Protecting Technology with Patents or Trade Secrets

***Disclaimer**: this presentation is not legal or other professional advice. If legal or other professional advice is needed, the services of a competent professional should be sought*

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Phone Call, SBTC

Jonathan T. Kaplan
KAPLAN IP LAW, PLLC
www.KaplanIPLaw.com
Camas, WA

Based in the Portland, OR area. Boutique intellectual property law firm. Practicing 27+ years. Former partner, nationally-ranked law firms.

Experience with IP issues across a broad range of technologies, such as: robotics, artificial intelligence, neural networks, 5G networks, mixed-signal integrated circuits, EDA software for integrated circuits, computer networks, neuron-level human-machine interfaces, and natural language processing.

MIT research included work at the AI Lab (now CSAIL) and Research Laboratory of Electronics.

Education

J.D., New York University School of Law, 1992

M.S.E.E., Massachusetts Institute of Technology, 1989

B.S.E., University of Pennsylvania, Moore School of Engineering, 1983, *summa cum laude*, *Tau Beta Pi*

Bar Admissions

California, New York, Washington; U.S.P.T.O Registered

- Infringement Actions in Federal Courts
- Validity Challenges at PTAB (IPR's)
- Patent Drafting and Prosecution
- Former Examiner (6 Years)

SBTC
Small Business Technology Council

Eric D. Blatt
Rothwell Figg
Washington DC
eblatt@rfem.com
202-772-5660

Outline

Part I: (Jonathan)

- Major Types of IP
- Data Rights & Recent Changes Thereto
- Structure of a Patent
- Patentable Subject Matter
- Patents vs. Trade Secrets

Part II: (Eric)

- Prior Art, Priority, Grace Period
- Patenting Process and Examination
- Challenging & Enforcing Patents
  - Patent Office: IPR & PGR
  - Courts
  - ITC

What is intellectual property?

Transforms a work of the mind into a property right that is legally enforceable.

Major types:

- **Trade Secrets**: the "workhorse." Almost any kind of information can be a trade secret, but must follow reasonable procedures to keep secret; cannot be enforced against independent developers.
- **Patent**: an occasional "thoroughbred." Protects an enduring contribution, in the application of engineering and/or scientific principles; can be enforced against independent developers.
- **Copyright**: protects aesthetics of how an idea or principle is expressed; primary use is to protect content (informational or entertainment); however, primary basis for open source software; not enforceable against independent authors.
- **Trademark**: a word or short phrase, that identifies source of goods and/or services.

Data Rights

- **Essentially, a kind of trade secret, optionally securable by patent**
- **Applies to technical data developed during all phases of the SBIR (and STTR) programs**
- **The government receives a limited nonexclusive license, or right to use, SBIR Data, but such use cannot include disclosing it in any way**
- **SBA's May 2, 2019 SBIR/STTR Policy Directive:**
  - **changed the Data Rights protection period for SBIR funding agreements to uniform (and nonrenewable) 20-year period beginning on date of first award -- previously 4 or 5 years from date of delivery of the last deliverable, but renewable with each award**
  - **New marking requirement (six months to cure if omitted) including prototypes**
  - **Physical prototypes are recognized as containing SBIR data rights (caution)**
  - **Phase III (commercialization) award:**
    - **must, "to the greatest extent practicable," be to SBIR Awardee that developed the technology.**
    - **"practicable" means for Awardee (not agency), and agency must make "good faith effort"**
- **Awardee must be careful to avoid nonconfidential disclosure, or the data rights will be lost**

What is a patent?

- **A right to sue others for using the invention, but patent holder may still not be able to practice her/his own invention without infringing patents of others** (patent is not a “force field”).
- **Two main sections: Specification (a narrative description) and Claims (defines the right to sue)**
- **The quid pro quo – disclosure of information publicly (through Specification) in exchange for the exclusionary rights (the Claims)**

Data rights changes & reconsideration of patents:

- **Previously, 4 or 5 years of confidentiality argued in favor of patent filing, even if results in publication within 18 months**.
- **Now, one may wish to defer choice between trade secret or patent protection.**
- **Nota Bene: requirements of Bayh-Dole Act to elect and file for patents**
- **A US-only application can be kept secret until a patent issues, if non-publication request made at time of filing.**
- **Do need to make decision, to not pursue non-US patents.**
- **However, within first year of filing US-only, all non-US options remain open.**
- **Can change mind, file non-US, and rescind the nonpublication request.**

Two Main Sections

Specification

- Specification discloses embodiments of the invention, and appears similar to a technical paper (but is a persuasive document)
- Must be "enabling" – enable one of ordinary skill in the art to make and use the invention without undue experimentation
- Must demonstrate "possession" of invention (called the "written description" requirement)

Claims

- checklist of items that need to be met for a potentially infringing product or process, "out there" in the world, to infringe
- Dilemma that guides claim scope are competing goals:
  - Broaden: Would like checklist to be as short as possible, with each checklist item as general as possible
  - Limitations:
    - checklist cannot be satisfied by anything that is "prior art"
    - Its boundary must be clear (cannot be "indefinite")
    - if too functional, radically different interpretation is triggered

Claim interpretation

- **Main approach:**
  - **Claim defines outer boundary of class of embodiments covered ("peripheral claiming")**
  - **words of claim given their ordinary meaning -- unless an altered meaning is clearly indicated (e.g., there is a definition) in the patent specification**
- **Watch out:**
  - **Functional language, especially "means for" or "step for," can trigger a very different interpretation regime**
  - **Start with embodiments of specification, plus add on equivalents ("central claiming")**

Example Claims

1. A vehicle, comprising:

- **four wheels;**
- **an engine; and**
- **a transmission linkage, between the engine and two of the wheels.**

2. The vehicle of claim 1, further comprising:

- **a cranked starter for the engine.**

- **Would a motorcycle infringe Claim 1?**
- **Claim 1 is independent, Claim 2 is dependent**
- **Why have dependent claims, when anything that infringes Claim 2 must also infringe Claim 1?**

Section 101

Appears very broad:

"any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof"

But there are judicial exceptions:

- **abstract ideas – traditionally: pure, unapplied, mathematics**
- **laws of nature – traditionally: the most basic laws, like F=MA, that have not been applied in any way**
- **natural phenomena**

Four Supreme Court decisions 2010-2014:

- ***Alice Corp v CLS Bank* (2014) – "abstract idea" can be anything with long-established and widespread use; remains abstract if implemented on physical but generic computer**
- ***Mayo v. Prometheus* (2012) – "laws of nature" include how body reacts to drug therapy**
- **1881-2009 (128 years) – 8 Supreme Court decisions (1 per 16 years); last decision 1981**
- ***Alice/Mayo* established the current two-part test:**
  - **Is claim "directed to" judicial exception?**
  - **If yes: element, or combination of elements, sufficient to ensure not an attempt to monopolize the judicial exception itself?**

Fallout from Alice/Mayo

Federal Circuit:

- Senior Judge S. Jay Plager, July 2018: It is "near impossible to know with any certainty" what can be patented.
- Judges Alan Lourie and Pauline Newman, May 2018: "what used to be a fairly simple analysis of patent eligibility under Section 101" has become "a complicated multiple-step consideration of inventiveness."

Congress:

- Dec. 2018 – Sens. Thom Tillis, R-N.C., and Chris Coons, D-Del., started meetings intended to produce overhaul of Section 101
- May 2019 – released draft legislation; improved Section 101, but threatened to make all claim interpretation central
- Currently – announced goal of follow-up draft by Summer, but appears stalled

USPTO:

- Jan. 7, 2019 – Director Iancu publishes "Revised Patent Subject Matter Eligibility Guidance" that focuses on just the "abstract idea" exception
- Only 3 types of abstract ideas (rather than ≈100 Federal Circuit cases since *Alice*):
  - Mathematical Concepts
  - Certain Methods of Organizing Human Activity
  - Mental Processes
- Focuses on first step of Alice/Mayo ("directed to") – breaks into two sub-parts: whether abstract idea "recited," and, if so, whether "integrated into a practical application"

Specification Revisited

- **Remember this mantra: the patent is not the product (or project).**
- **Product (or project) was the original motivation.**
- **Specification need only disclose the invention as you plan to claim it.**
- **Aspects of product or project not needed to support claims can be omitted (and possibly kept as trade secret).**

Patents vs. Trade Secrets

When should you patent?

- **Longevity: is technique/application expected to have at least 5-10 year lifespan?**
- **Market size: technique/application cover sufficiently large market, to justify expense of patent enforcement?**
- **For a complex project/product: first step is strategic review, leading to prioritized list of candidate inventions**

When to consider trade secret protection?

- **Default protection, for all company-generated information.**
- **When the invention would be difficult to detect in a competitor.**
- **Many types of information, while of great commercial value, cannot be patented (e.g., Section 101). One such type is information that serves simply as content (e.g., client/customer lists, financial records, market analyses).**
- **When the invention is commercially exploitable, without being revealed (e.g., a process for manufacturing a product, or for providing a service, that cannot be determined from the product or service provided to the customer).**

Advantages of trade secret protection:

- **Almost any type of information, that is of commercial value, can be protected in this way.**
- **Easy to obtain:**
  - **First step is execution, by all Officers and Employees, of proper Employment Agreements.**
  - **Employment Agreements must "I hereby assign" all IP to the Company and must place a continuing, post employment, obligation to maintain confidentiality.**
  - **Company must, at least, take all reasonable steps to maintain secrecy of company generated information.**

Disadvantages of trade secret protection:

- **The secrecy required can hinder commercial exploitation**
- **Cannot be enforced against another party that independently develops the same information**
- **Has a tendency to "evaporate," as rest of industry catches-up with your achievement(s) and the once secret information gradually becomes generally known.**
- **Very difficult to litigate to successful conclusion. Unlike patent, is often not well defined**

Advantages of patent protection:

- **In general, once a patent application has been filed, public disclosure does not affect the patenting process or the patent rights obtained.**
- **With limited exceptions, independent invention is not a defense to infringement**
- **Broad and powerful array of remedies for infringement:**
  - **Reasonable royalty (for Non-Practicing Entity, NPE)**
  - **Lost profits (of patent holder)**
  - **Injunction**
  - **Punitive damages can be awarded for knowing ("willful") infringement.**

Disadvantages of patent protection:

- **Preparation of patent application consumes significant time of a company's most valuable engineering people.**
- **No enforceable rights until a patent is issued**
  - **Typical delay, from filing of patent application to issuance, is 3 to 5 years**
    - **Note: Track 1, available since 2011, can reduce that delay to 1-2 years**
  - **In U.S., rights remain in effect for a period of (typically) 15-19 years, depending upon time to emerge from patent office (in-force period = 20 years – time in patent office)**
- **The "deep pockets problem":**
  - **Patent litigation is extremely expensive, 5M$-15M$ legal fees is not unusual**
  - **There must be a "deep pocket" stakeholder, capable of financing enforcement**
  - **Patent must cover a sufficiently valuable market, at least potentially, to justify obtaining**

Patent Process

Examination and Enforcement

- Infringement Actions in Federal Courts
- Validity Challenges at PTAB (IPR's)
- Patent Drafting and Prosecution
- Former Examiner (6 Years)

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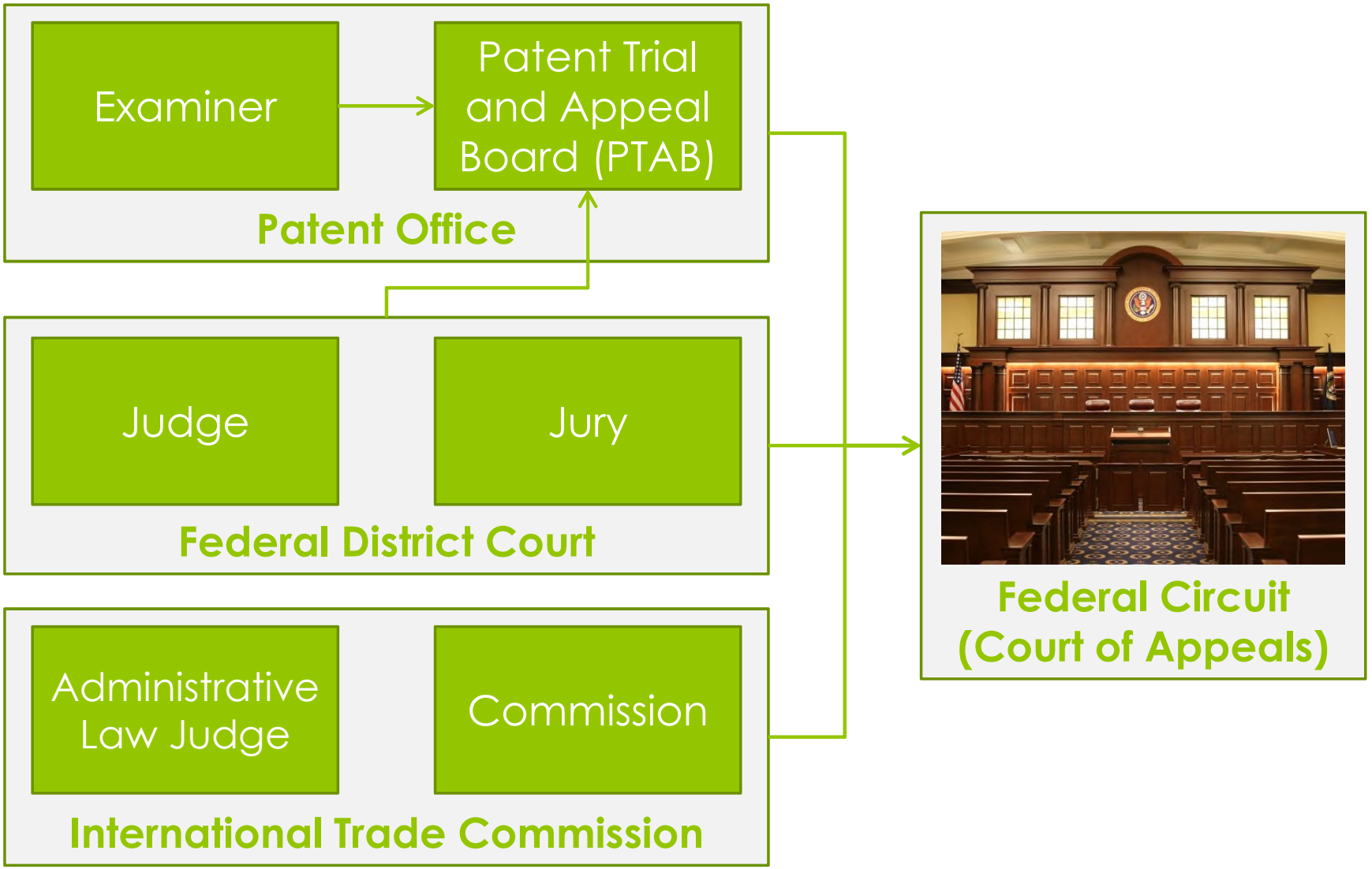
Patent Forums



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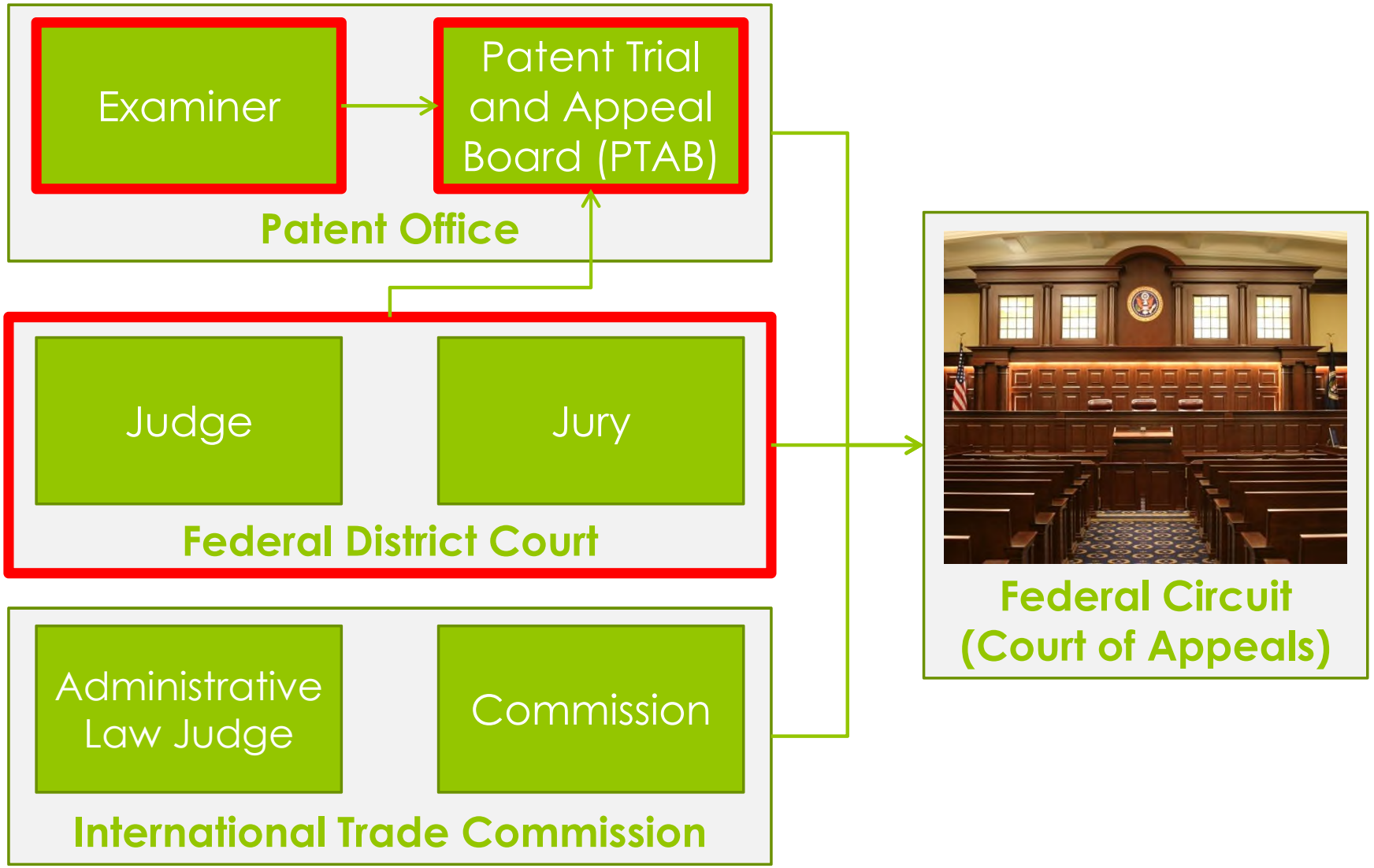

Examination

- Application docketed to Examiner
- Examiner searches for prior art, issues Office Action
- Applicant and Examiner negotiate – in papers and calls
- Process concludes at allowance or abandonment

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/749,300	01/31/2018	Aneta VULGARAKIS FELJAN	3602-1597US1	2449

6449 7590 10/01/2019
ROTHWELL, FIGG, ERNST & MANBECK, P.C.
607 14TH STREET, N.W.
SUITE 800
WASHINGTON, DC 20005

EXAMINER	
AHSAN, UMAIR	
ART UNIT	PAPER NUMBER
2645	
NOTIFICATION DATE	DELIVERY MODE
10/01/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Examination

- Prior art is information (documents, products, etc.) that pre-dates the filing date of the subject application
- US law provides an exception for disclosures made by the inventor
- File early – consider filing before pitches, conferences, product launches, SBIR proposals / funding agreements

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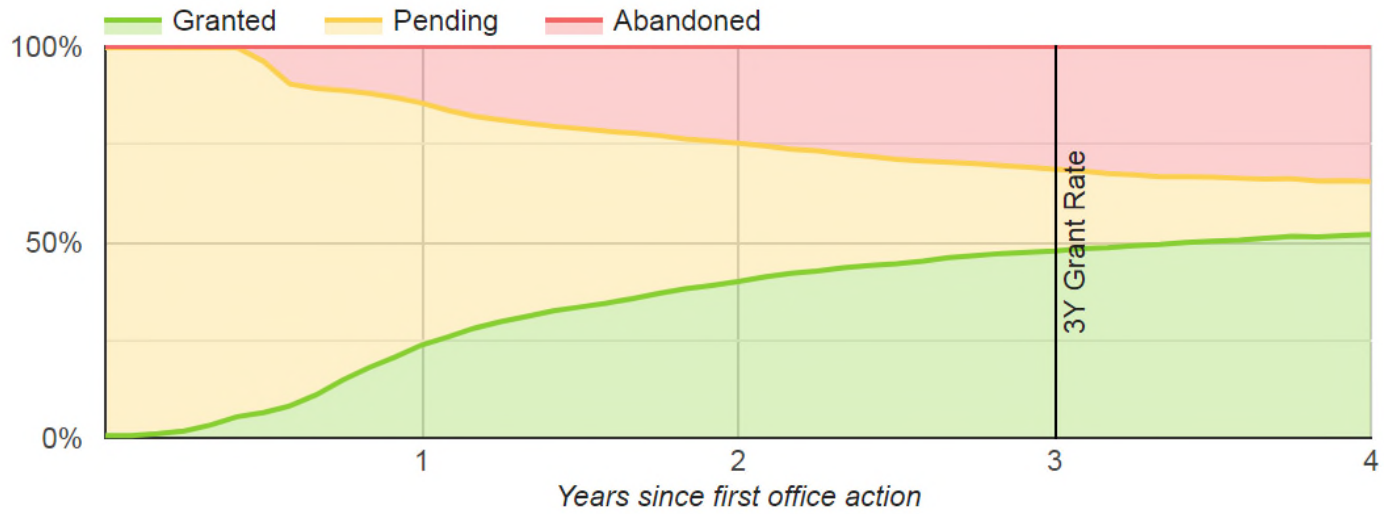
Examination

Grant Rate Timeline

Below is the grant rate timeline for Art Unit 3771, where the timeline is relative to the date of the first office action. The three-year grant rate is the percentage of applications granted at three years after the first office action.



https://www.patentbots.com/stats/art-unit/3771

Examination

Factors affecting timeline / cost:

- Examiner tendencies
- Applicant effectiveness
- Content of specification

Examiner A – AU 3771

Grant Rate and Difficulty Ranking

3-Year Grant rate:	76% over 238 cases
Difficulty:	Easier
Difficulty Percentile:	31st 

Examiner B – AU 3771

Grant Rate and Difficulty Ranking

3-Year Grant rate:	29% over 157 cases
Difficulty:	Very Hard
Difficulty Percentile:	86th 

https://www.patentbots.com/stats/art-unit/3771

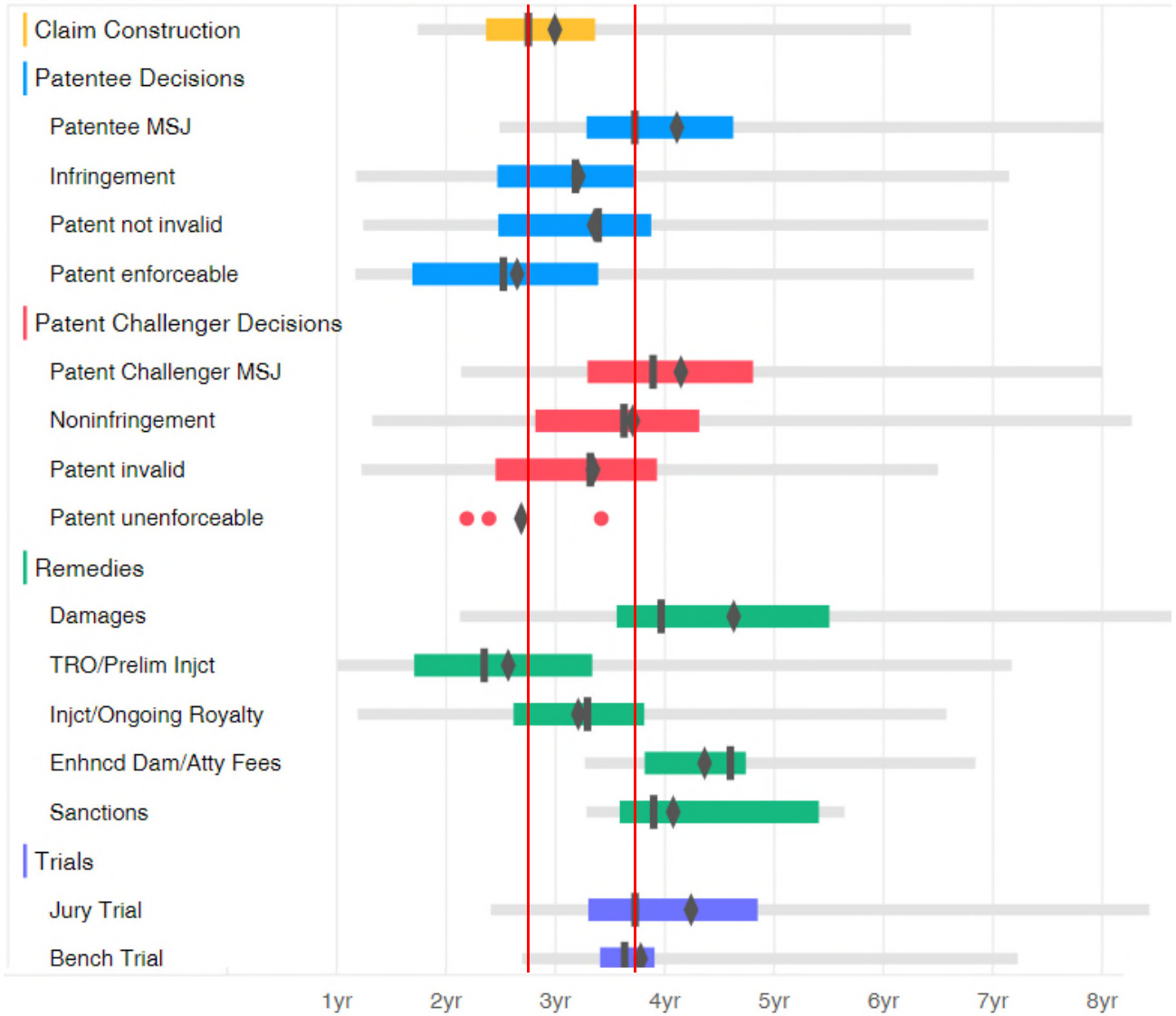
Federal District Court

- Enforcement action brought in district court
- Remedies: damages, injunction
- Issues litigated:
  - Infringement
  - Validity
  - Willfulness
  - Damages

District of Delaware

Remedies	
High	$2,540,000,000
Low	$39
Average	$37,477,415
Determinations	
Infringed	1202
Not unenforceable	478
Not invalid	1429
Not infringed	936
Unenforceable	32
Invalid	736

District of Delaware - Timeline



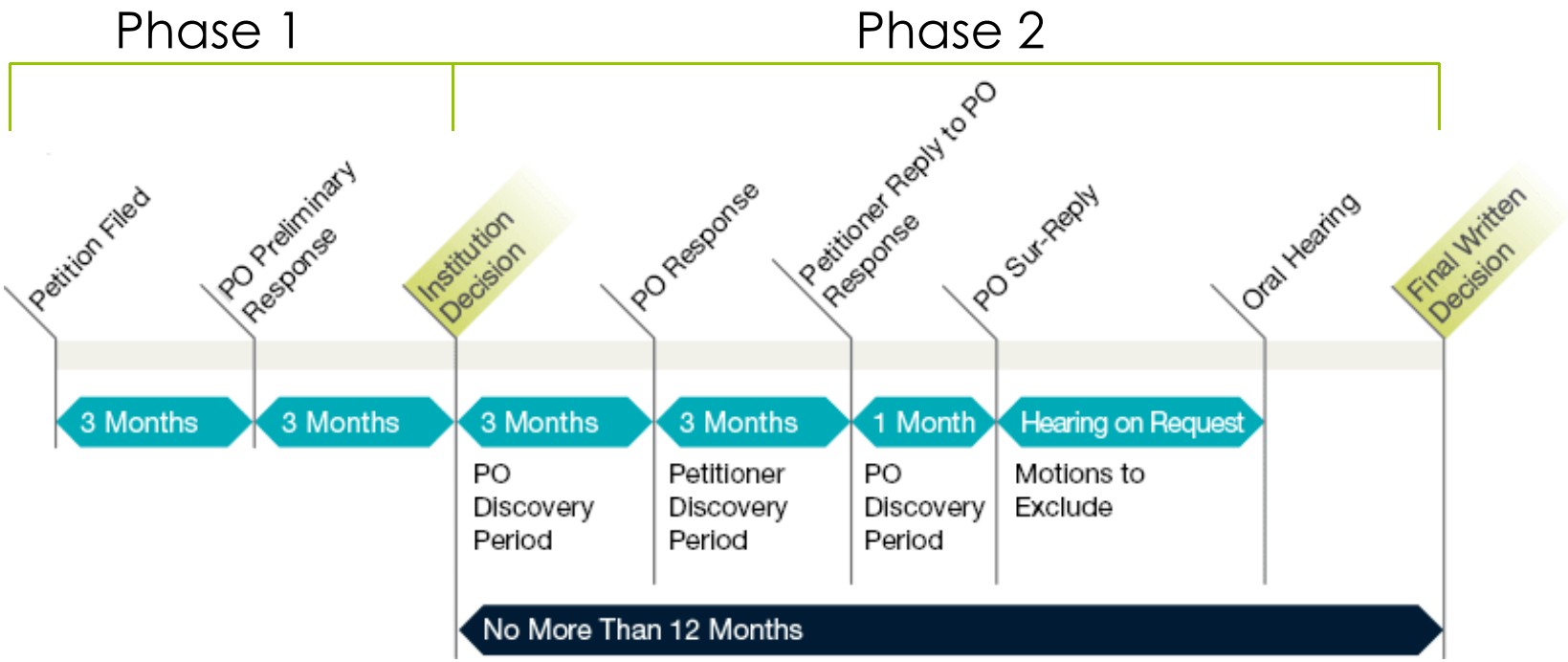
Litigation Finance

- Contingency fee arrangement
  - Law firm finances cost of litigation
- Finance company
  - Investor finances cost of litigation
- Availability of funding depends on damages and likelihood of prevailing

PTAB – Inter Partes Review

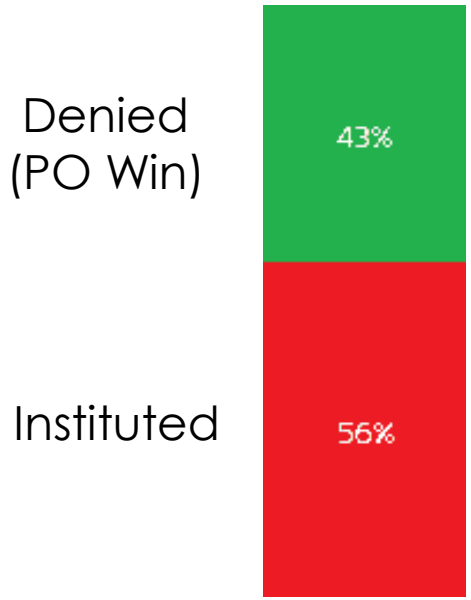
- Challenger asks PTAB to evaluate patentability of issued patent
- Shifts novelty and obviousness decision from jury to Administrative Patent Judges

IPR - Timeline



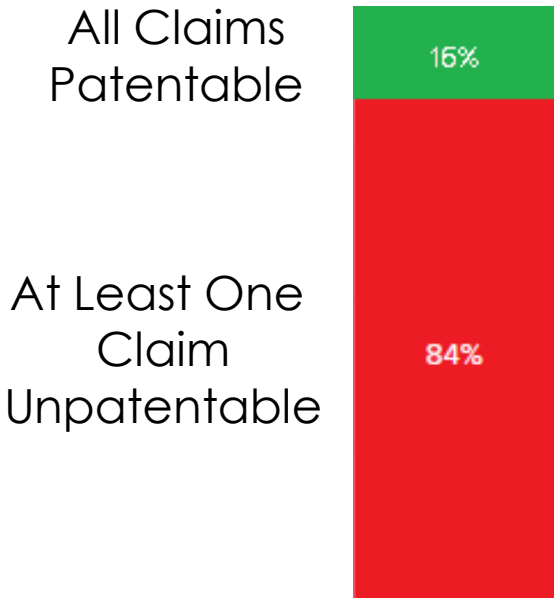
IPR - Statistics

Phase 1
Institution Decision



2019 - YTD

Phase 2
Final Written Decision



2019 - YTD

IPR – Types of Arguments

- Procedural
  - Petition rehashes issues considered by Examiner
  - Follow-on Petition unfairly benefits by previewing PO's arguments
  - New arguments raised in Reply
- Merits
  - Elements not explicitly disclosed & failure to show inherency
  - Reliance on expert testimony for missing element
  - Failure to develop obviousness rationale