PATENT SEARCHING:
(Almost) Everything You Need to Know

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Outline

I. Types of Searches

II. Timelines

III. Budgeting and Staffing

IV. Guidance and Tips for Searching

V. Metrics to Assess Searches

VI. Those Pesky Rules: Evidentiary Burdens, Privileges, and Disclosure Duties

VII. Considerations for USPTO Post Grant Proceedings

VIII. Considerations for Design Patents

IX. Search Resources (reference only)

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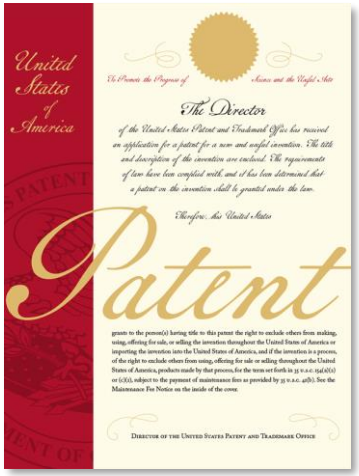
TYPES OF SEARCHES

Understanding different search objectives and methodologies in the patent context

Basic Types of Searches

- Landscape/State-of-the-Art
- Patentability
- Due Diligence
- Freedom-to-Operate (FTO)/Clearance/Right-to-Use
- Invalidity/Unpatentability/Nullity/Opposition



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Search Types Fall Into Two Groups By Purpose

Exploratory	• Landscape • Patentability • Due Diligence
Defensive	• FTO • Invalidity

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Character of Exploratory Searches (Landscape, Patentability, Due Diligence)

- In theory, legal consequences for mistakes or poor quality (e.g., missed reference(s) or faulty analysis) are less severe
- Optional:
  - *USPTO does not require a pre-filing search for new applications*
  - *granted patents presumed valid (35 U.S.C. § 282)*
  - *Q-Pharma, Inc. v. Andrew Jergens Co., 360 F.3d 1295, 1303 (Fed. Cir. 2004) (reasonable belief in presumption of validity made suit nonfrivolous under Rule 11)*
  - *Digeo, Inc. v. Audible, Inc., 505 F.3d 1362, 1369-70 (Fed. Cir. 2007) (case not exceptional [frivolous] because defendant did not establish plaintiff knew or should have known it lacked legal title due to alleged forgeries)*

Character of Defensive Searches (FTO / Invalidity)

- Direct patent infringement has a strict liability character
  - *either you fall within the scope of a (valid) claim (as properly construed), or you don't (plant patents an exception)*
  - *but…scope of patent claims (claim construction) plus other elements of infringement and validity often disputed*
- You have to know about the patent in order to obtain an opinion of counsel or initiate a post grant challenge
  - *the range of options is much greater if you find a potentially problematic patent before it finds you*
  - *but no more adverse inference (35 U.S.C. § 298)*

Character of Defensive Searches (cont.)

- The Sedona Conference, "Commentary on Patent Litigation Best Practices: Willful Infringement Chapter" (July 2020 Public Comment Version), p. 3:
  - *"Best Practice 2 – Once an entity is on notice of a potential infringement claim, it should take steps to protect itself from a claim of willful infringement, with the understanding that such steps will be very context dependent."*
  - *"The defendant should also consider whether to investigate prior art, whether to obtain an opinion of competent and qualified counsel . . . ." (emphasis added)*
  - *"In the end, an entity on notice of potential infringement needs to make a decision about what response it can present to a jury, consistent with pragmatic and other considerations, to demonstrate its lack of bad faith."*

TIMELINES

Understanding the ideal times to start and complete various types of searches

Timing: Two General Categories of Searches

Prospective	• Landscape • Patentability • FTO
Reactive	• Due Diligence • Invalidity

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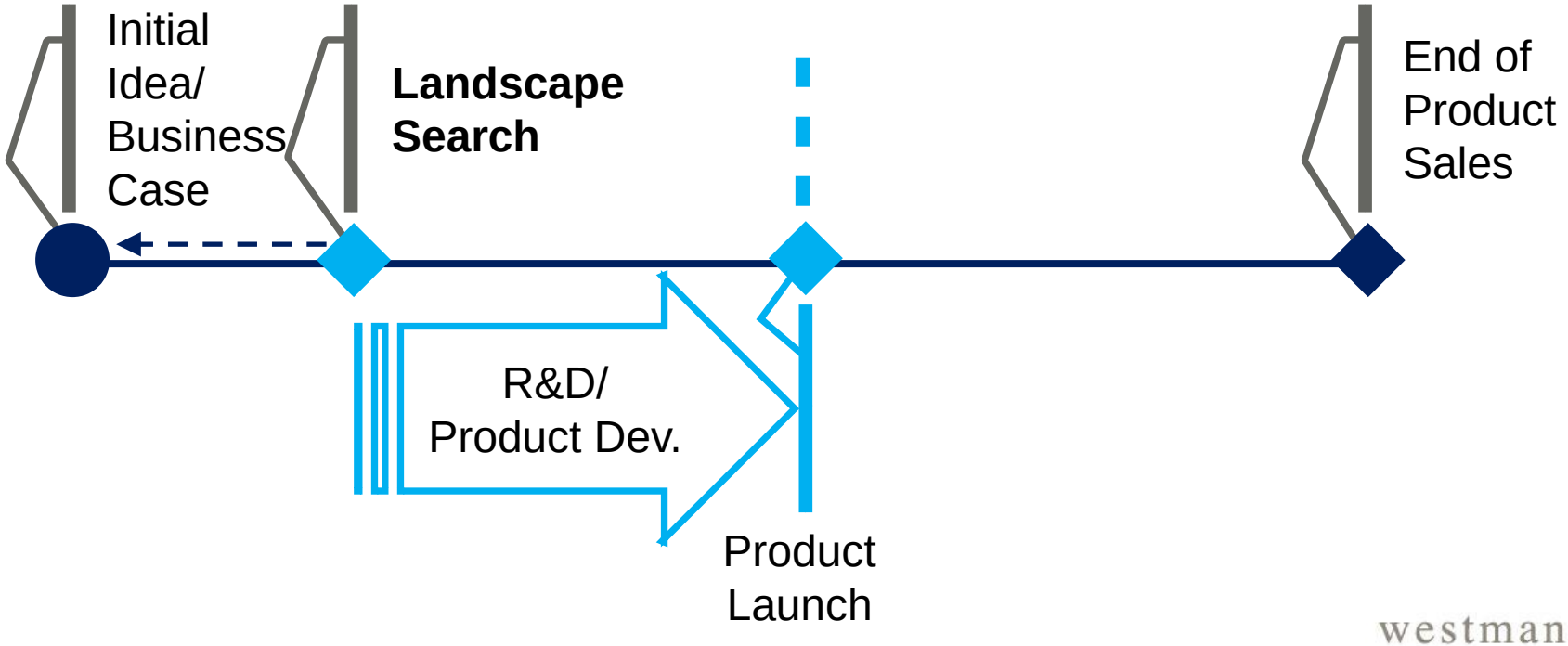
Timeline: Landscape Search



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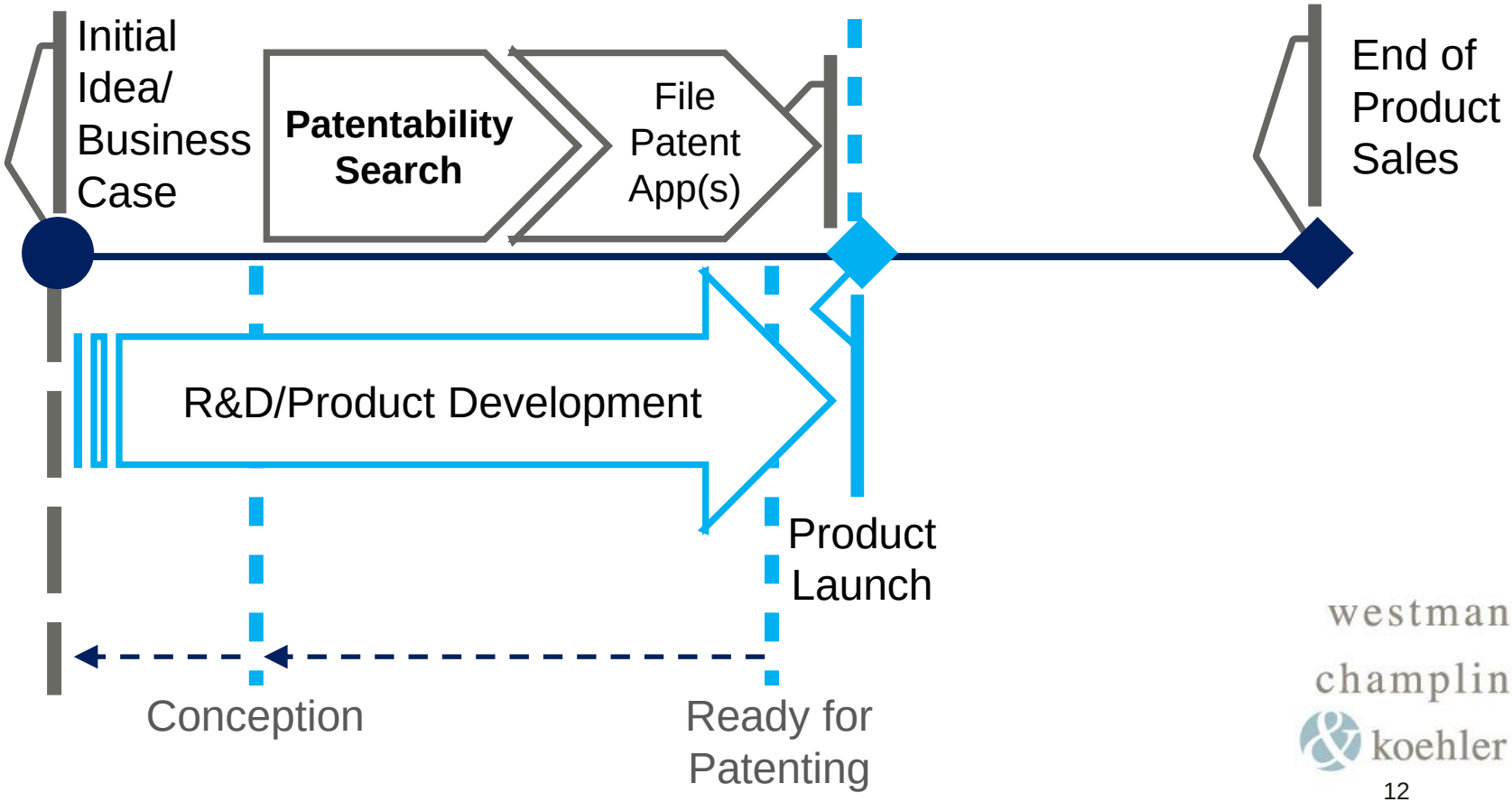
Timeline: Patentability Search



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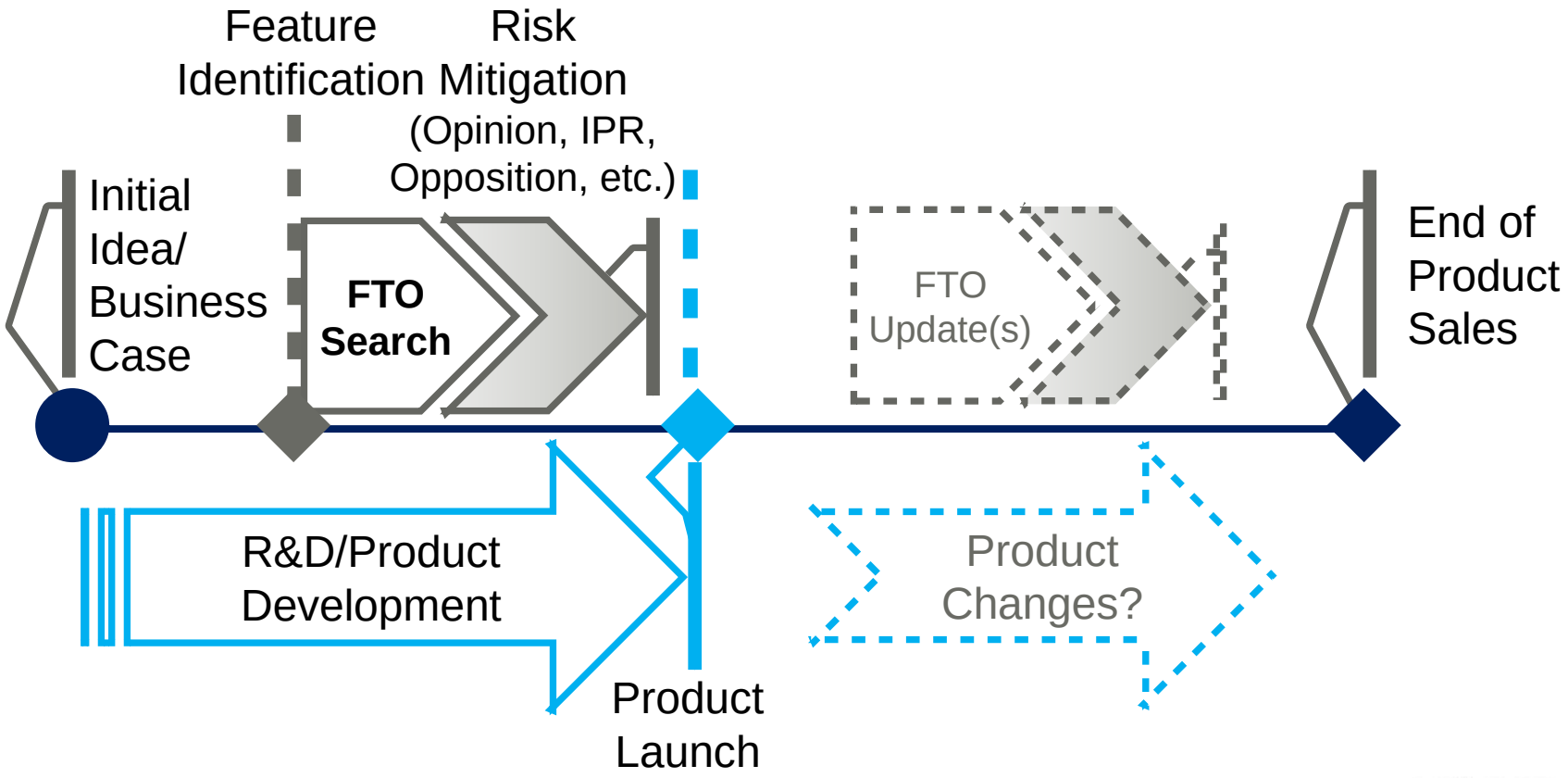
Timeline: FTO Search



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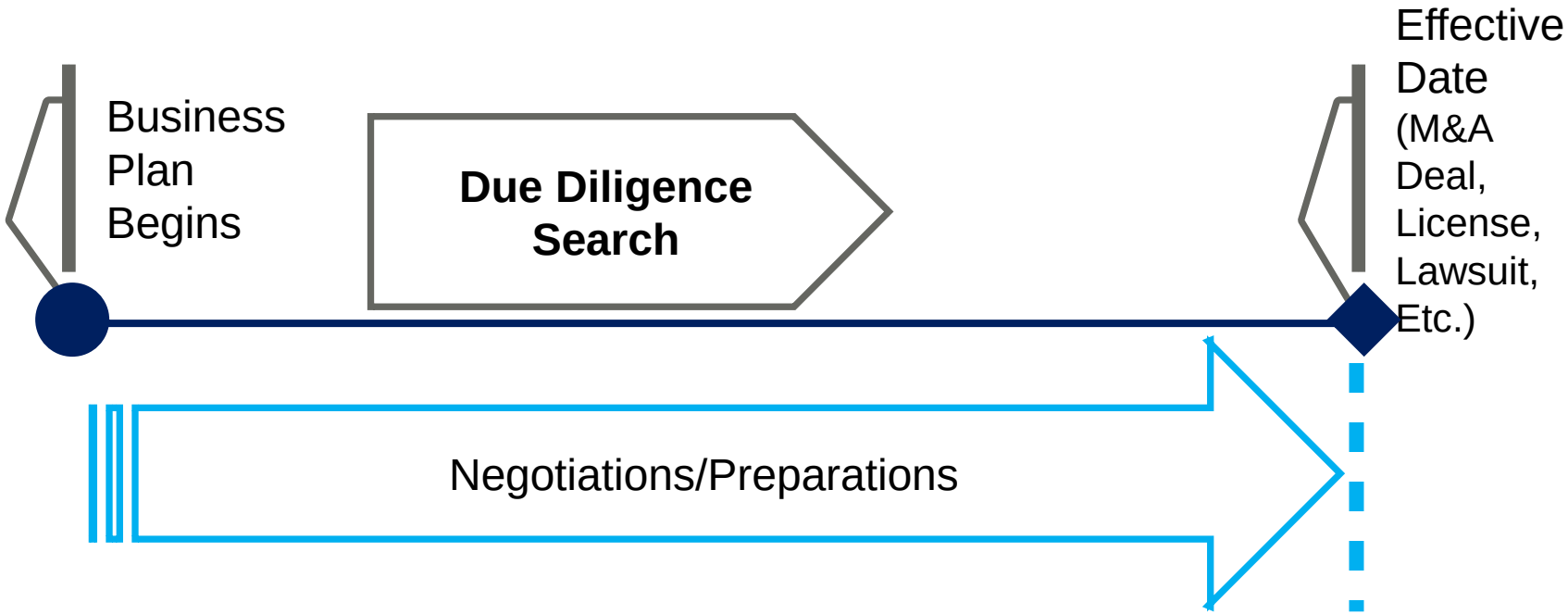
Timeline: FTO Search (cont.)

- Can also conduct *ongoing monitoring* of *all* patents and published applications for:
  - *particular competitor(s)*
  - *particular technology area(s)*

- Use alerts/saved criteria with proprietary search platforms or periodic (manual) searches

Timeline: Due Diligence Search



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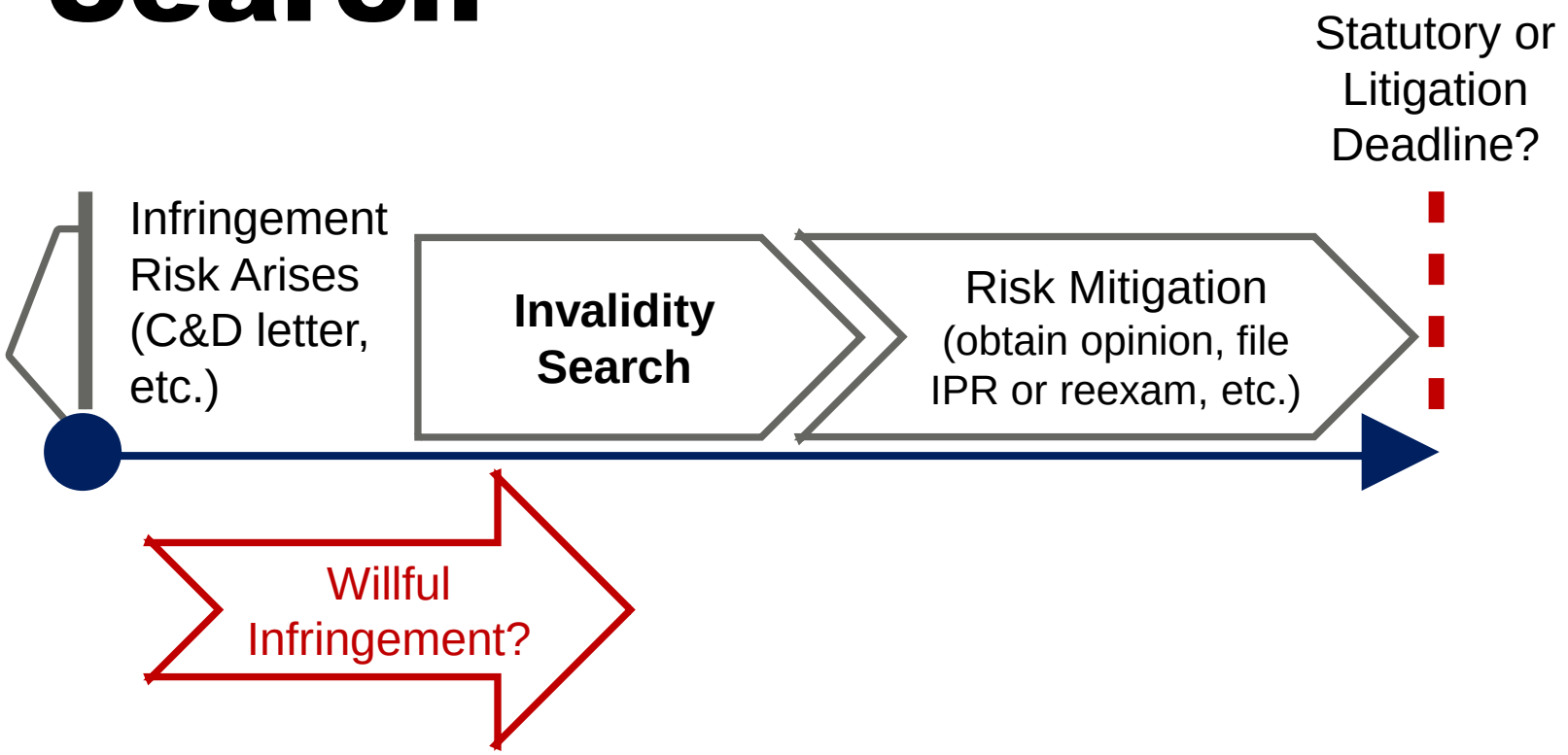
Timeline: Invalidity Search



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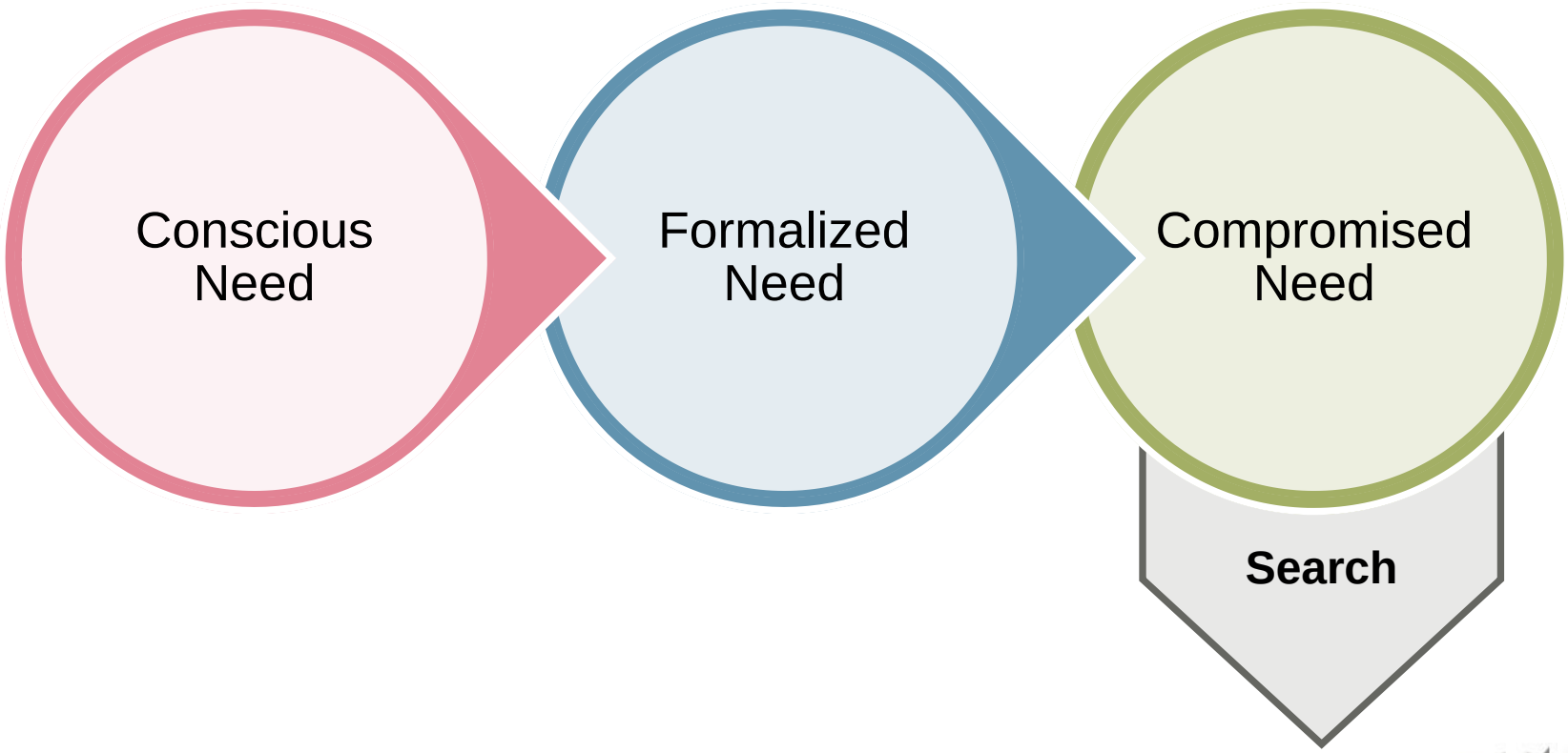
BUDGETING & STAFFING

Tips for approaching the costs and burdens associated with searches in the patent context

Searching as Information Retrieval Problem-Solving



See Stephen P. Harter, "Online Searching as a Problem-Solving Process," *Clinic on Library Applications of Data Processing* (24th : 1987) *available at* <https://www.ideals.illinois.edu/bitstream/handle/2142/1176/Harter.pdf> (citing Robert Taylor, 1962, 1968).

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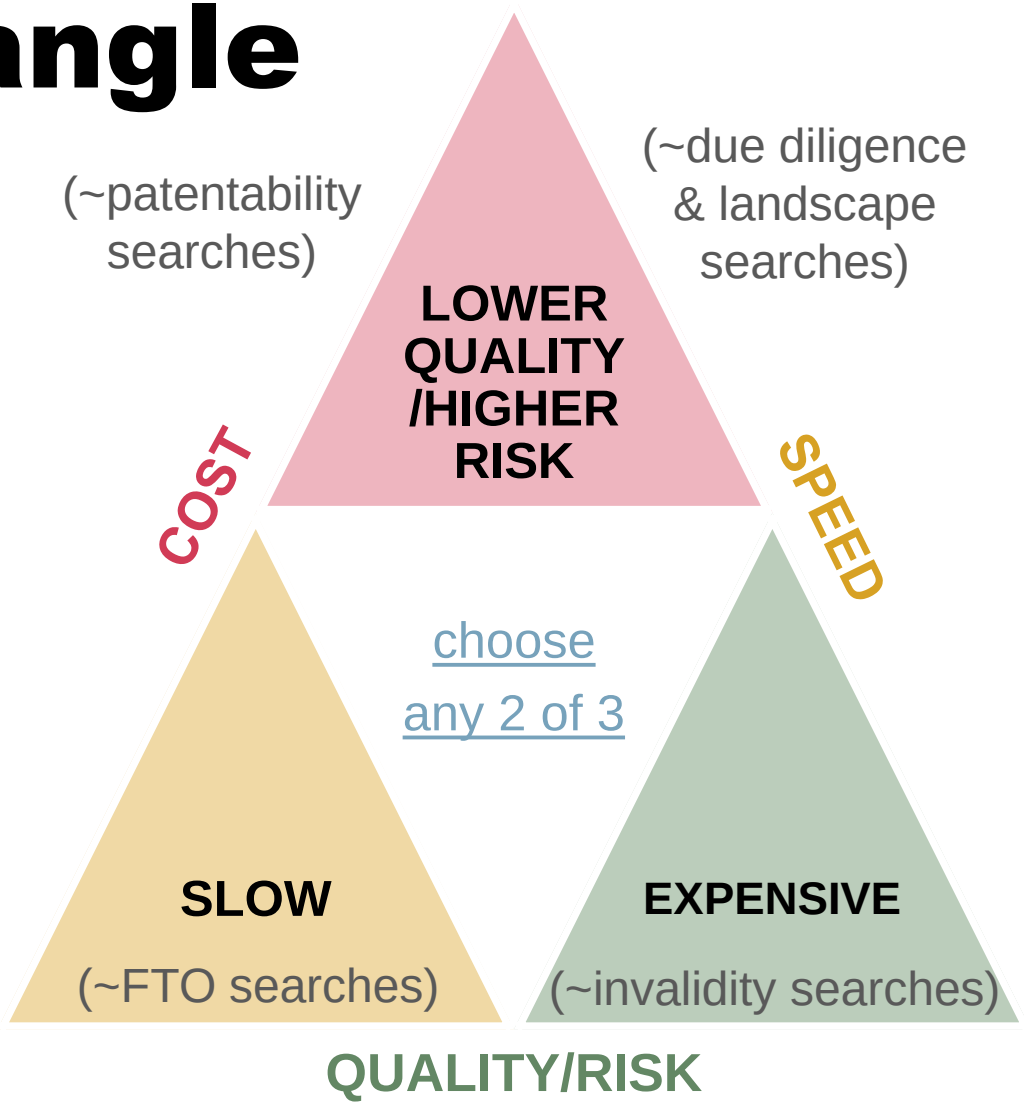
The Searcher's Iron Triangle



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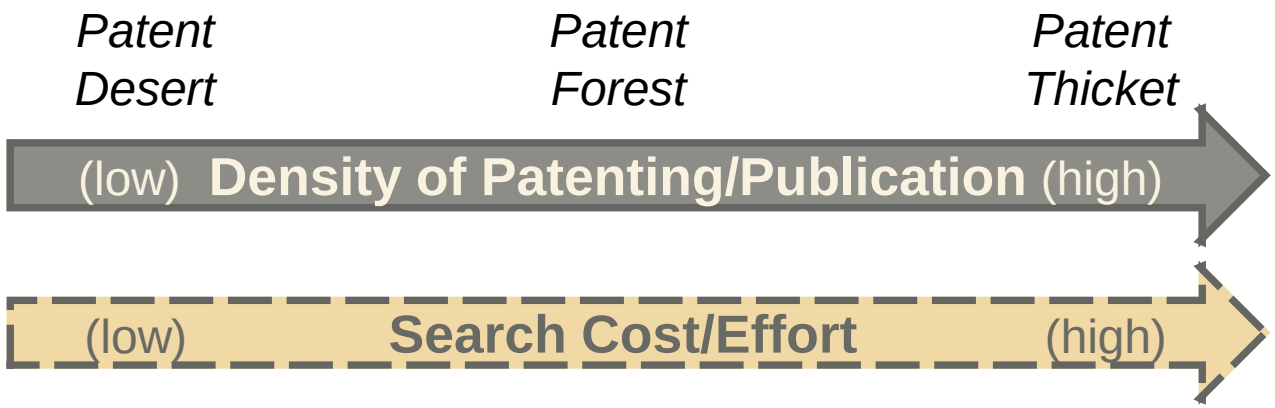
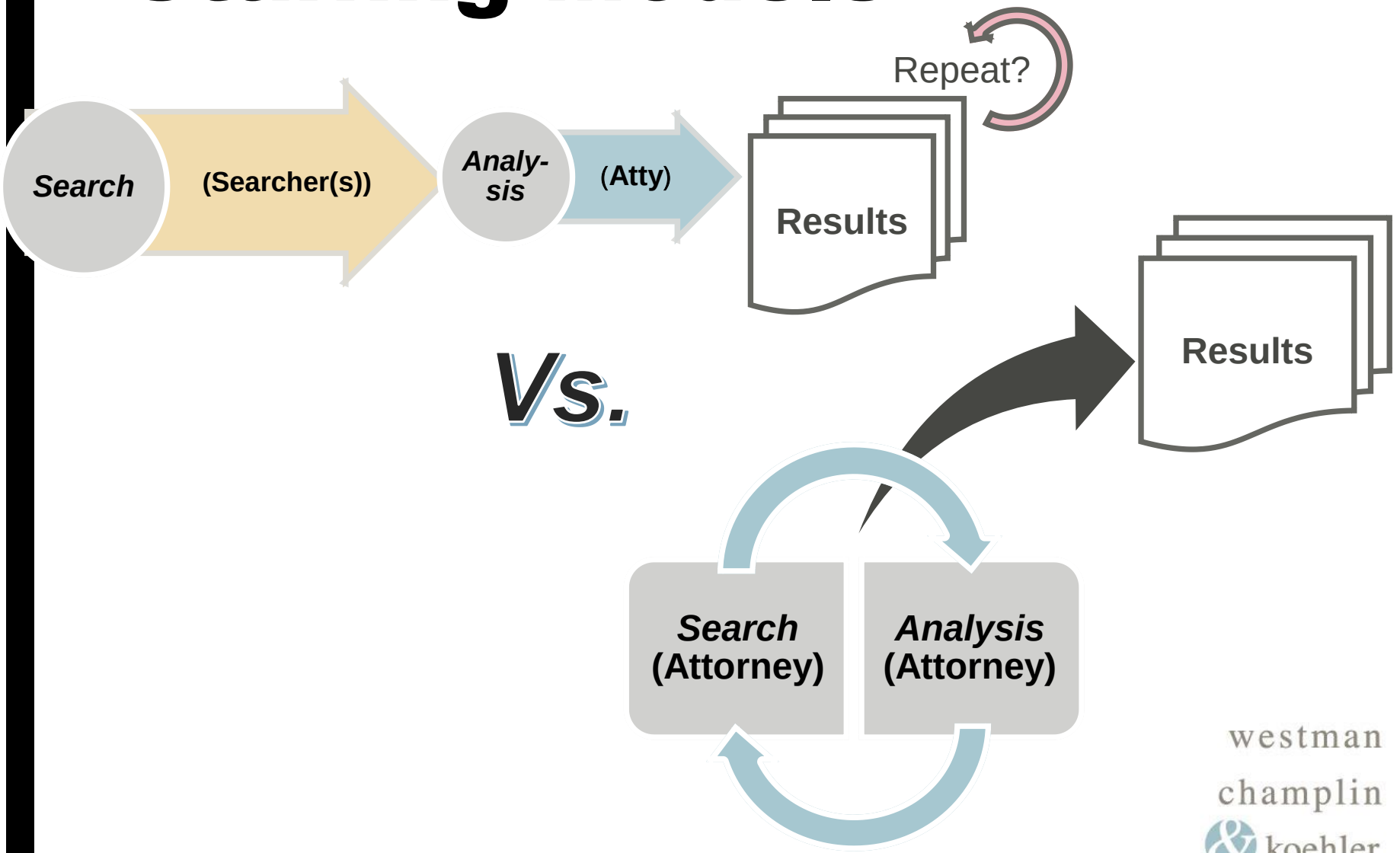
Budget Considerations (cont.)

- Cost/effort can vary based on publication density in tech area:



- But density of patents/NPLs may not be known at outset

Staffing Models



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Outsourcing & Exports

- Experienced subject-matter expert vs. "hired gun"
  - *usually a cost vs. quality trade-off*
- Export controls and similar provisions (e.g., Entity List, ITAR, sanctions, DoD tranches) may prohibit/limit outsourcing searches abroad
  - *"EAR99" generally applies to low-tech consumer goods that do not require export license in many situations*
  - *"dual-use" export controls can be esoteric (15 C.F.R. § 730.3)*
    - *e.g.*, PlayStation® 2 game console exports briefly limited as high performance computers because their graphics cards were capable of use in missile guidance systems
    - *see* CCLs and Wassenaar Arrangement Control Lists
  - *reexport and retransfer also prohibited (15 C.F.R. § 734.14; 22 C.F.R. §§ 120.19 and 120.51)*
  - *"deemed export" to non-Green Card foreigner in USA*
  - *check information transmission & storage in the "cloud"*

GUIDANCE & TIPS FOR SEARCHING

A brief overview of available resources about how to conduct searches in the patent context, with some helpful guidance

(note: what follows is not meant to be a search training tutorial or “how-to” guide)

The Challenge of Searching

- *Often said patent searching is more an art than a science*

- *Searching does not become "easy" simply because you wish it was easy!*
  - *there is no one-size-fits-all formula for conducting effective and reliable searches*
  - *there is a learning curve to searching but it is a skill that can be learned*

Patent Keyword, Classification, Forward/Backward & Automated Searching

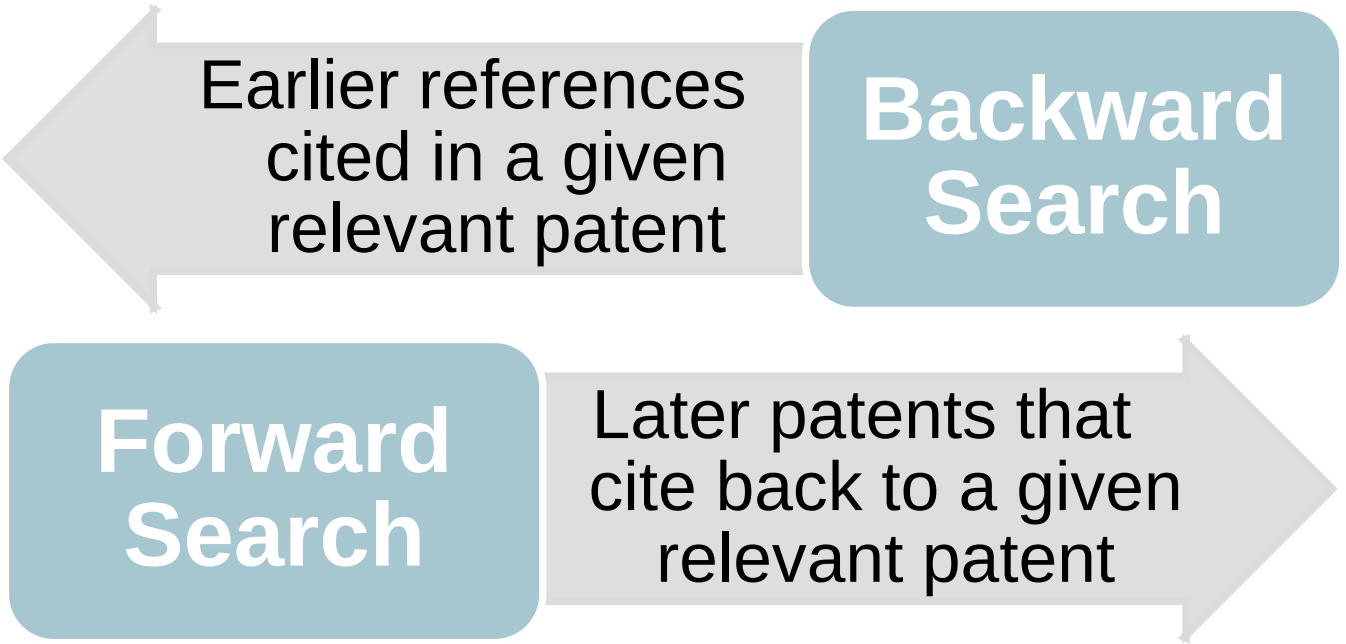
- Historically, searching by classification (reviewing hard copies) was the *only* way to search patents
- Paradigm shift occurred with the advent of computer databases that allowed keyword (Boolean) searching
  - *not all search engines are equal*
    - proximity searching can be valuable (greater precision)
    - search engines sometimes fail to duplicate search results
  - *no database is perfect*
    - data entry errors, OCR misrecognition, faulty machine translations, lack of searchable full text for all time periods or jurisdictions, etc.

Patent Keyword, Classification, Forward/Backward & Automated Searching (cont.)

- Natural language searching, semantic searching, machine learning, and artificial intelligence (AI) ???
  - *lack of transparency*
    - experienced attorneys do not trust "black box" algorithms for research,[1] but that is exactly what many recent computer search tools present—under various names
    - still a lack of independent/peer-reviewed comparative studies
  - *might represent a paradigm shift, someday, but today better to rely on human-guided searching in higher-stakes situations and use these new tools only as a supplement:*
    - initial quick-start or "drunk walk" search orientation efforts
    - last-step search validation or auditing
    - lucky find of additional art otherwise missed

[1] Brian Sheppard, "Does Machine-Learning-Powered Software Make Good Research Decisions? Lawyers Can't Know for Sure," *ABA Journal New Normal* (Nov. 22, 2016)

Patent Keyword, Classification, Forward/Backward & Automated Searching (cont.)



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Patent Keyword, Classification, Forward/Backward & Automated Searching (cont.)

- Classifications categorize patent documents by technical subject matter area to facilitate searching
- All relevant prior art patents/disclosures may not appear in the seemingly relevant class(es)
  - *classification decisions subject to human (& AI) error*
  - *class revisions/additions over time can leave gaps*
  - *classifications do not necessarily address <u>all</u> technical disclosures in patent documents*
- Reliability (recall) improves at higher levels (*e.g.*, IPC "sections" less error-prone than narrower "subgroups")
- Search queries can combine (key)words and classifications

Patent INID Codes

- Patent INID (field) codes useful in absence of translation
- WIPO Standard ST.9 Appendix 1 and ST.80 (for designs), for example:

INID Code	Data Field Content
(10)	Publication/Patent Number
(22)	Filing Date
(43)	Application Publication Date
(45)	Grant/Issue Date
(54)	Title
(71)	Applicant(s)
(73)	Assignee(s)
(86)	PCT Filing Details

Patent INID Codes (cont.)

US010000000B2

(12) **United States Patent**
Marron

(10) **Patent No.: US 10,000,000 B2**
(45) **Date of Patent: Jun. 19, 2018**

(54) **COHERENT LADAR USING INTRA-PIXEL QUADRATURE DETECTION**

(71) Applicant: **Raytheon Company**, Waltham, MA (US)

(72) Inventor: **Joseph Marron**, Manhattan Beach, CA (US)

(73) Assignee: **Raytheon Company**, Waltham, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 430 days.

(21) Appl. No.: **14/643,719**

(22) Filed: **Mar. 10, 2015**

(65) **Prior Publication Data**

US 2016/0266243 A1 Sep. 15, 2016

(51) **Int. Cl.**
G01S 7/48 (2006.01)
G01S 7/486 (2006.01)
G01S 7/491 (2006.01)
G01S 13/89 (2006.01)

(52) **U.S. Cl.**
CPC ***G01S 7/4863*** (2013.01); ***G01S 7/4865*** (2013.01); ***G01S 7/4914*** (2013.01); ***G01S 7/4917*** (2013.01); ***G01S 13/89*** (2013.01)

(58) **Field of Classification Search**
CPC G02B 27/58; G02B 26/10; G01J 1/20
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,093,563 A * 3/1992 Small G02B 27/58 250/201.9
5,751,830 A 5/1998 Hutchinson
2003/0076485 A1 4/2003 Ruff et al.
2006/0227317 A1 * 10/2006 Henderson G01B 11/026 356/28

FOREIGN PATENT DOCUMENTS

WO WO 2005/080928 A1 9/2005

OTHER PUBLICATIONS

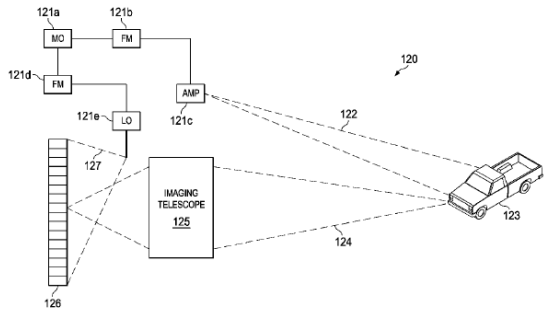
Li; "Time-of-Flight Camera—An Introduction"; Texas Instruments White Paper; SLOA190B; Jan. 2014; revised May 2014; 10 pp.
(Continued)

Primary Examiner — Luke D Ratcliffe
(74) *Attorney, Agent, or Firm* — Wolf, Greenfield & Sacks, P.C.

(57) **ABSTRACT**

A frequency modulated (coherent) laser detection and ranging system includes a read-out integrated circuit formed with a two-dimensional array of detector elements each including a photosensitive region receiving both return light reflected from a target and light from a local oscillator, and local processing circuitry sampling the output of the photosensitive region four times during each sample period clock cycle to obtain quadrature components. A data bus coupled to one or more outputs of each of the detector elements receives the quadrature components from each of the detector elements for each sample period and serializes the received quadrature components. A processor coupled to the data bus receives the serialized quadrature components and determines an amplitude and a phase for at least one interfering frequency corresponding to interference between the return light and the local oscillator light using the quadrature components.

20 Claims, 6 Drawing Sheets



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(19)日本国特許庁(JP) (12)特 許 公 報(B2) (11)特許番号
特許第6570658号
(P6570658)

(45)発行日 令和1年9月4日(2019.9.4) (24)登録日 令和1年8月16日(2019.8.16)

(51)Int.Cl. F I
G01S 17/32 ***(2006.01)*** G01S 17/32
G01S 17/89 ***(2006.01)*** G01S 17/89

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(33) 優先権主張国・地域又は機関
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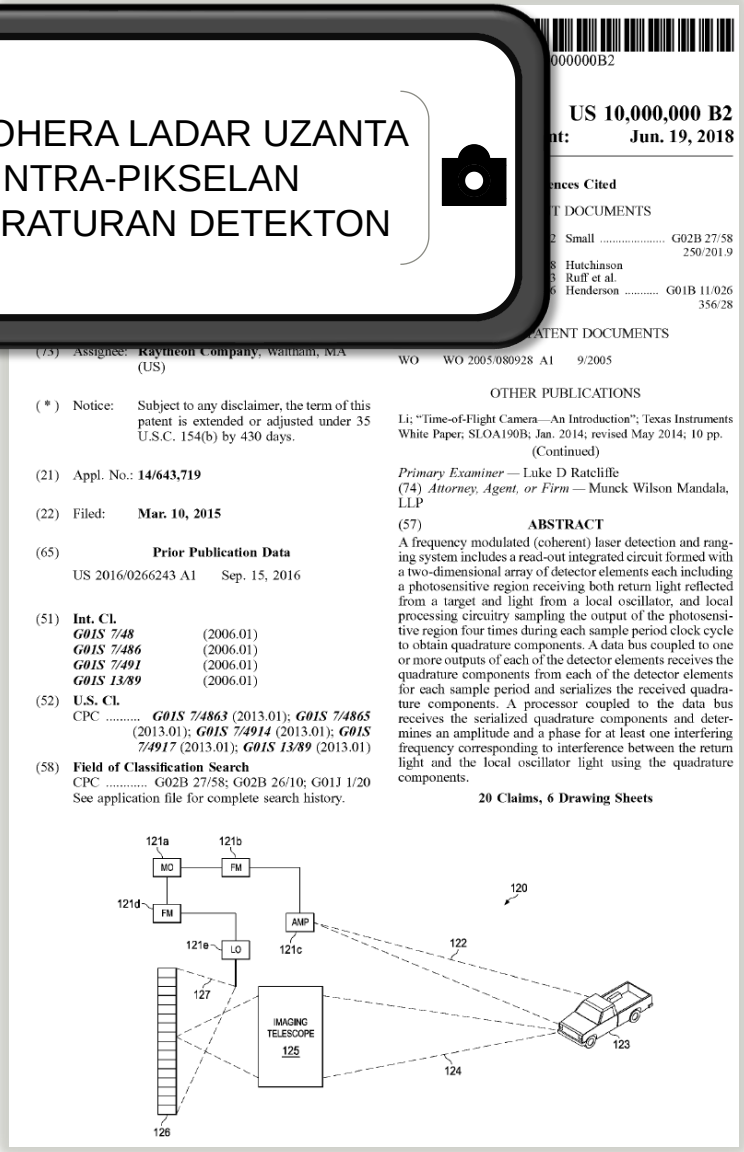
マンハッタン・アヴェニュー 2311
最終頁に続く

(54)【発明の名称】LADARシステム及び方法

(57)【特許請求の範囲】
【請求項1】
レーザー検出レンジング(LADAR)システムであって:
ディテクタ・エレメントの2次元的なアレイであって、前記アレイ内の各ディテクタ・エレメントは、
ターゲットから反射されたリターン光とローカル光源からのローカル発振器光とを受信するように構成される感光領域と、
個々の感光領域の出力に結合されるローカル処理回路であって、前記出力におけるアナログ信号を受信し、各々のサンプル期間のクロック・サイクルの間に前記アナログ信号を複数回サンプリングし、各々のサンプル期間のクロック・サイクルの間にサンプルに対する複数のサンプル成分を取得するように構成され、前記複数のサンプル成分は直交成分である、ローカル処理回路とを有する、2次元的なアレイ;
各々のディテクタ・エレメントの1つ以上の出力に結合され、各々のサンプル期間のクロック・サイクルの間に各々のディテクタ・エレメントから前記複数のサンプル成分を受信するように構成されるデータ・バス;及び
前記データ・バスに結合されるプロセッサであって、各々のサンプル期間のクロック・サイクルについて、前記各々のディテクタ・エレメントからの前記複数のサンプル成分を、前記データ・バスから受信し、前記複数のサンプル成分を利用して、リターン光とローカル発振器光との間の干渉に対応する干渉周波数に関する振幅及び位相を判定するように構成されるプロセッサ;

Patent INID Codes (cont.)

(54) KOHERA LADAR UZANTA INTRA-PIKSELAN KVADRATURAN DETEKTON



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US 10,000,000 B2
nt: Jun. 19, 2018

nces Cited

T DOCUMENTS

2 Small G02B 27/58 250/201.9
8 Hutchinson
3 Ruff et al.
6 Henderson G01B 11/026 356/28

ATENT DOCUMENTS

WO WO 2005/080928 A1 9/2005

OTHER PUBLICATIONS

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(Continued)

(73) Assignee: **Raytheon Company**, Waltham, MA (US)

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G01S 13/89	(2006.01)

(52) **U.S. Cl.**

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Primary Examiner — Luke D Ratcliffe

(74) *Attorney, Agent, or Firm* — Munck Wilson Mandala, LLP

(57) **ABSTRACT**

A frequency modulated (coherent) laser detection and ranging system includes a read-out integrated circuit formed with a two-dimensional array of detector elements each including a photosensitive region receiving both return light reflected from a target and light from a local oscillator, and local processing circuitry sampling the output of the photosensitive region four times during each sample period clock cycle to obtain quadrature components. A data bus coupled to one or more outputs of each of the detector elements receives the quadrature components from each of the detector elements for each sample period and serializes the received quadrature components. A processor coupled to the data bus receives the serialized quadrature components and determines an amplitude and a phase for at least one interfering frequency corresponding to interference between the return light and the local oscillator light using the quadrature components.

20 Claims, 6 Drawing Sheets

Smartphone App Camera-Based *Partial* Machine Translation of Title to Esperanto (etc.)

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Kind Codes

- "Kind codes" identify type of patent document
  - *letter or letter-and-number immediately after the patent or publication number*
- Japanese patent numbering and kind code explanation: https://www.epo.org/searching-for-patents/helpful-resources/asian/japan/numbering.html
  - *Japan issued different patents with same numbers, differentiated only by kind codes*
  - *To look up old Japanese patent documents, try:*
    - Adding zero(es): for example, "JPH01-**0**23456"
    - Adding year-of-emperor letter: **S** (Showa) for 1926-1989 or **H** (Heisei) for 1989~1999 (for example, "JP**H**01-123456")

METRICS TO ASSESS SEARCHES

Understanding how to gauge the effectiveness of searches and to know when a search is complete

Metrics For Assessing Searches

- ***Recall***: The proportion (%) of all relevant documents retrieved in a given search query or overall search; hypothetically expressed as:

$$Recall = \frac{relevant\ documents\ actually\ retrieved}{universe\ of\ all\ relevant\ documents}$$

- ***Precision****:* The proportion (%) of relevant documents versus irrelevant documents retrieved in a given search query or overall search; hypothetically expressed as:

$$Precision = \frac{relevant\ documents\ retrieved}{total\ relevant\ \&\ irrelevant\ documents\ retrieved}$$

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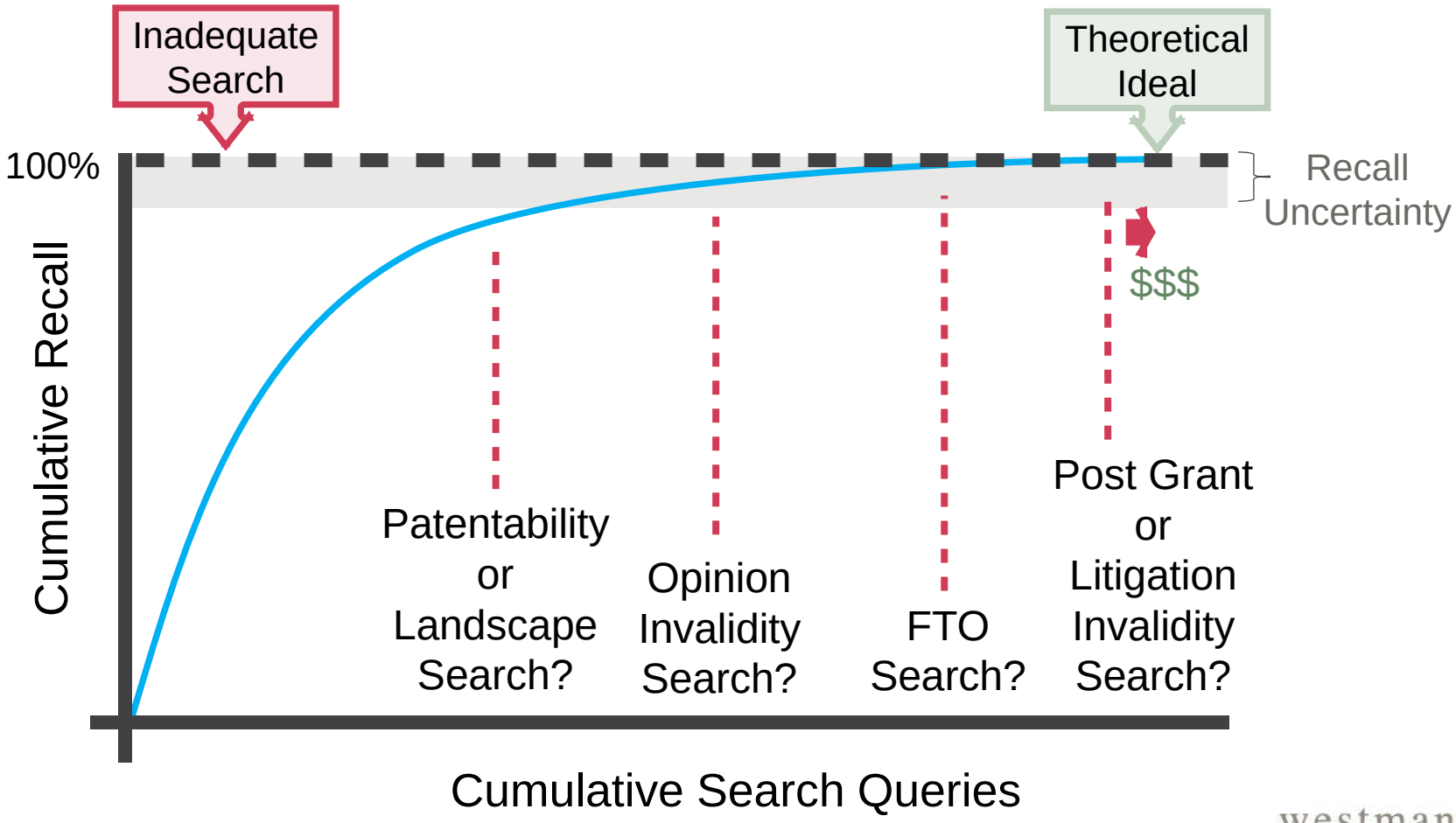
Metrics For Assessing Searches (cont.)

- Higher recall means better search results in terms of quality/completeness, but usually requires more review/analysis effort
  - *universe of all relevant documents (100% recall) is unknown at the beginning of a search, and may never be definitively knowable*
  - *"proving a negative" problem*
- Higher precision saves time (and time is money), but higher precision usually lowers recall of a given query
  - *subsequent substantive analysis of query results can remove irrelevant results to improve precision of final reported results*
- Library science says that recall and precision are trade-offs
  - *having both 100% recall and 100% precision in any given query is fantasy!*

When is Search Complete?



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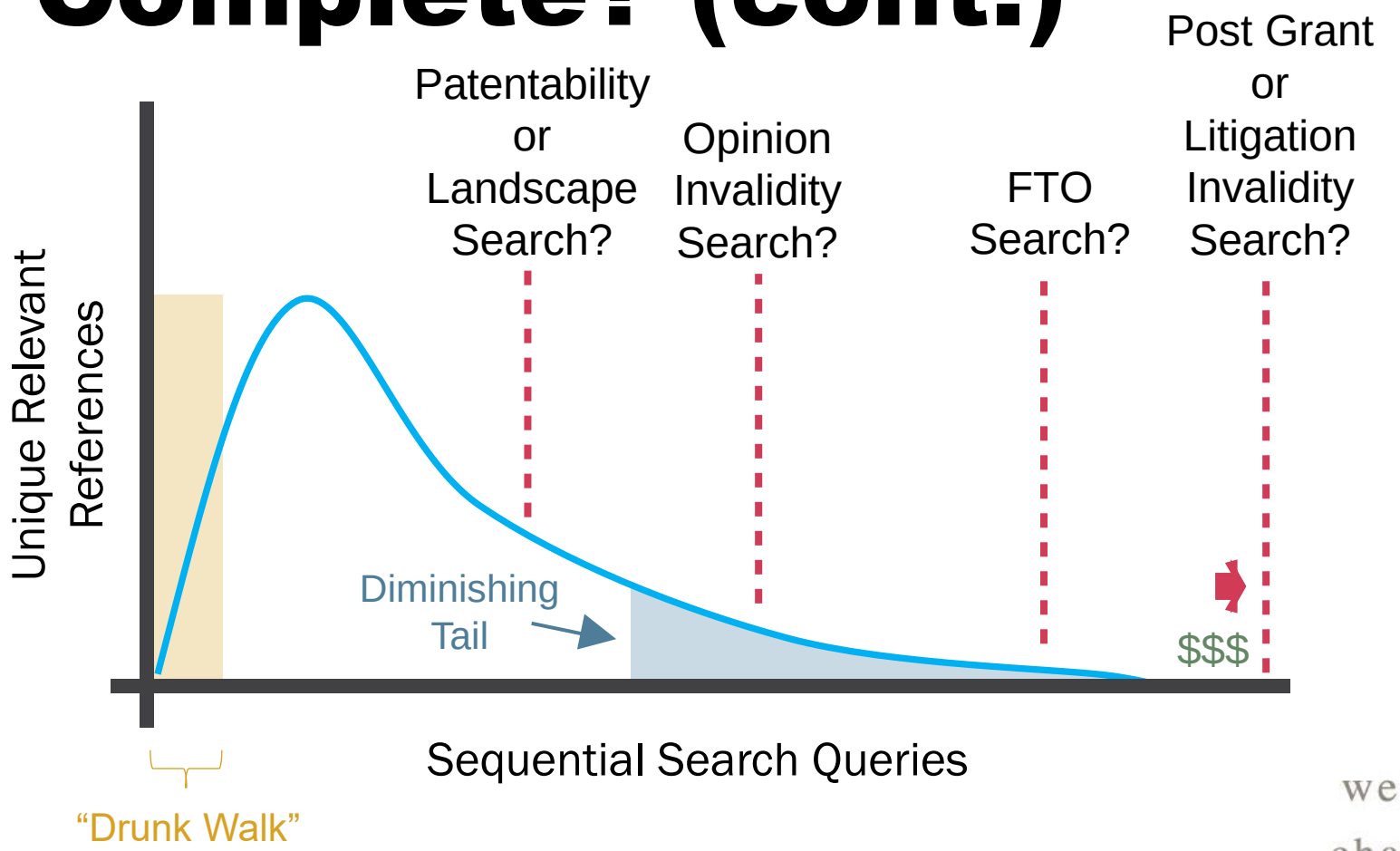
When is Search Complete? (cont.)



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EVIDENTIARY BURDENS, PRIVILEGES, & DISCLOSURE DUTIES

Brief overview of legal rules and duties that can arise in connection with searches in the patent context

Evidentiary Concerns for NPL References

- Federal Rules of Evidence (FRE) require authentication and prohibit hearsay (unless exception applies):
  - *Article VIII - FRE 801-807: Hearsay*
  - *Article IX - FRE 901-903: Authentication*
  - *Not a concern for U.S. patents, which as "public records" are self-authenticating (FRE 902) and a hearsay exception (FRE 803(8)) to qualify as prior art*
- FRE apply to district court litigation and PTAB trials
  - *note 37 CFR § 42.61 at PTAB*
  - *see also EVIDENCE IN PATENT CASES (2018) and THE PRACTITIONER'S GUIDE TO TRIALS BEFORE THE PTAB (2016)*
- Lower NPL evidentiary standard for ordinary examination & reexam
  - *date on a document can establish its publication for examination purposes unless applicant challenges it (MPEP § 2128)*
  - *Ex parte Grillo-López, Appeal No. 2018-006082 at *2-3 (PTAB, Jan. 31, 2020) (precedential) (lower examination vs. IPR standards)*

Evidentiary Concerns for NPL References (cont.)

- To qualify as "prior art", an NPL reference must be established as a "printed publication" that was sufficiently generally "publicly accessible" before the critical date
  - *In re Hall, 781 F.2d 897, 899 (Fed. Cir. 1986) ("'public accessibility' has been called the touchstone in determining whether a reference constitutes a 'printed publication'")*
  - *Medtronic, Inc. v. Barry, 891 F.3d 1368, 1380 (Fed. Cir. 2018) ("A reference will be considered publicly accessible if it was disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence[] can locate it.")*
  - *In re Lister, 583 F.3d 1307, 1311 (Fed. Cir. 2009) ("Whether a reference is publicly accessible is determined on a case-by-case basis based on the 'facts and circumstances surrounding the reference's disclosure to members of the public.'")*

Evidentiary Concerns for NPL References (cont.)

- In invalidity context, cannot assume a copyright date, printing date, Internet server upload date, or the like on reference itself will *necessarily* satisfy public availability evidentiary requirement
  - *Samsung Electronics Co., Ltd. v. InfoBridge Pte. Ltd., IPR2017-00099,-00100, Paper 43 (PTAB, Nov. 13, 2020); Samsung Elecs. Co., Ltd. v. InfoBridge Pte. Ltd., 929 F.3d 1363, 1372 (Fed. Cir. 2019)*
  - *Acceleration Bay, LLC v. Activision Blizzard Inc., 908 F.3d 765, 773 (Fed. Cir. 2018)*
  - *Blue Calypso, LLC v. Groupon, Inc., 815 F.3d 1331, 1348-49 (Fed. Cir. 2016)*
  - *Open Text SA v. Box, Inc., No. 3:13-cv-04910, 2015 WL 4940798 at *7 (N.D. Cal. Aug. 19, 2015)*
  - *CNET Networks, Inc. v. Etilize, Inc., 584 F. Supp. 2d 1260, 1274 (N.D. Cal. 2008)*
- But, publication by "established" publisher with traditional hallmarks of publication (ISBN, etc.) *may* be sufficient
  - *VidStream LLC v. Twitter, Inc., 981 F.3d 1060, 1066-67 (Fed. Cir. 2020)*
  - *Hulu, LLC v. Sound View Innovations, LLC, Case IPR2018-01039, Paper 29 at *17-21 (PTAB, Dec. 20, 2019) (precedential)*
  - *Ericsson Inc. v. Intellectual Ventures I LLC, IPR2014-00527, Paper 41 (PTAB, May 18, 2015)*
  - *Kyocera Wireless Corp. v. Int'l Trade Comm'n, 545 F.3d 1340, 1351 (Fed. Cir. 2008)*

Evidentiary Concerns for NPL References (cont.)

- Ephemeral or temporarily displayed materials also raise issues regarding status as "prior art"
  - *Medtronic, Inc. v. Barry, 891 F.3d 1368, 1379-83 (Fed. Cir. 2018)*
  - *Initiative for Medics., Access & Knowledge (I-MAK), Inc. v. Gilead Pharmasset LLC, IPR2018-00123, Paper 7 at *8-11 (PTAB, June 13, 2018)*
  - *In re Klopfenstein, 380 F.3d 1345, 1347-50 (Fed. Cir. 2004)*
  - *Ecolochem, Inc. v. S. Cal. Edison Co., 227 F.3d 1361, 1369-70 (Fed. Cir. 2000)*
- Preponderance of the evidence standard at USPTO vs. clear & convincing evidence standard in district courts

Evidentiary Concerns for NPL References (cont.)

- "[Way]Back to the Future: Using the Wayback Machine in Patent Litigation," ABA *Landslide*, Vol. 6, No. 3 (Jan./Feb. 2014)
  - *excellent overview of authentication and hearsay issues involved in using web pages (and archived versions) as prior art*
  - *see also https://archive.org/legal/faq.php*
- "Hearsay Hurdle: Proving Nonpatent Literature Is Prior Art" *Law360* (Feb. 15, 2018)
- "Proving 'Prior Art' At The PTAB," *mondaq* (Feb. 23, 2016)
- USPTO, "Hearsay and Authentication" (Dec. 6, 2018)
  - *How to authenticate a web page for PTAB:*
    - Demonstrating a clear reliable process for capturing, preserving, and presenting the web page (e.g., Internet Archive "Wayback Machine")
    - Testimony from a person who captured the web page
    - Testimony from a computer forensic expert
    - Relying on distinct characteristics of the web page

On Sale and Public Use

- Potentially highly persuasive and effective as invalidity prior art, *but…*
- Often hard to find (especially "secret" sales/offers for sale)
  - *more an investigation than a database search*
  - *patentee's own prior on sale and public use activities may only be revealed during litigation discovery*
- Similar evidentiary challenges as with NPL art
- Plus, "corroboration" requirement in district court
  - *Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1217 (Fed. Cir. 2002) ("corroboration is required of any witness whose testimony alone is asserted to invalidate a patent.")*
  - *Juicy Whip, Inc. v. Orange Bang, Inc., 292 F.3d 728, 741-42 (Fed. Cir. 2002) ("rule of reason" and factors for assessing sufficiency of corroboration)*

On Sale and Public Use (cont.)

- *Wi-LAN Inc. v. Sharp Elecs. Corp.*, 992 F.3d 1366 (Fed. Cir. 2021) (re: infringement rather than validity evidence at summary judgment)
  - *declarations could not be used to authenticate source code printout on theories that the declarations were "proxy for trial testimony" or themselves admissible as "business records"*
  - *source code printout's "appearance, contents, substance, internal patterns, [and] other distinctive characteristics,". . . did not satisfy FRE 901(b)(4)'s strictures "given the highly dubious circumstances surrounding the production and the lack of indicia of trustworthiness in the source code . . ."*

Privileges and Their Limits

- Materials generated in connection with searches *may* end up being disclosed or produced in litigation
  - ***reliance on advice of counsel*** *in litigation* ***waives privilege for all communications on same subject matter****. In re EchoStar Comm'ns Corp., 448 F.3d 1294, 1299,1304 (Fed. Cir. 2006)*
- Attorney-client privilege only applies to communications actually sent, and only when seeking or providing legal advice
  - *must involve atty. or those under supervision & control*
  - *anything that must be disclosed on a privilege log is not privileged*
  - *privilege law varies, but some courts have held that acts of counsel, general topics of discussion, and ultimate legal conclusions are not privileged*

Privileges and Their Limits (cont.)

- Work product protection for materials prepared for trial or in anticipation of litigation (FRCP 26(b)(3)) can apply to non-attorneys but will not apply where business considerations predominate
  - *Takeda Chem. Inds., Ltd. v. Alphapharm Pty., Ltd., No. 04-cv-1966, 2005 WL 1678001 (S.D.N.Y., July 19, 2005) (routine patent searches in ordinary course of business, irrespective of litigation, not protected work product)*
  - *In re Google Inc., 462 F. App'x 975, 976-79 (Fed. Cir. 2012) (nonprecedential) (email captioned "Attorney Work Product" expressing need for license was a technical/business investigation not protected work product, nor attorney-client privileged)*

Privileges and Their Limits (cont.)

- Privilege log may need to identify patents by number, and documents found during patent infringement/prior art searches or reviewed by an expert witness may need to be identified or disclosed.
  - *Baxter Int'l, Inc. v. Becton, Dickinson and Co., No. 17-C-7576, 2019 WL 3408813 (N.D. Ill, July 26, 2019)*
  - *BASF Catalysts LLC v Aristo, Inc., No. 2:07-cv-222, 2009 WL 187808 (N.D. Ind., Jan. 23, 2009)*
  - *Adobe Inc. v. RAH Color Techs. LLC, Nos. IPR2019-00627, -00628, -00629, -00646, Paper 59 (PTAB, Dec. 12, 2019)*

Satisfying Duty of Disclosure

- 37 C.F.R. § 1.56
  - *"Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability . . . . The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. *** The duty to disclose . . . is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office" in an IDS*
- *See also* MPEP Chapter 2000
- Withholding material prior art can render granted patent unenforceable. *See* Therasense, Inc. v. Becton, Dickinson & Co., 649 F.3d 1276 (Fed. Cir. 2011) (*en banc*)

CONSIDERATIONS FOR POST GRANT PROCEEDINGS

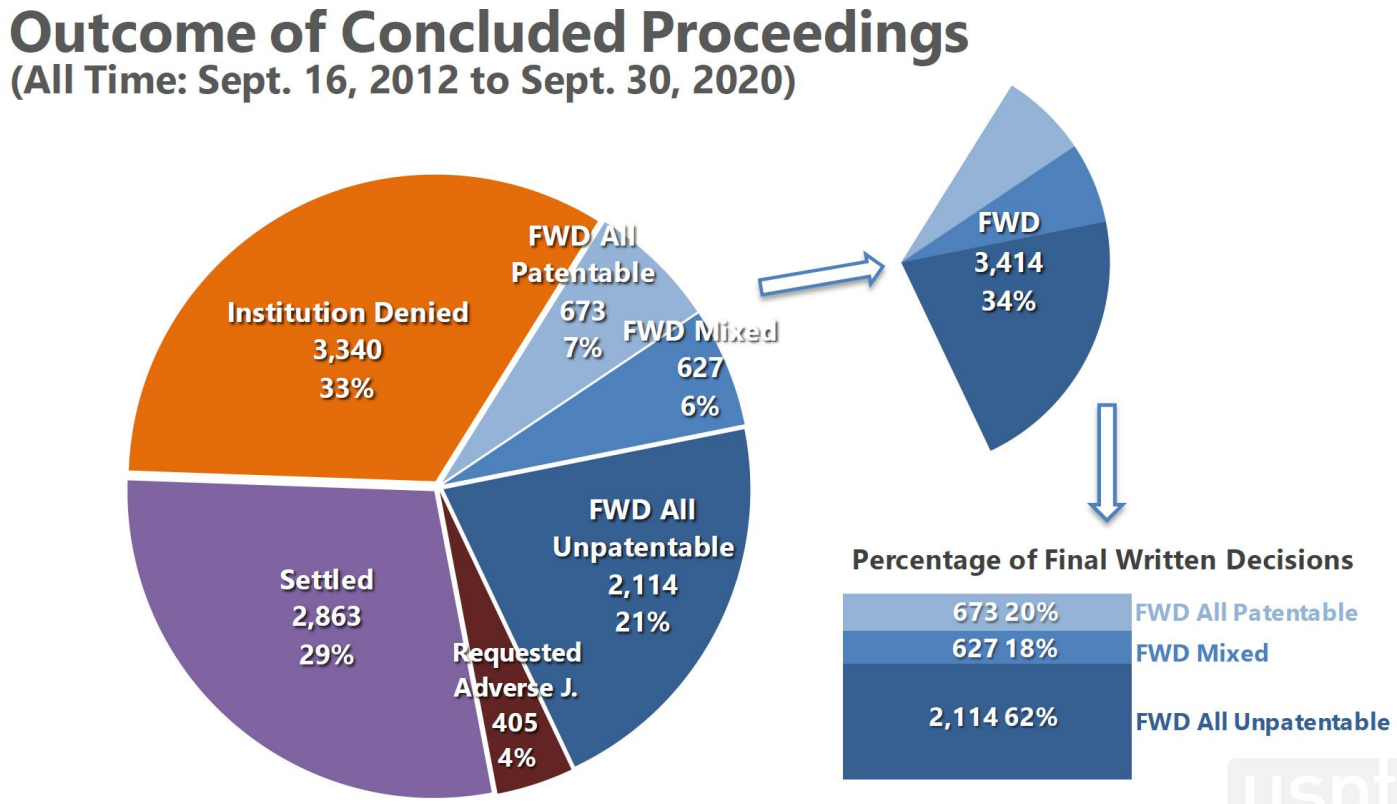
Understanding special concerns applicable to invalidity searches for use in USPTO post-grant patent challenges

USPTO Post Grant

	PGR	IPR	*Ex parte* Reexam
Eligible Pats.	AIA patents only: EFD ≥ March 16, 2013	Any patent	Any patent
Grounds	§§ 101, 102, 103, 112 (no best mode), and double patenting	§§ 102 and 103 based on patents and printed publications (only)	§§ 102 and 103 based on patents and printed publications (only)
When	Within 9 months of patent grant (or reissue)	AIA patents: after 9 months (end of PGR), Non-AIA patents: after issuance Both: only within 1 year of civil action	Anytime
Claim Interpretation:	Same as district court civil action (*Phillips*)	Same as district court civil action (*Phillips*)	Broadest reasonable interpretation (BRI) *except* Expired patents: *Phillips*
Threshold	More likely than not unpatentable	Reasonable likelihood petitioner will prevail	Substantial new question of patentability (SNQ)
Estoppel	Raised or reasonably could have raised	Raised or reasonably could have raised	None

See also http://www.uspto.gov/sites/default/files/ip/boards/bpai/aia_trial_comparison_chart.pptx

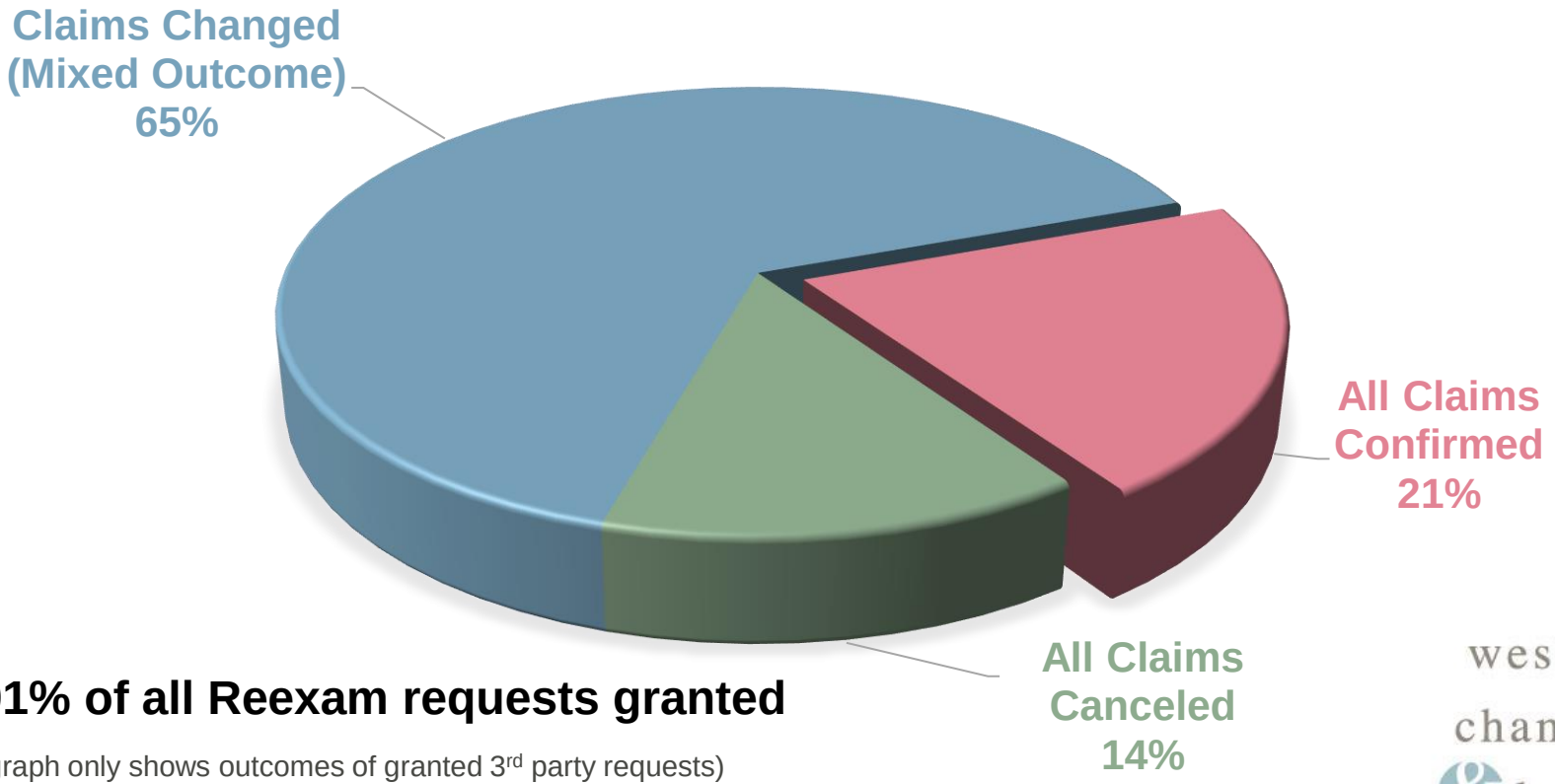
USPTO Post Grant Trial Statistics



Source: https://www.uspto.gov/sites/default/files/documents/trial_statistics_20200930.pdf

Ex parte Reexam Statistics

3RD PARTY REQUESTER REEXAM CLAIM OUTCOMES (1981-2019)



91% of all Reexam requests granted

(graph only shows outcomes of granted 3rd party requests)

Source: https://www.uspto.gov/sites/default/files/documents/ex_parte_historical_stats_roll_up.pdf

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Estoppel for USPTO Post Grant Proceedings

- Estoppel applies to any ground raised or reasonably could have been raised in PTAB trials
  - *IBM Corp. v. Intellectual Ventures II LLC, No. IPR2014-01465, Paper 32 at 5 (PTAB, Nov. 6, 2015)*
    - ask whether a skilled searcher conducting a diligent search reasonably could have been expected to discover the prior art reference in question
    - *See also Valve Corp. v. Ironburg Inventions Ltd.*, IPR2017-00137, Paper 43 (PTAB, Jan. 25, 2018)
  - *Wasica Finance GmbH v. Schrader Int'l, 432 F. Supp. 3d 448, 452-55 (D. Del. 2020)*
  - *Star Envirotech, Inc. v. Redline Detection, LLC, No. 8:12-cv-01861, 2015 WL 4744394, at *4 (C.D. Cal., Jan. 29, 2015)*
- No estoppel arises from *ex parte* reexaminations
  - *but subject to SNQ and collateral estoppel (In re Freeman, 30 F.3d 1459 (Fed. Cir. 1994))*

Other Hurdles for Subsequent District Court Litigation

- Unsuccessful reexam still presents obstacle
- *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360 (Fed. Cir. 1984) (emphasis in original):
  - *"When an attacker simply goes over the same ground travelled by the PTO, part of the burden is to show that the PTO was wrong in its decision to grant the patent. When new evidence touching validity of the patent not considered by the PTO is relied on, the tribunal considering it is not faced with having to disagree with the PTO or with deferring to its judgment or with taking its expertise into account. [Such new] evidence may . . . carry more weight and go further toward sustaining the attacker's unchanging burden."*
  - *accord Microsoft Corp. v. i4i Ltd. P'ship, 564 U.S. 91, 110 (2011)*

CONSIDERATIONS FOR DESIGN PATENTS

Understanding special concerns applicable to searches in the design patent context

Design Patent Considerations

- Design patents cover ornamental rather than functional (useful) inventions, but otherwise *most* of the same rules apply as with utility patents in the U.S.
  - *in other countries, "industrial designs" are treated in a manner closer to trademarks or trade dress*
- For design searching, "brute force" manual review of all designs in relevant classifications recommended
  - *so little text that keyword searching frequently unreliable*
  - *check for alternate embodiments not on front page*
  - *one-to-many image-based searching (i.e., uploading a reference image for automated search) is not particularly reliable (yet?)*

Design Patents – Use of Prior Art

- Generally more difficult to establish invalidity of a design patent based on prior art than with utility patents
- Focus on anticipating/novelty-destroying prior art
  - *ordinary **observer** test, the same test used for assessing infringement, is "the sole test for anticipation."* *Int'l Seaway Trading Corp. v. Walgreens Corp., 589 F.3d 1233, 1239-40 (Fed. Cir. 2009).*
  - *"Just as 'minor differences between a patented design and an accused article's design cannot, and shall not, prevent a finding of infringement,' so too minor differences cannot prevent a finding of anticipation." Id.* at 1243 *(citation omitted)*
  - *for anticipation, the claimed design and the prior art design must be substantially the same. Door-Master, 256 F.3d at 1313*

Design Patents – Use of Prior Art (cont.)

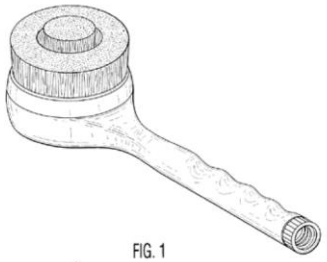
- Obviousness of design patent fairly difficult to establish
  - *obviousness of design assessed from viewpoint of an ordinary **designer** rather than an ordinary observer. High Point Design LLC v. Buyers Direct, Inc., 730 F.3d 1301, 1313 (Fed. Cir. 2013)*
  - *two-step Durling test for obviousness. Durling v. Spectrum Furniture Co., 101 F.3d 100, 103 (Fed. Cir. 1996)*
  - *in order for secondary references to be considered, there must be some suggestion in the prior art to modify the basic design with features from the secondary reference(s). In re Borden, 90 F.3d 1570, 1574-75 (Fed. Cir. 1996); see also In re Glavas, 230 F.2d 447, 450 (CCPA 1956); In re Carter, 673 F.2d 1378, 1380 (CCPA 1982)*
  - *(practical applicability of KSR [from utility patent context] to design patents still somewhat unclear)*

Design Patents – Use of Prior Art (cont.)

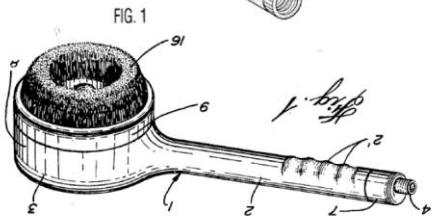
- *Pac. Coast Marine Windshields Ltd. v. Malibu Boats, LLC*, 739 F.3d 694, 700-01 (Fed. Cir. 2014)
  - *doctrine of equivalents "intertwined" with the baseline "ordinary observer" test*
- *Egyptian Goddess, 543 F.3d at 678 (en banc)*
  - *"differences between the claimed and accused designs that might not be noticeable in the abstract can become significant to the hypothetical ordinary observer who is conversant with the prior art."*
- Three-way comparison between the patent figures, the accused product, and the closest prior art can be used in "close" cases
  - *can highlight the need to construe the range of equivalents to the claimed design very narrowly*
- Burden is on accused infringer to put forward prior art for a three-way comparison. *Egyptian Goddess, 543 F.3d at 678*

Design Patents – Use of Prior Art (cont.)

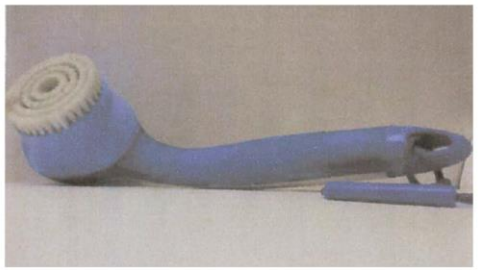
- *Wallace v. Ideavillage Prods. Corp.*, No. 2015-107, 2016 WL 850860 (Fed. Cir., March 3, 2016) (nonprecedential)



D'990
Fig. 1



Prior Art
'826 Patent,
Fig. 1

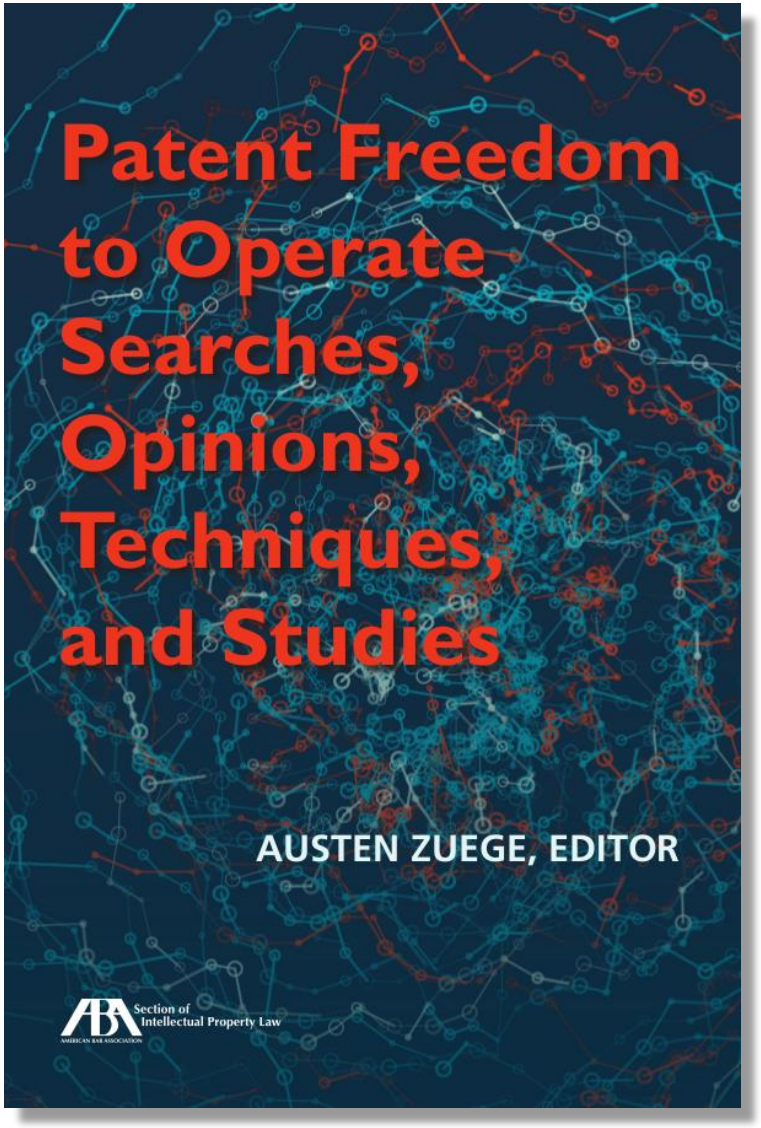


Ideavillage's
Accused
Product

SEARCH RESOURCES

Listings of books etc. about patent searching and some currently available tools for conducting searches

Resources on How to Search



https://www.americanbar.org/products/inv/book/281334069

Covers detailed patent searching techniques and methodologies, as well as general information about patents and patent law, risk mitigation strategies, and more

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Resources on How to Search (cont.)

- Stephen P. Harter, ONLINE INFORMATION RETRIEVAL: CONCEPTS, PRINCIPLES, AND TECHNIQUES (1986)
- David Hunt et al., PATENT SEARCHING: TOOLS & TECHNIQUES (2007)
- USPTO, "Seven Step Strategy"
- USPTO, "How to Conduct a Preliminary U.S. Patent Search: A Step by Step Strategy" (online video)
- USPTO, "How to Search [Guidance for Examiners]," MPEP § 904 *et seq.*
- WIPO, "Patent Search Strategies and Techniques" (April 2016)
- "Conducting and Analyzing Prior Art Searches: Strategies for Validity, Patentability, Infringement, FTO and State-of-the-Art Searches" Strafford Publications (Feb. 27, 2019)
- Franklin Pierce Center for IP, "Freedom to Operate, Product Deconstruction, and Patent Mining: Principles and Practice" (Feb. 2011)
- EPO, "The Basics of Patent Searching" (Sept. 2018)
- Jonas Fransson, EFFICIENT INFORMATION SEARCHING ON THE WEB (2009), Chapter 8: "Search Technique"
- WIPO, GUIDELINES FOR PREPARING PATENT LANDSCAPE REPORTS (2015)

Patent Searching Databases

- WIPO INSPIRE
  - *Lists available patent searching databases*
  - *https://inspire.wipo.int*

Patent Searching Databases: Official (Utility/Invention)

- EPO (Espacenet): https://worldwide.espacenet.com
- USPTO: http://patft.uspto.gov
  - *https://catalog.archives.gov/id/305885 (reconstructed 1791-1836 U.S. Patents)*
  - *PubEAST and PubWEST available onsite (only) at USPTO & PTRCs*
  - *See also: http://www.pat2pdf.org (U.S. patent no. PDF fetching)*
- JPO (J-PatPlat): https://www.j-platpat.inpit.go.jp
- KPO (KIPRIS): http://www.kipris.or.kr/enghome/main.jsp
- CNIPA: http://english.cnipa.gov.cn/
  - *http://pss-system.cnipa.gov.cn/sipopublicsearch/inportal/i18n.shtml*
  - *http://epub.sipo.gov.cn (not in English)*
- WIPO (Patentscope): https://www.wipo.int/patentscope/en

Patent Searching Databases: Official (Designs)

- EUIPN DESIGNview: https://www.tmdn.org/tmdsview-web/welcome#/dsview
- EUIPO eSearch Plus: https://euipo.europa.eu/eSearch
- WIPO Global Design Database: http://www.wipo.int/reference/en/designdb
- EPO (Espacenet): https://worldwide.espacenet.com
- USPTO: http://patft.uspto.gov/netahtml/PTO/search-bool.html
  - *See also: http://www.pat2pdf.org (U.S. patent no. PDF fetching)*
- JPO (J-PatPlat): https://www.j-platpat.inpit.go.jp
- KPO (KIPRIS): http://engdtj.kipris.or.kr/engdtj/searchLogina.do?method=loginDG
- CNIPA: http://english.cnipa.gov.cn/
  - *http://pss-system.cnipa.gov.cn/sipopublicsearch/inportal/i18n.shtml*
  - *http://epub.sipo.gov.cn (not in English)*

Patent Searching Databases: Proprietary (Paywall/Fee-Based)

- Derwent Innovation: https://www.derwentinnovation.com
- Questel Orbit (popular for designs): https://www.orbit.com
- Minesoft PatBase®: https://www.patbase.com
- Gridlogics PatSeer: https://patseer.com
- LexisNexis TotalPatent One®: https://www.totalpatentone.com
- Anaqua Acclaim IP: https://www.acclaimip.com

…Find more at https://inspire.wipo.int

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Patent Searching Databases: Free/Open Access

- The Lens: https://www.lens.org/lens/search/patent/structured
  - *allows "collection" saving and exporting as spreadsheet*
  - *can save "dynamic" queries (and collections) with emailed alerts*
  - *generates "analytics" summary graphics*
- Free Patents Online (FPO): https://www.freepatentsonline.com/search.html
  - *allows "portfolio" saving and exporting as spreadsheet*
  - *see also archived database help/tutorial page https://web.archive.org/web/20190406234135/http://research.freepatentsonline.com/help#search-tutorial*
- Patent Quality through Artificial Intelligence (PQAI): https://search.projectpq.ai

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USPTO Public Search Facility

- Public search facility at USPTO in Alexandria, VA
  - *https://www.uspto.gov/learning-and-resources/support-centers/public-search-facility/public-search-facility*

- On-site (only) public Examiner Automated Search Tool (EAST) access, etc.

- New Patents End-to-End (PE2E) system will be available to public (in some manner) later in FY2021

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Patent & Trademark Resource Centers (PTRCs)

- Nationwide U.S. network of public, state and academic libraries
  - *https://www.uspto.gov/learning-and-resources/support-centers/patent-and-trademark-resource-centers-ptrcs*

- Access to public Examiner's Automated Search Tool (**PubEAST**) and public Web-based Examiner's Search Tool (**PubWEST**) search systems used by USPTO examiners

Non-patent (NPL) Database Resources (Free/Open-Access)

- Internet Archive “Wayback Machine”: https://archive.org
  - *see also https://archive.is*
- Google Scholar: https://scholar.google.com
- The Lens: https://www.lens.org/lens/search/scholar/structured
- Prior Art Archive: https://www.priorartarchive.org
- Technical Disclosure Commons: https://www.tdcommons.org
- Dissertation.com: http://dissertation.com/
- Nucleotide Database: https://www.ncbi.nlm.nih.gov/nucleotide
- PubMed: https://pubmed.ncbi.nlm.nih.gov
- PubChem: https://pubchem.ncbi.nlm.nih.gov
- ChemSpider: https://www.chemspider.com
- NASA HQ Databases: https://www.nasa.gov/centers/hq/library/find/databases
- Scholarpedia: http://www.scholarpedia.org

…and more (including paywalled ones) depending on technology area

Patent Classification Resources

- IPC (WIPO): http://www.wipo.int/classifications/ipc/en
  - *IPCCAT: https://www.wipo.int/ipccat (classification prediction tool)*
  - *See also Strasbourg Agreement and IPC Guide*
- CPC (USPTO + EPO): https://www.cooperativepatentclassification.org/cpcSchemeAndDefinitions/table
  - *Training: https://www.cooperativepatentclassification.org/Training*
  - *USPTO/CPC: https://www.uspto.gov/web/patents/classification*
  - *EPO/CPC: https://worldwide.espacenet.com/patent/cpc-browser#*
- JPO: https://www.j-platpat.inpit.go.jp/p1101
  - *File Index/Facet (FI): based off IPC; addresses only claims*
  - *File Forming Term (F-term): theme-based (for computer database era); more granular than FI; addresses all disclosure*
- Locarno (WIPO; designs): http://www.wipo.int/classifications/locarno/en

Patent Classification Resources (cont.)

- USPC and ECLA were retired (by 2015) in favor of CPC
  - *see concordances:*
    - https://www.cooperativepatentclassification.org/cpcConcordances (IPC and ECLA)
    - (although the USPTO at one time published a USPC to CPC statistical mapping concordance, those materials are no longer available on the USPTO web site even though some stray legacy materials remain)

Other Resources

- Dictionaries (general, technical, & encyclopedic)
  - https://en.wikipedia.org/wiki/Comparison_of_English_dictionaries
  - McGraw-Hill Dictionary of Scientific and Technical Terms *(6th Ed., 2003)*
  - Van Nostrand's Scientific Encyclopedia *(10th Ed., 2008)*
  - *…and more based on technology area*
- WIPO Pearl: https://www.wipo.int/reference/en/wipopearl
  - *multilingual associations of technical & scientific terminology (derived from actual patent usage)*
- WIPO, The WIPO Manual on Open Source Patent Analytics (2016), Chapter 2 "An Overview of Tools"

Other Resources (cont.)

- Patent Center: https://patentcenter.uspto.gov
  - *file histories and patent/app. status; continuity (family) data*
- MyUSPTO: https://my.uspto.gov
  - *use "patent docket" to track status of pending utility applications, with alerts (requires free account login)*
- Global Dossier: https://globaldossier.uspto.gov
  - *machine translations of IP5 patent office file histories*
- PCT Time Limit Calculator: https://www.wipo.int/pct/en/calculator/pct-calculator.html
- USPTO patent term calculator: https://www.uspto.gov/patents/laws/patent-term-calculator
- Withdrawn U.S. patent numbers: https://www.uspto.gov/patents/search/withdrawn-patent-numbers
- RECAP (free U.S. court records PACER archive): https://www.courtlistener.com/recap
- RPX Patent Litigation Search: https://insight.rpxcorp.com/advanced_search/search_litigations#

QUESTIONS?

Time for Q&A

Thank You

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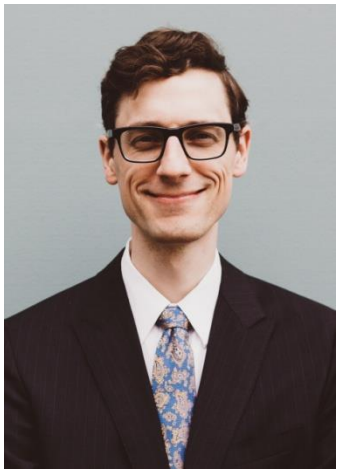
www.wck.com
Bio/CV | LinkedIn



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