

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...



Steve Lundberg

Principal & Chief Innovation Officer
Schwegman Lundberg & Woessner



Janal Kalis

Principal
FTO and Patent Analytics Expert
Schwegman Lundberg & Woessner



Tom Marlow

President, Renewals
Former Chief Patent Counsel of
Fairchild Semiconductor
Black Hills IP



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.

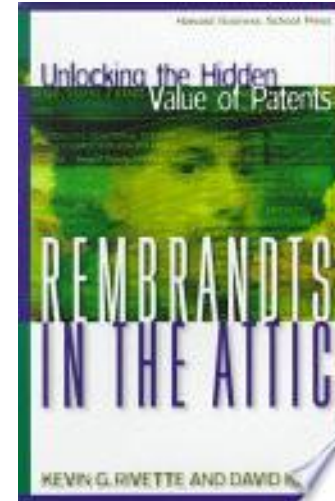


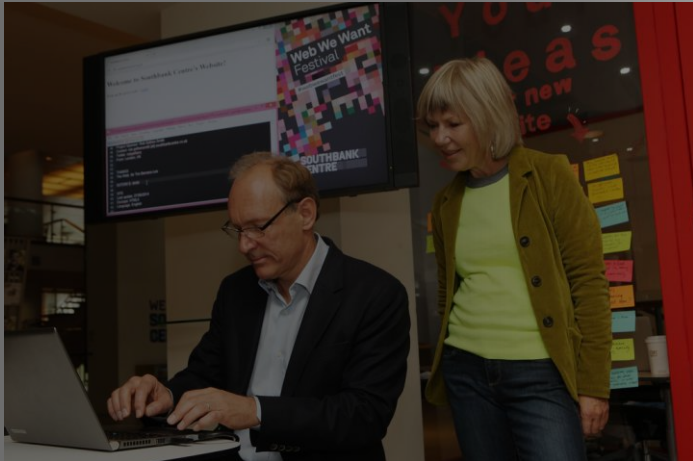
Image from:
https://books.google.com/books/about/Rembrandts_in_the_Attic.html?id=jCLqg80CpwwC

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.

Tim Berners-Lee: Inventor of World Wide Web



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"Sir Tim Berners-Lee at #WebWeWantFest" by [Southbank Centre London](#) is licensed under [CC BY 2.0](#)



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.

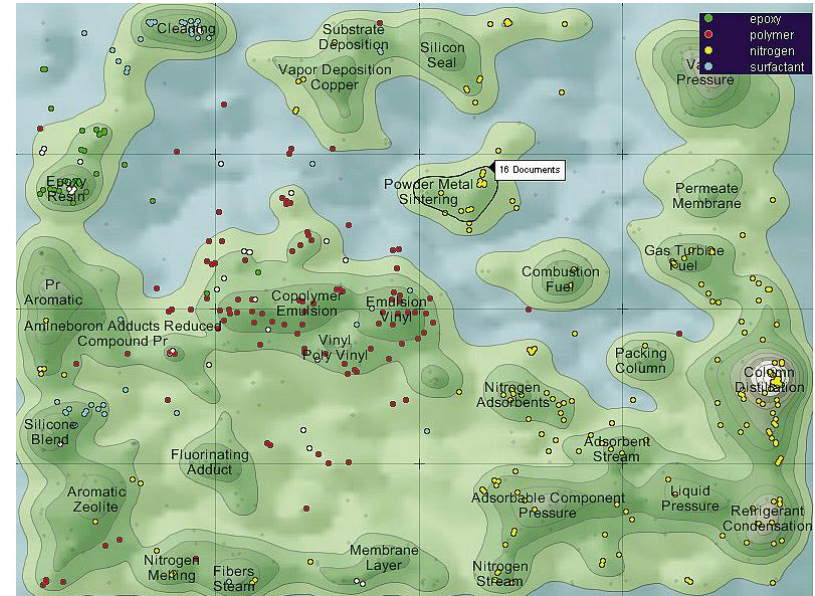


Image from <http://web.mit.edu/ruggles/MappingControversy/web-directory/342.html>



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 Occurrences	References							
		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?



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