ANALYTICS *EXCELLENCE* WEBINAR SERIES

Black Hills IP
Paralegal and Docketing Services

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Building Extraordinary IP Assets

Patent Value Analytics: Algorithms and Applications

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Presentors

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Four Part Presentation

- What is the problem with Algo-based Valuation of Patents
- What Analytics/Algorithms are bad at….
- What Analytics/Algorithms are good at…
- Suggested approach to Valuation using Analytics/Algorithms

Challenges with Patents

- Patents have intrinsic value
  - Locked away in the form of text/claims & images
- Patents are numerous
  - It is time consuming to read one alone
- Patent claims can be very broad
  - Claims can attach to a number of outcome
- Patents also require tending
  - System is designed to put them in public domain

Challenges with Patents-Personal

- What is valuable to one isn’t valuable to others
- Design around is often available
- Also much of what is patented isn't detectable
- Overall, patents require an understanding of its contents

Challenges with Patents–Risk/$$$

- Bad patents cost as much as good patents
- Everyone is afraid to let a bad patent go
- So patent budgets enter a twilight zone
  - Costs to maintain go up
  - New filings costs suffer
- No one really wants to pay for human analysis

So enter the algorithms

Types of Algorithms for Valuating

- Cluster
- Categorize
- Compare/Cross-Reference
- Sort
- Suggest
- Statistically Present Citations/Classes
- Data Collection & Basic Analysis

What Algorithms Do Poorly…They CANNOT:

- Provide a real valuation of a patent
- Tell you how much someone might pay
- Tell you how broad a claim is against a product
- Tell you if you are going to win a litigation
- Tell you if someone will license the patent
- Tell you which field is correct when comparing data
- Always tell you the current patent owner/applicant

However, they can get you started!

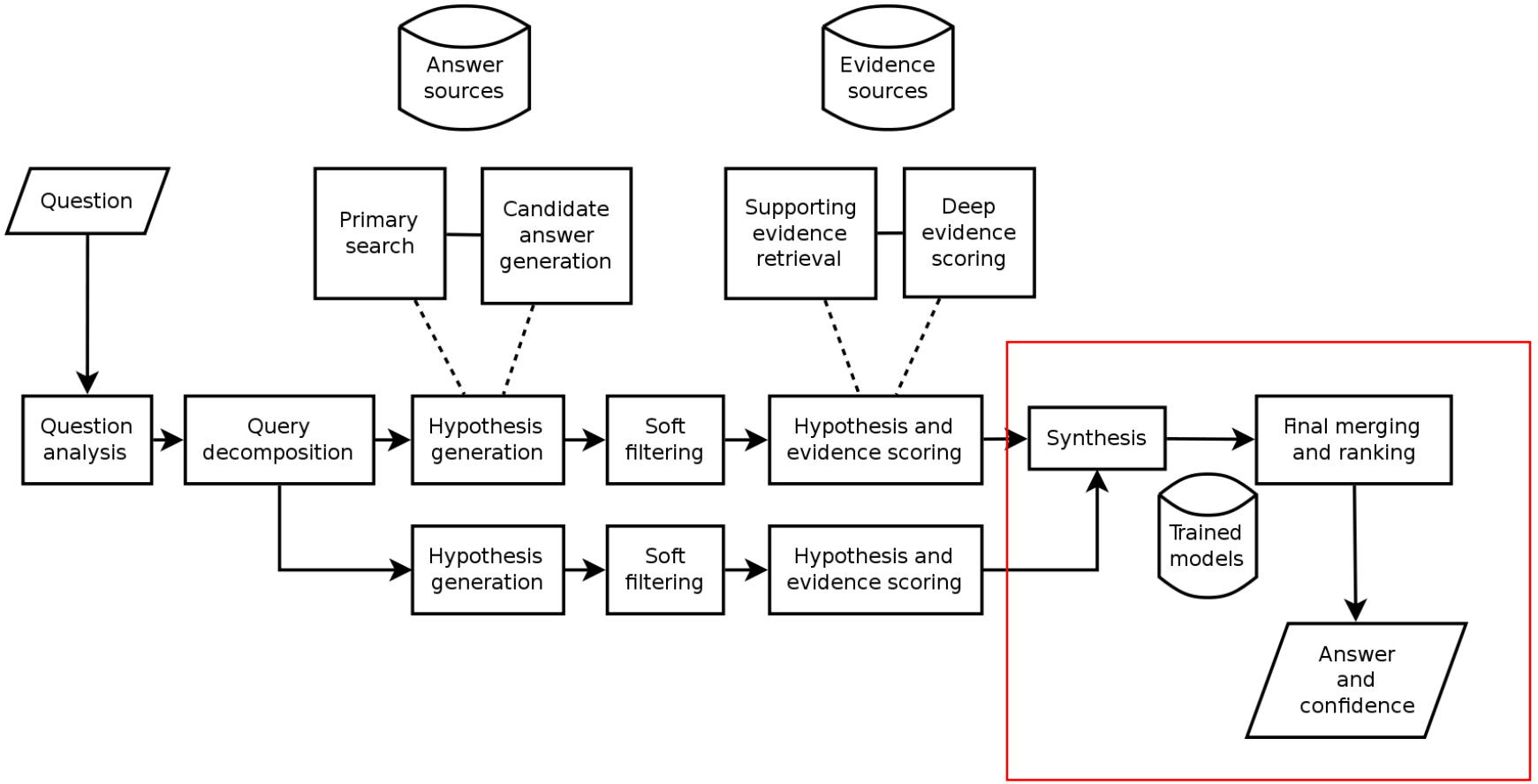
Training Algorithms

- Using Subject Matter Experts (SME)
  - Algorithms can produce human quality suggestions/sorting of documents
  - The more data that is categorized
    - The better the algorithm is at recognizing important things
- Watson is a trained data model QnA system
  - More on this later

Algorithms are much more useful when trained

- Training includes
  - Harvesting Human Subject Matter Expertise
    - By purposeful experiment
    - By social statistical review
    - Monitoring Transactions/Structured Data (Insurance Claims
  - Using taxanometric constructs
    - TOC
    - Classifications

Watson



What happens without fully trained models

Results

Classifier	Confidence Score
Animal	69%
Cow	68%
Vertebrate	67%
Natural_Activity	66%
Bird	65%

Watson isn't sure if this is a cow or a bird

What happens without training

- We see a patent drawing

Watson sees...

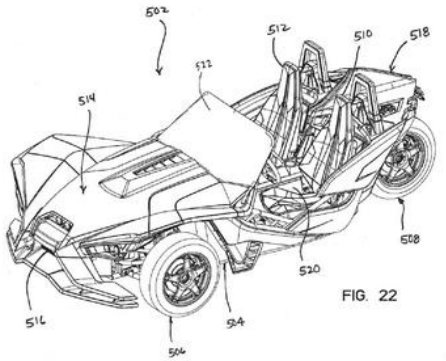


FIG. 22

JSON

Classes	Score
study	0.91
gray color	0.88

Did We Wow You? Yes No

What Algorithms do Well

- Clustering Words and their Synonyms
- Finding patterns
  - Semantic or otherwise
- Claims v other Claims
- Similarity (more like this)
- Citation Impact
  - Examiner/IDS
- Portfolio Statistics
- Data Comparisons

What do we use algorithms for?

- Starting points in Analysis/Speed
  - Give me everything that looks like this patent….
  - Above a certain threshold of similarity
  - After or before a specific date (prior art)
  - That have been cited more than 15 times
    - by Examiners in Art Unit 3628
  - And have overcome an Alice rejection
  - And have been litigated or challenged in IPR
  - Gathering bulk data
  - Comparing client data to public data
  - Making an initial determination on ownership

Algorithms assist in determining asset impairment

- Missing or incomplete assignments
- Inventors working at the competitor
- Prosecution Metrics
  - # of RCE
  - # of OA
  - # of Restrictions
- Incorrect data affecting renewal or prosecution deadlines

Ultimately SME is necessary

- Does a patent say tech “x” but cover tech “y”
- Does the infringing product satisfy the “all elements” rule
- Should I keep this patent?
  - This patent covers this product of my competitor
- What was disclosed v. what was claimed
- What is this worth? And WHY?
  - company a($$$) or company b ($)
- Resolve differences in data comparison
- Determine the proper chain of title or ownership

Beware on relying on a Patent Strength/Patent Score

Suggested Approach to Analytic Supported Patent Valuation

- Sort and Compare Portfolio against a Target Product /Company
  - Identify Statistical and Semantic Prospects (M)
  - Identify Target Evidence of USE (SME assisted by M)
  - Identify potential prior art (M), (SME assisted by M)
- Segment out high potential matters(SME assisted by M)
  - Map against Product(SME assisted by M)
    - Claim Scope/Design Around /Detect
  - Map against Targets Portfolio (SME assisted by M)
    - Claim Scope/Design Around/Detect
- Engage a professional valuation expert (SME)
  - Receive a professional valuation of just the matters that matter
- Rinse & Repeat for Next Target

Discussion & Questions

Analytics *Excellence* Webinar Series

Please Join us for our Next Presentation:

Using Analytics as a Patent Annuity Decision Tool

February 8, 2017
1 PM (Central)

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