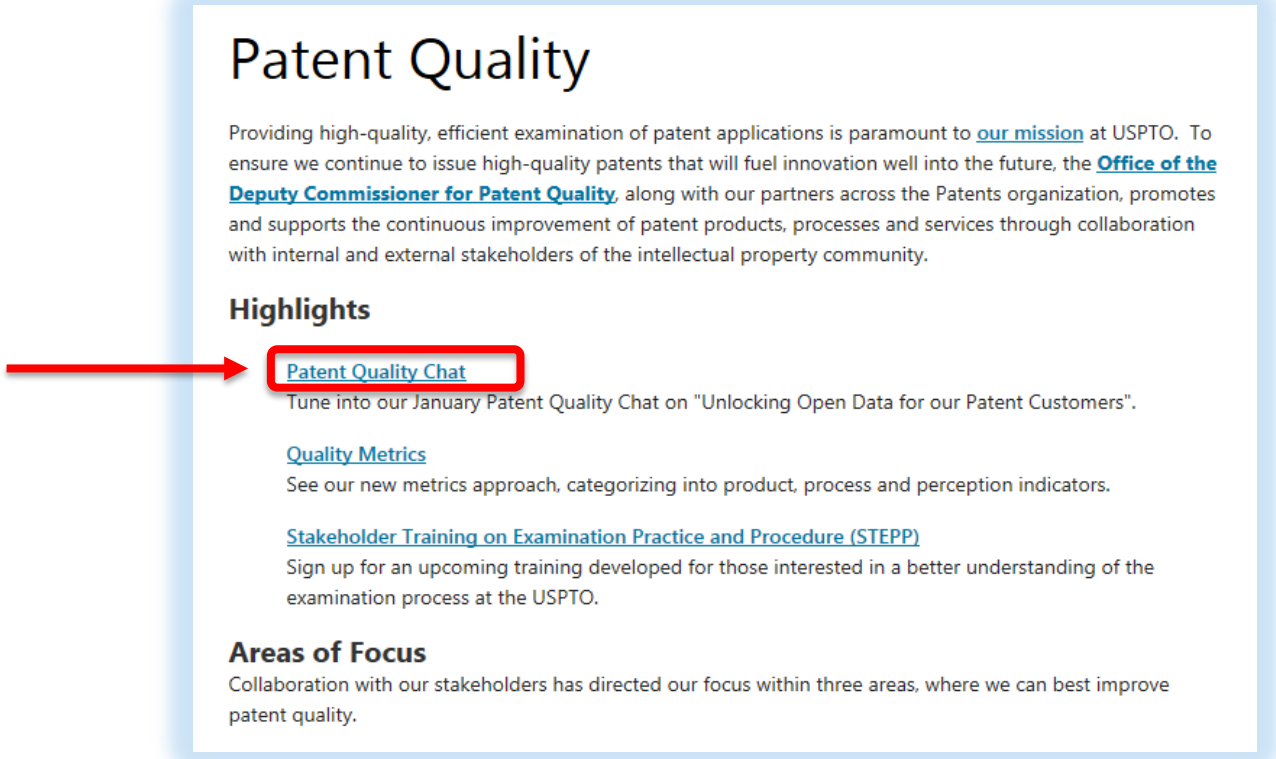
http://www.uspto.gov/patentquality



Patent Quality

Providing high-quality, efficient examination of patent applications is paramount to our mission at USPTO. To ensure we continue to issue high-quality patents that will fuel innovation well into the future, the **Office of the Deputy Commissioner for Patent Quality**, along with our partners across the Patents organization, promotes and supports the continuous improvement of patent products, processes and services through collaboration with internal and external stakeholders of the intellectual property community.

Highlights

Patent Quality Chat
Tune into our January Patent Quality Chat on "Unlocking Open Data for our Patent Customers".

Quality Metrics
See our new metrics approach, categorizing into product, process and perception indicators.

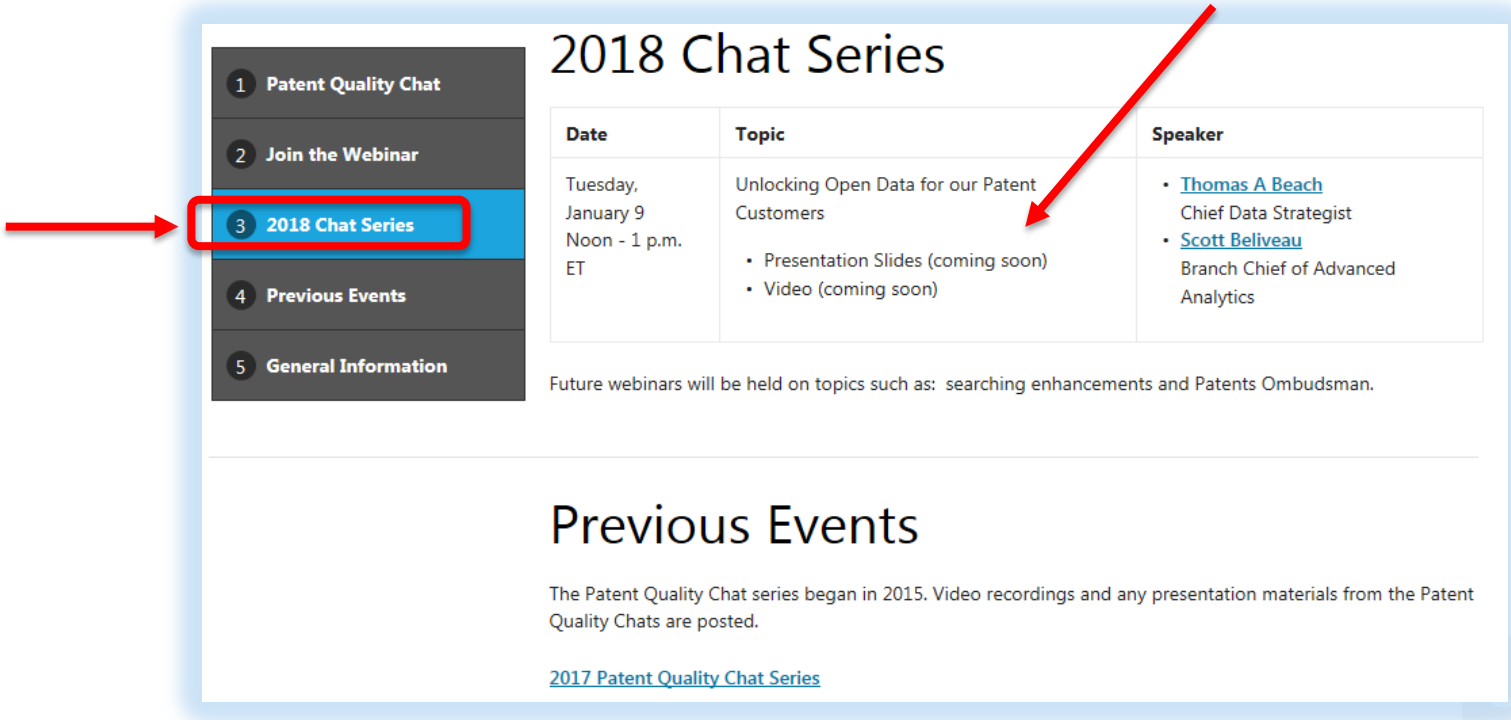
Stakeholder Training on Examination Practice and Procedure (STEPP)
Sign up for an upcoming training developed for those interested in a better understanding of the examination process at the USPTO.

Areas of Focus

Collaboration with our stakeholders has directed our focus within three areas, where we can best improve patent quality.

Email questions to **PatentQuality@uspto.gov**

http://www.uspto.gov/patent/initiatives/patent-quality-chat



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Patent Quality Chat

Unlocking Open Data for our Patent Customers

Thomas Beach
Chief Data Strategist
Scott Beliveau
Branch Chief of Enterprise Advanced Analytics

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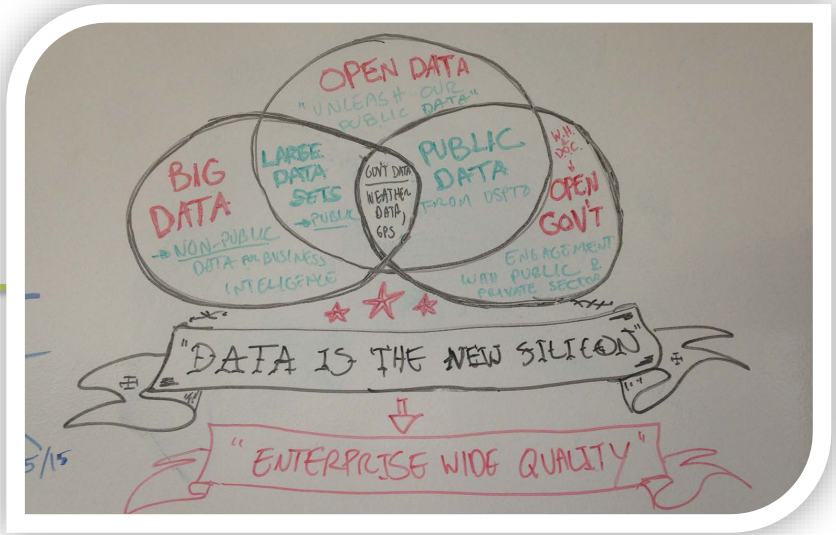
USPTO Data Program Overview

- Open data
  - Publicly available, freely discoverable data that anyone can use, reuse or redistribute easily.

- Big Data
  - A collection of large volumes of data that can be mined for trends, patterns and analysis.



Why does open data matter?

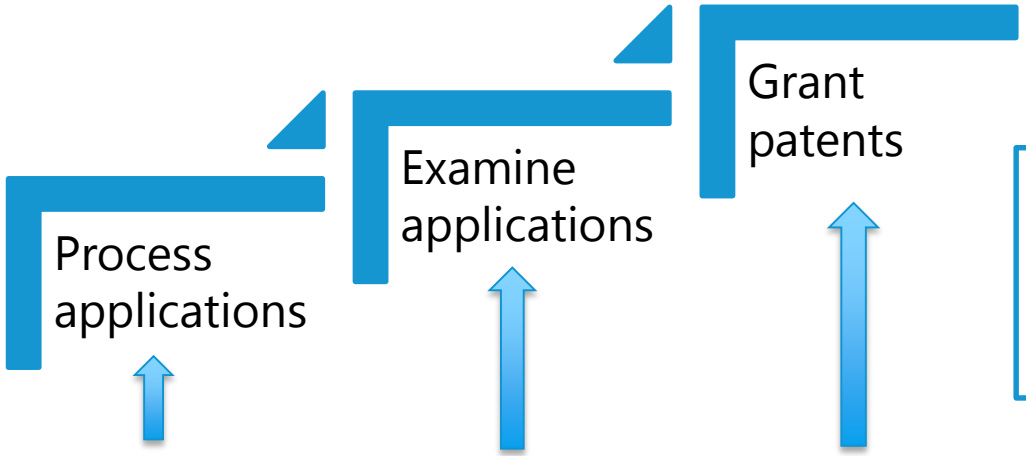
- Transparency is empowering
- Leads to more informed applicants - more time being inventive less time searching for our data

Why does big data matter?

It's not the amount of data that's important. ***It's what organizations do with the data that matters – data driven decision making.***

- Detect anomalies (inconsistencies)
- Identify and prevent problems early
- Measure training impact
- Validate assumptions

How are we using the data?



(i) Application Data;
(ii) Transaction History;
(iii) Office Action Data;
(iv) External Data (litigation, licensing etc.)

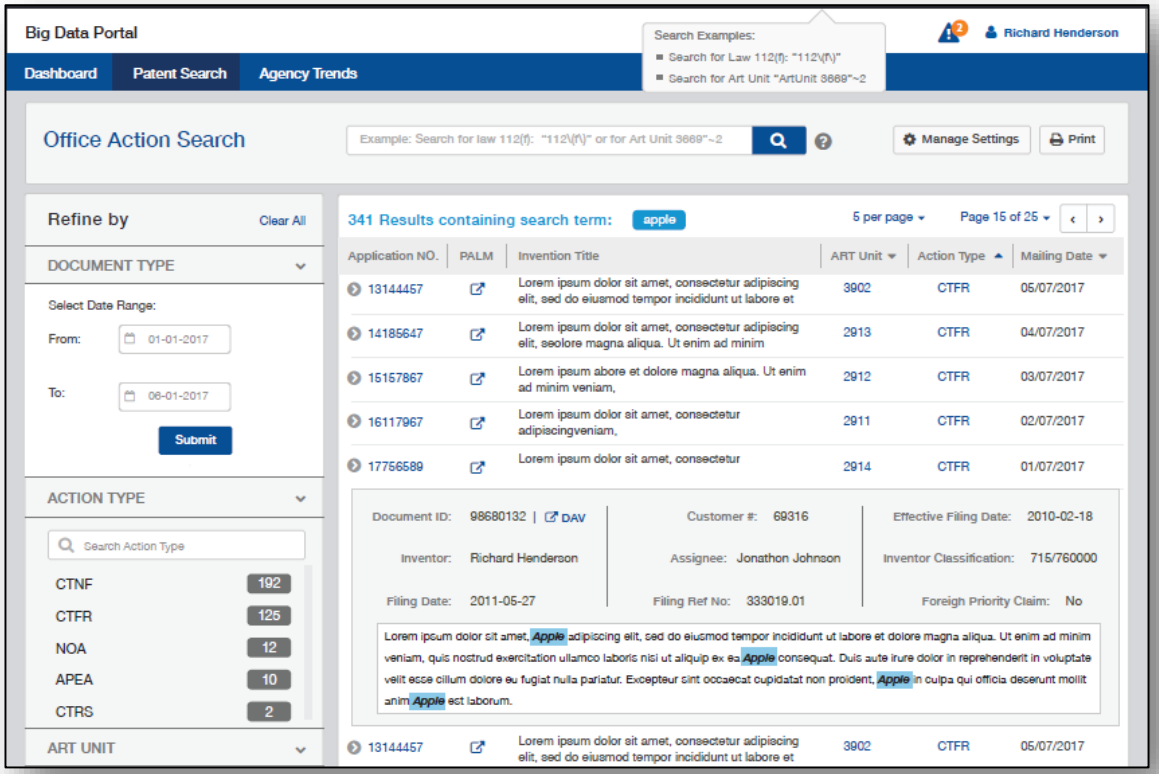
Big Data Open Analytics Adds Value. More usage *leads to* continual improvement of the tools that *leads to* greater insights.

Internal Office Action Dashboard

* Sample data only

Email questions to **PatentQuality@uspto.gov**

Internal Office Action Search



* Sample data only

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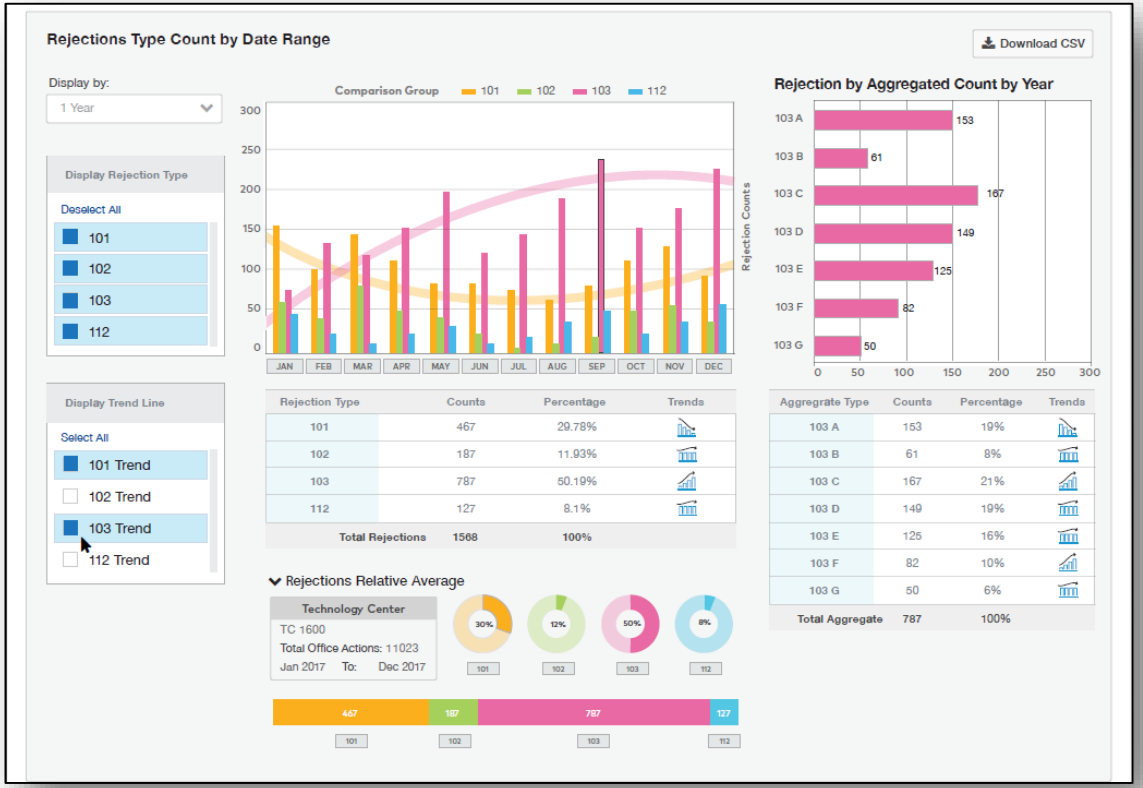
Internal View of Agency Trends



* Sample data only

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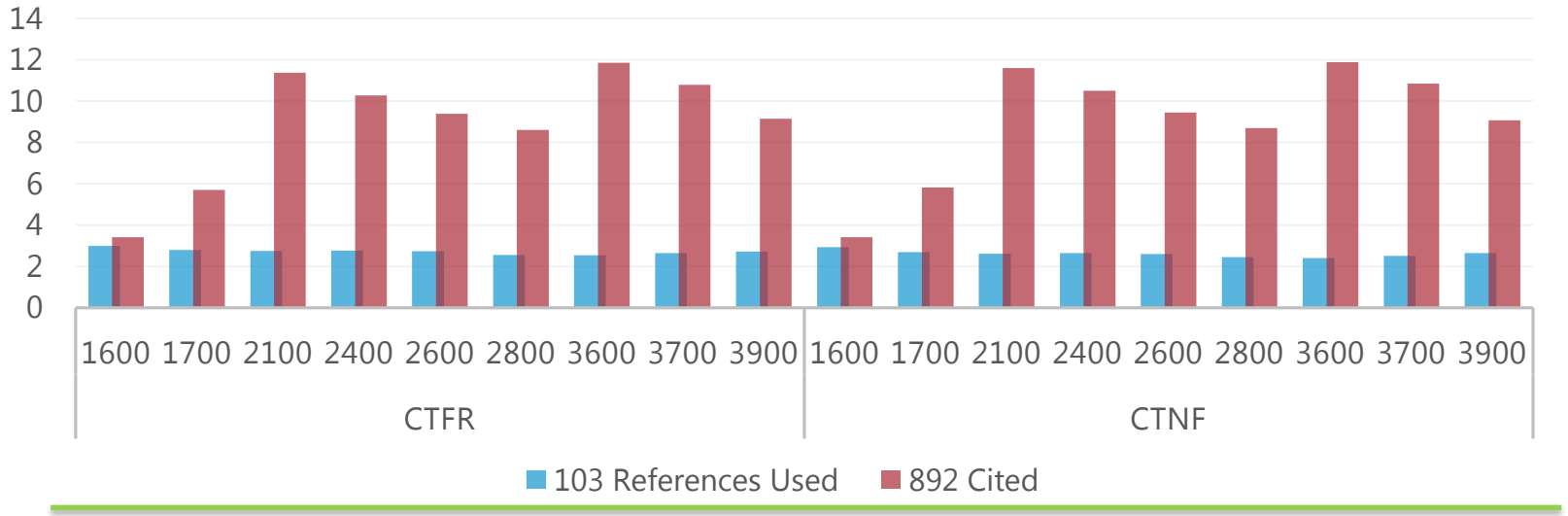
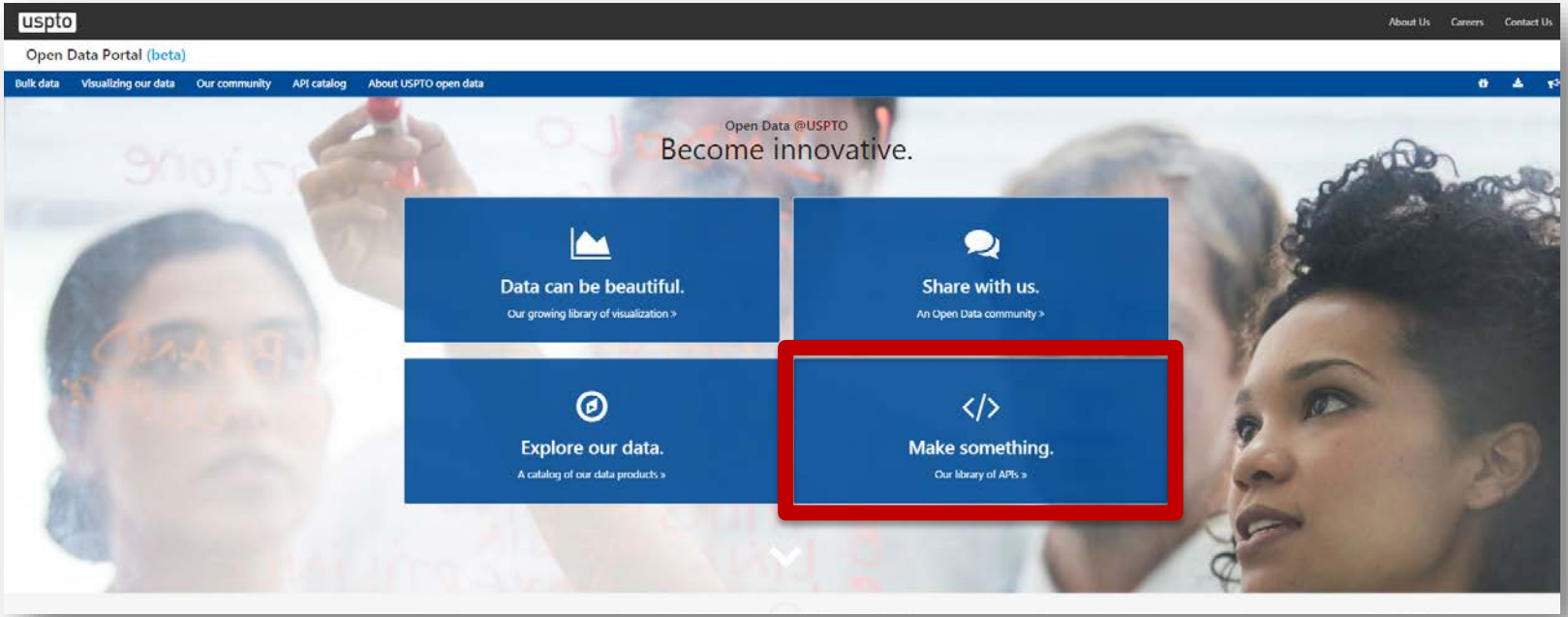
Internal Study of Cited U.S. Patents



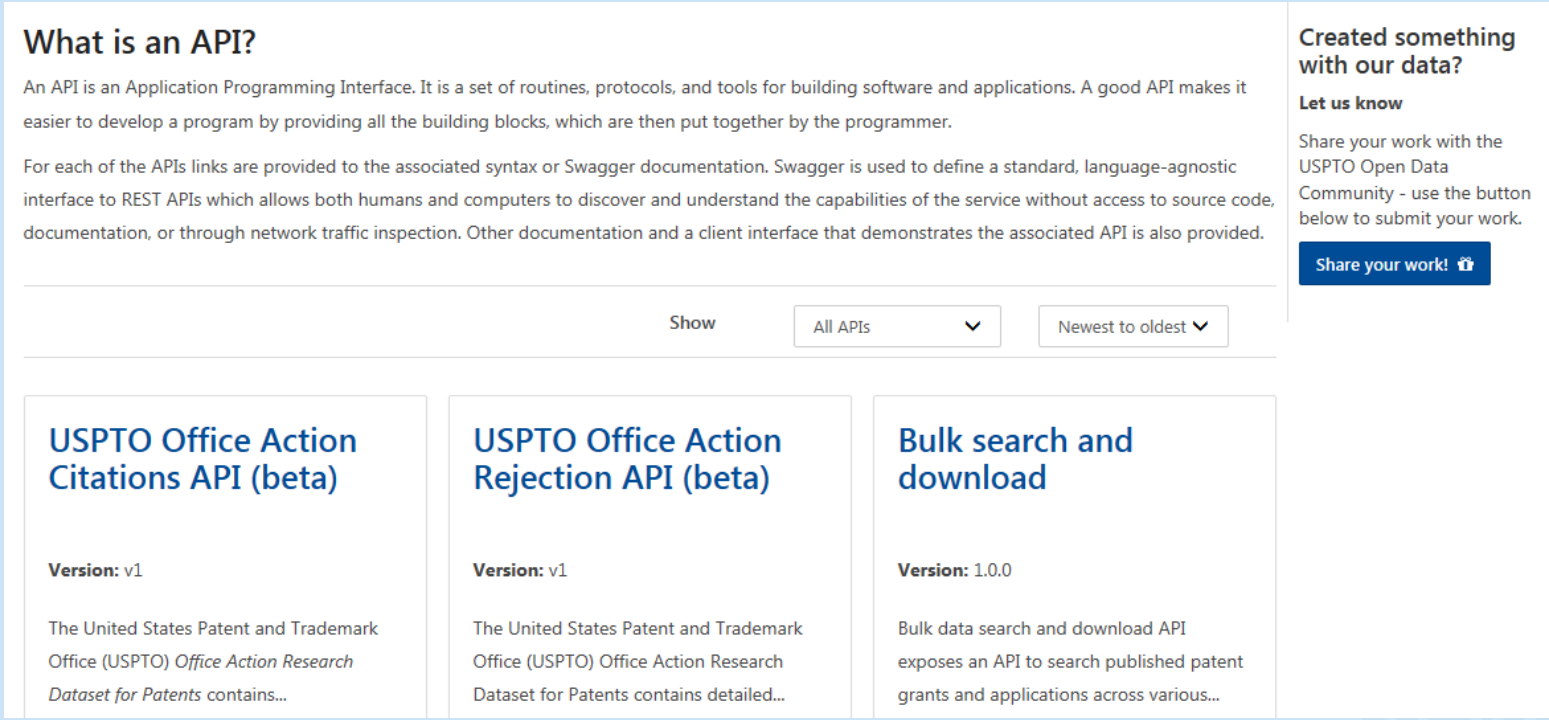
Data Highlights

- The number of Patent/PG-Pub references used in 103 rejections is relatively consistent across TCs.
- The number of Patent/PG-Pub references cited by examiners varies (on a PTO-892 form) based on Technology Center (1600, 1700, etc.) and whether used in a final rejection (CTFR) or a non-final rejection (CTNF).

https://developer.uspto.gov/



Application Programming Interfaces (APIs)



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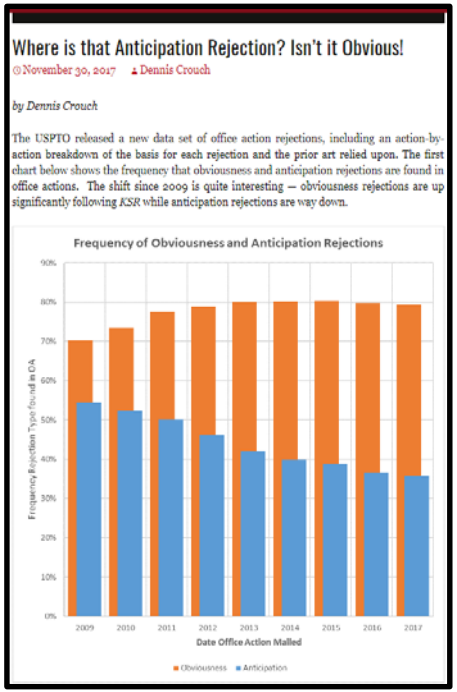
. . . Public is using it too!



Where is that Anticipation Rejection? Isn't it Obvious!

November 30, 2017 Dennis Crouch

by Dennis Crouch

The USPTO released a new data set of office action rejections, including an action-by-action breakdown of the basis for each rejection and the prior art relied upon. The first chart below shows the frequency that obviousness and anticipation rejections are found in office actions. The shift since 2009 is quite interesting — obviousness rejections are up significantly following *KSR* while anticipation rejections are way down.

Frequency of Obviousness and Anticipation Rejections

Frequency Rejection Type found in OA

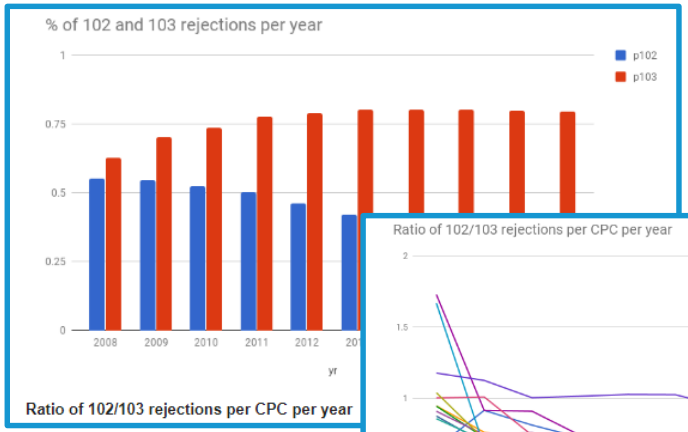
90% 80% 70% 60% 50% 40% 30% 20% 10% 0%

2009 2010 2011 2012 2013 2014 2015 2016 2017

Date Office Action Mailed

Obviousness Anticipation

https://patentlyo.com/patent/2017/11/anticipation-rejection-obvious.html



% of 102 and 103 rejections per year

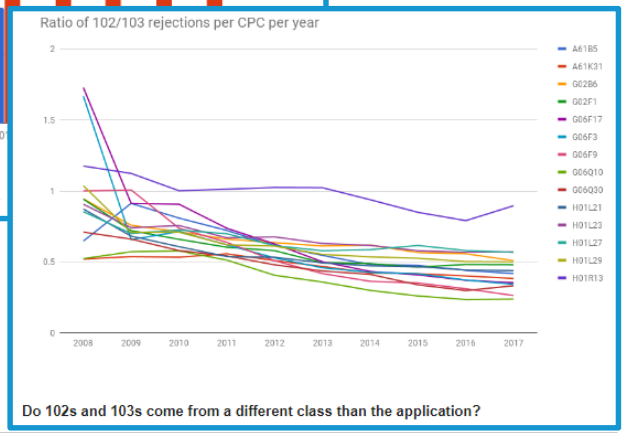
p102 p103

1 0.75 0.5 0.25 0

2008 2009 2010 2011 2012

yr

Ratio of 102/103 rejections per CPC per year



Ratio of 102/103 rejections per CPC per year

A61B5 A61K31 G02B6 G02F1 G06F17 G06F3 G06F9 G06Q10 G06Q30 H01L21 H01L23 H01L27 H01L29 H01R13

2 1.5 1 0.5 0

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

Do 102s and 103s come from a different class than the application?

https://groups.google.com/forum/#!topic/patents-public-data/3McHv1Ukpkk

Where to get the data?

U.S. Patent and Trademark Office
OFFICE OF THE CHIEF ECONOMIST
OFFICE OF THE CHIEF TECHNOLOGY OFFICER
Economic Working Paper Series

USPTO Patent Prosecution Research Data:
Unlocking Office Action Traits

Qiang Lu
U.S. Patent and Trademark Office

Amanda Myers
U.S. Patent and Trademark Office

Scott Beliveau
U.S. Patent and Trademark Office

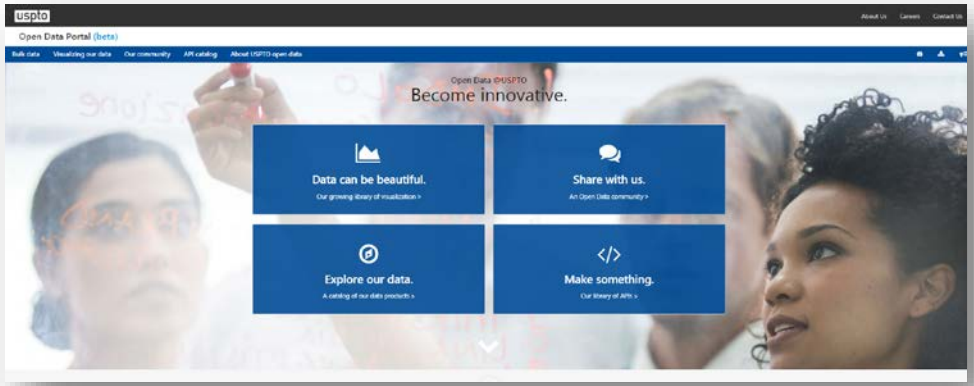
November 2017

USPTO Economic Working Paper No. 2017-10
Digital Services & Big Data Project Series No. 2017-v1-1

The views expressed are those of the individual authors and do not necessarily reflect official positions of the Office of the Chief Economist, the Office of the Chief Technology Officer, or the U. S. Patent and Trademark Office. USPTO Economic Working Papers are preliminary research being shared in a timely manner with the public in order to stimulate discussion, scholarly debate, and critical comment.

For more information about the USPTO's Office of Chief Economist, visit www.uspto.gov/economics.

The USPTO Office Action Research Dataset for Patents is available at:
https://bulkdata.uspto.gov/data/patent/office/actions/bigdata/2017/



https://developer.uspto.gov/

https://ssrn.com/abstract=3024621

Traits of Patent Data

Complexity of Patent Prosecution

- Not all patents have the same prosecution history; they are not statistically unitary due to their unique traits (specifications, claims).

Changing Landscape

- Court Decisions, Potential Legislation, Patent Trial & Appeal Board, Examination Guidance/Procedures & Policy Changes

Authoritative Data

- Ensuring the highest level of data quality

USPTO Data - Summary

- Making patent and trademark data accessible
- Empowering innovation through better tools and information so *the public can make smarter decisions*.
- Promoting the progress of science and useful arts by modernizing ways to explore patent and trademark data.
- Inspiring collaboration and innovation across the government and private sector to grow the economy.

Let's Chat about
Unlocking Open Data for our Patent Customers

Thomas Beach
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Next Patent Quality Chat

eMod Update

February 13, 2018

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Other Patent Quality-Related Events

https://www.uspto.gov/about-us/events

January 17	**Technology Center 2600 Customer Partnership Meeting** (in-person in Alexandria and simulcast in other offices)
January 18	**Inventor Info Chat** "Overview of the Patent Process" (virtual)
February 13	**STEPP Virtual Instructor-Led Training** "Claim Interpretation – Preambles" https://www.uspto.gov/patent/initiatives/stakeholder-training-examination-practice-and-procedure-stepp

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Thank you for joining us today!

Patent Quality Chat
Webinar Series 2018
January 9, 2018

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