How to Make and Use Panoramic Patentability Studies

Patent Analytics How-to Webinar Series: Episode 05

5-Episode Analytics How To Webinar Series

Episode 01 – How to Make and Use Portfolio Analytics, Patent Landscapes, and Patent Watching/Surveillance Reports
Thursday, February 25th, 2021, at 12:00 PM CT

Episode 02 – How to Make and Use Portfolio Curation, Competitive Patent Landscape and SWOT Analysis Reports
Thursday, March 25th, 2021, at 12:00 PM CT

Episode 03 – How to Make and Use Freedom to Operate Maps and Analysis, Product Coverage Analysis and Maps
Thursday, April 22nd, 2021, at 12:00 PM CT

Episode 04 – How to Make and Use Prosecution Attorney Analytics and Examiner Analytics

Thursday, May 27th 2021, at 12:00 PM CT

Episode 05 – How to Make and Use Panoramic Patentability Studies

Thursday, June 24th, 2021, at 12:00 PM CT

Before We Get Started...

Recording

A link to the recording and slides will be emailed to all registrants.

Questions

Type in the question box and we will answer in real time or during the Q&A.

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Today's Presenters...

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Episode Overview

Analytics & Data-Driven Decisions

- Blue ocean (white space maps)

What is "Whitespace"?

- Whitespace is literally the space between text, graphics, images, and blocks. Whitespace is also known as negative space or blank space.
- In business, a white space is where the unspoken, unmet needs of customers are discovered in order to spark innovation. It is a business process used to uncover opportunities.
- McDonald's identified white space of selling only burgers and fries but focusing on customer service.

What is Patent Whitespace?

Three types of whitespace in patent portfolios:

- 1. Patents that cover products or processes not performed by the portfolio assignee;
- 2. Products or processes not covered in a patent portfolio
- 3. Products or processes disclosed in a patent specification but not claimed.

Identifying Whitespace in Patent Data

- In the 1980s and 1990s, IBM identified the whitespace in its patent portfolio, patents covering products and processes not practiced by IBM, and used these patents to generate at least about $1B per year in licensing revenue.
- IBM studied market products and compared new products to patents in its portfolio. Sent demand letters to companies making, using, selling allegedly infringing products.
- Set royalty fees low enough to discourage litigation and high enough to generate a substantial income.

Identifying Whitespace in Patent Data

- The IBM model was described in the book, "Rembrandts in the Attic, Unlocking the Hidden Value of Patents" by Kevin Rivette and David Kline, published November 1999.
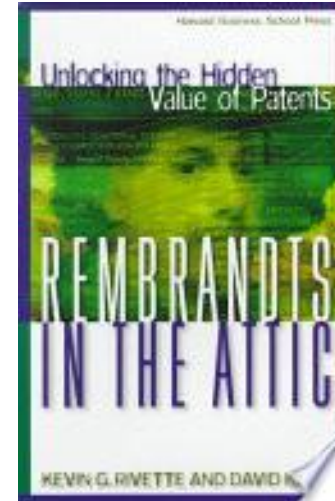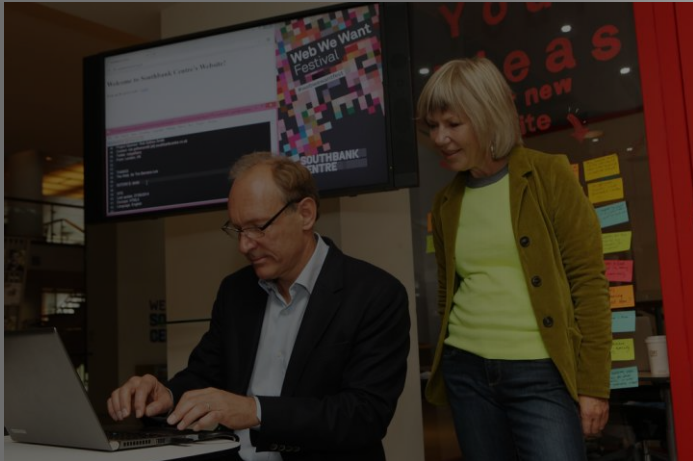

Image from: https://books.google.com/books/about/Rembrandts_in_the_Attic.html?id=jCLqq80CpwwC

Tim Berners-Lee: Inventor of World Wide Web

Happy birthday to Web inventor & MIT professor Tim Berners-Lee! Things besides the WWW that didn't exist before TBL:

Apple
Google
Facebook
YouTube
Instagram
Netflix
Uber
Spotify
Bitcoin
Venmo

Most technologies we use today.

Identifying Whitespace in Patent Data

- The invention of the WWW created whitespace that included new methods for doing business in virtually every area of commerce.

Identifying Whitespace in Patent Data

- But, Business Methods were not patentable. The vast expanse of whitespace created by the WWW was not usable...

- Until the State Street Bank decision

Identifying Whitespace in Patent Data

- State Street Bank & Trust Co. v. Signature Financial Group 149 F.3d 1368 (Fed. Cir. 1998); Business method survived 101 challenge at the Federal Circuit.

- The whitespace for business model patenting was open for business.

Identifying Whitespace in Patent Data – May Be Too Clever By Half

- Patenting new Business Models was the great whitespace idea in the late 1990s-early 2000s. It was the dot.com boom

- New business model opportunities were a result of the invention of the World Wide Web and a change in the patentability of business methods as a result of the State Street Bank decision.

- Then, along came Alice.

Identifying Whitespace in Patent Data

- The courts and patent examiners used the Alice decision and subsequent 101 decisions to render thousands of patents (maybe tens of thousands of patents) unenforceable and invalid.

- The whitespace was "bombed to smithereens," filled with landmines and rattlesnakes.

Identifying Patent Data in Whitespace

- Other ways of identifying whitespace;

- The Gillette example from "Rembrandts in the Attic."

Identifying Whitespace using Product Features – Panoramic Patentability

- Gillette invented a shaver having tiny springs mounted to twin blades within a cartridge so that each blade moved independently along the contours of a user's face. The Sensor
- Designers invented 7 options for mounting the twin blades.
- Patent attorneys studied the patent landscape to determine which design could obtain the broadest patent coverage;
- 22 patent applications were filed on all features of the new shaver.

Identifying White Space Using Product Features

- US 5,960,411: Amazon's One Click Patent

Identifying White Space from Product Features

- We claim:

  1. A method of placing an order for an item comprising:
  under control of a client system, displaying information identifying the item; and in response to only a single action being performed, sending a request to order the item along with an identifier of a purchaser of the item to a server system; under control of a single-action ordering component of the server system, receiving the request; retrieving additional information previously stored for the purchaser identified by the identifier in the received request; and generating an order to purchase the requested item for the purchaser identified by the identifier in the received request using the retrieved additional information; and fulfilling the generated order to complete purchase of the item whereby the item is ordered without using a shopping cart ordering model.

Identifying WhiteSpace Using Product Features

- Amazon's One Click Issued in 1999 and Included Features that Foreclosed Design Arounds;
- Apple and Many other Companies Licensed the Patent;
- There were many Validity Challenges to the One Click Patent But It Survived.
- Right Place—USPTO; Right Time;

Identifying Whitespace from Product Features

- The idea that consumers could enter in their billing, shipping and payment information just once and then simply click a button to buy something going forward was unheard of when Amazon secured the patent in 1999, and it represented a breakthrough for the idea of hassle-free online shopping.

Identifying Whitespace Using Product Features—Patentability +: Clustering and Bracketing

Clustering is shielding an invention by patenting features usable to create a commercially viable design around

Bracketing is locking a competitor into a single patent to protect a product of interest.

Identifying Whitespace by Predicting the Future

- Company or patent portfolio acquisitions require a prediction regarding future markets and understanding of a current patent portfolio's strengths and weaknesses.

- Look for compensation for patent portfolio weakness in a target patent portfolio.

Rules for Whitespace Identification

- 1. If you cannot articulate what you are looking for, you probably won't find it.

- Early patent maps created by Aurigin.

Image from http://web.mit.edu/ruggles/MappingControversy/web-directory/342.html
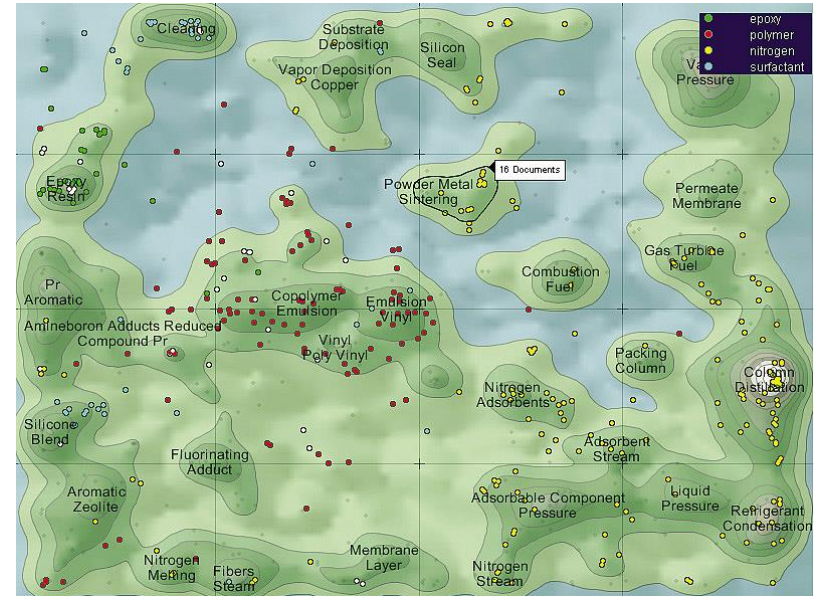
Panoramic Patentability Studies

Identify open spaces in the patent landscape – determine the density of prior art for each of a group of ideas related to a technology of interest

What is it?

- Panoramic patentability studies show, in matrix map form, the density of prior art for each of the concepts analyzed, and in turn the opportunity for patenting and where innovation in a technology space will be most commercially fruitful benefit the company.
- A drill-down matrix view of results provides a high-level visual overview with drill down on results.

Claim Space Map for Patent Application

Disclosure Element List	# of Occurences	References X=Found in reference						
		A	B	C	D	E	F	G
Disclosure element 1	6	x	x		x	x	x	x
Disclosure element 2	2			x	x			
Disclosure element 3	2					x		x
Disclosure element 4	0							
Disclosure element 5	4	x		x		x	x	
Disclosure element 6	2		x			x		
Disclosure element 7	0							
Disclosure element 8	1							x
Disclosure element 9	4	x		x		x	x	
Disclosure element 10	0							
Total Elements in Reference:		3	2	3	2	5	3	3

- Mine specification for unclaimed subject matter
- Prior art is taken as cited art
- Spec defines "space" to map
- Determine patentability
- Strategize combinations to claim
- Plan continuations

Claim Space Map for Development Project

Project element List	# of Occurences	References		X=Found in reference				
		A	B	C	D	E	F	G
Project element 1	6	x	x		x	x	x	x
Project element 2	2			x	x			
Project element 3	2					x		x
Project element 4	0							
Project element 5	4	x		x		x	x	
Project element 6	2		x			x		
Project element 7	0							
Project element 8	1							x
Project element 9	4	x		x		x	x	
Project element 10	0							
Total Elements in Reference:		3	2	3	2	5	3	3

- Like application claim space mapping
- But, "space" is determined by ideas/features to include in development project
- Make a list of all features/ideas applicable, from high concept to details if available
- Search art for most relevant references
- Map ideas/features to references

Value Proposition

- Align development with "open" IP space
- Gain insight into the state of the art
- Avoid reinventing existing technologies
- Target areas open to patenting
- Results delivered in an engineer-friendly format

Process and Cost

- Define scope of project by defining key ideas to be investigated
- Perform searches to identify most relevant prior art references – 50 of the earliest references per idea
- Load references into ClaimScape® and tag ideas to specific portions of each reference
- Generate panoramic maps from ClaimScape

Tools for Panoramic Patentability

- All of the Tools discussed in this series

- Claimbot

- Tags

What the Future Holds

- Pharmaceutical and Chemical Companies are using AI to discover new drugs and new chemicals;
- Google is using AI to invent new semiconductor structures.
- Google has used AI to make *to generate chip layouts that match or beat human-produced designs at power consumption, performance, and area in less than six hours. Expert humans typically need months of iteration to do this task.*
- A graph placement methodology for fast chip design: [A graph placement methodology for fast chip design | Nature](#)
- "We believe that it is AI itself that will provide the means to shorten the chip design cycle, creating a symbiotic relationship between hardware and AI, with each fueling advances in the other."
- The AI is a reinforcement learning system.
- Reinforcement learning systems, unlike typical deep learning, do not train on a large set of labeled data. Instead, they learn by doing, adjusting the parameters in their networks according to a reward signal when they succeed. In this case, the reward was a proxy measure of a combination of power reduction, performance improvement, and area reduction. As a result, the placement-bot becomes better at its task the more designs it does.
- Patentability AI may work in concert with design AI to determine available whitespace and optimal claims.

Thank you for your interest.

Questions?

These materials are for general informational purposes only. They are not intended to be legal advice, and should not be taken as legal advice. They do not establish an attorney-client relationship.

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