

Introduction to US Intellectual Property Day 1

Henry Biggs
Washington University
(St Louis)

hbiggs@wustl.edu

henrypbiggs@gmail.com

May 21 2025

SLOVENIA

My Introduction (your 3+ questions!)

1. Background:

- Associate Dean, Washington University
- Adjunct Law Professor, Washington University
- Adjunct Linguistics Professor, Washington University
- General Counsel, Eusabian Software Development

2. Education:

- BA Harvard, Classics (Latin)
- PhD, UCLA 1995
- JD, LLM in Intellectual Property, Saint Louis U 2011, Wash U, 2013
- M2, Paris-Dauphine, 2012

3. Languages:

- French, German, Italian, English

4. Fun Facts:

- Loooove cheese, like anchovies!
- Run marathons, swam the English Channel

5. Things you are afraid of:

- Heights!

Your Background

- 1. Name
- 2. Education
- 3. Languages
- 4. One thing about you NOT found on your résumé



Class Structure



- Discussion, Question-Answer
 - Gentler Socratic Method
 - Education as negative commodity
 - Once you buy it, you are happy to get less!
- Revisions, focused repetition is key to retention
- Occasional small group discussions
- And we will also - mercifully - take a pause at the hour (:

Introduction to Fundamentals of U.S. Intellectual Property

- Patents
- Trademarks
- Copyright
- Trade Secrets (if time available)
- Geographical Indications
- Traditional Knowledge (TK), Traditional Cultural Expressions (TCE), & paying back an entire culture

Brief Excursis:
Understanding US
Common Law



How would YOU say
the Common Law system works?

2nd difference: judges

Common law

- Judge and jury
- trial dominated by lawyers with judge as referee

Civil law

- One or a panel of judges
- Judge actively participates in seeking of evidence and examining of witnesses



A wooden gavel with a dark handle and a light-colored head, resting on a stack of US dollar bills. The bills are fanned out, showing various denominations including \$100, \$50, and \$20. The background is a dark, textured surface.

Who pays the legal fees?

U.K.?

U.S.?

Other forms of Settlement

1. Mediation
2. Arbitration
3. Negotiation

Settlement- U.K. v. U.S.?

U.K. - potentially penalized if you do
not try and negotiate



Juries and Big Business

Would you as an attorney
for a big company
ask for a jury?

US Common Law Cycle

- Legislators write statutes
- Judges apply and interpret those statutes, and in doing so, ultimately make new law and policy
- RESTATEMENTS!
- If legislators do not like the interpretation, they write new statutes

US Common Law Cycle

- Over time, these are bound up in what are called Restatements
 - Restatements summarize the general trends of interpretations of judges on statutes all across the country
- What are restatements?

Civil Law v. Common Law

Civil Law v. Criminal Law

1. *The system of law predominant on the European continent, historically influenced by that of ancient Rome and Napoleon.*
2. *The system of law concerned with private relations between members of a community rather than criminal, military, or religious affairs.*

Civil Law

- *A system of law whose most prevalent feature is that its core principles are codified into a referable system which serves as the primary source of law.*



What is the difference between
property and Intellectual Property?



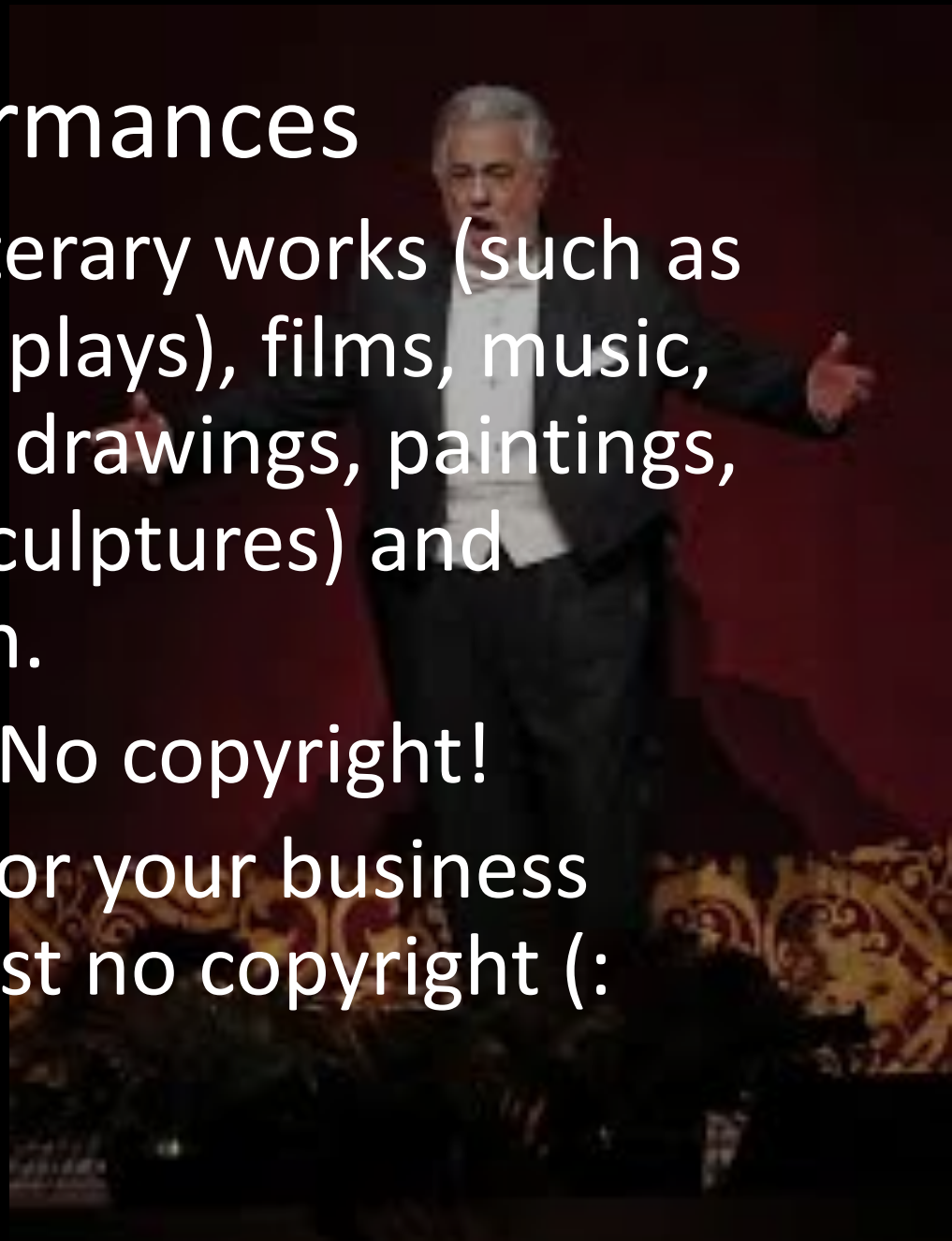
- Intellectual Property refers to ***creations of the mind*** -- intangible property that is NOT therefore exclusive or exhaustive.
- For example:
 - (1) Inventions; literary and artistic works; and
 - (2) symbols, names and images used in commerce.
- To motivate these creations we give the creators **Limited/unlimited monopolies**

Industrial Property

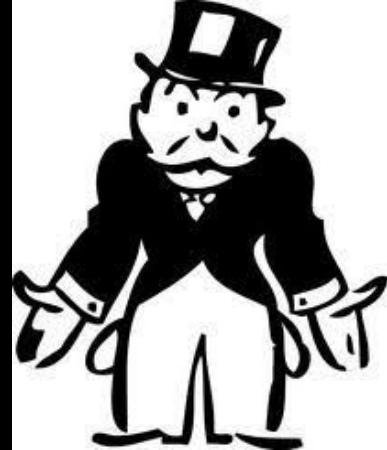
- Intellectual property is divided into two categories:
- 1. **Industrial Property** which includes patents for inventions, trademarks, industrial designs and geographical indications (trademarks on steroids!).

Performances

- Copyright covers literary works (such as novels, poems and plays), films, music, artistic works (e.g., drawings, paintings, photographs and sculptures) and architectural design.
 - Titles to books? No copyright!
 - Computer code for your business software? Almost no copyright (:

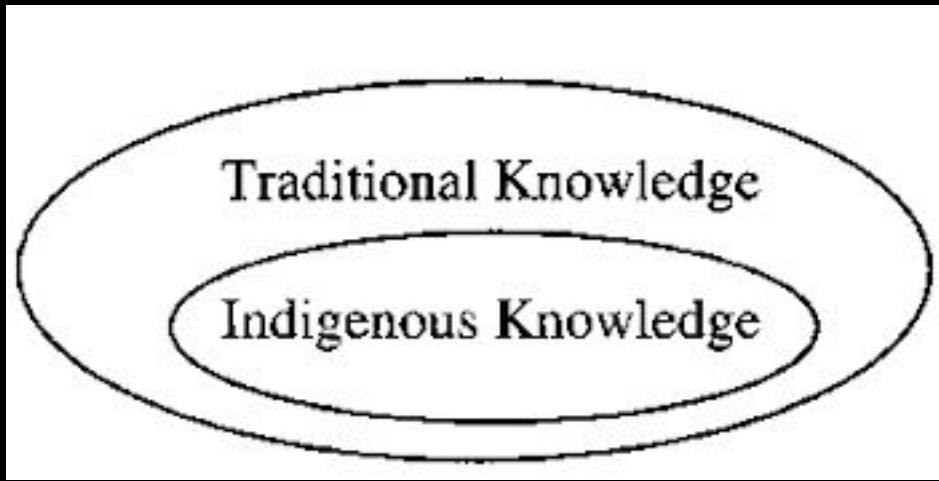


Definitions



- The Product
 - Intangible property that is the result of creativity, such as patents, copyrights...
 - Not exclusive – several may own at once
 - Do you think trademarks are creative?
- The Protection:
 - Limited Monopoly
 - Write to exclude for any reason or no reason

Exception?



Traditional Cultural Expressions (TCE)

Contributory Sharing

Where does US Intellectual Property Law Come From?



Focusing on U.S. Constitutional Mandates

Article I, Clause 8, Section 8

- Congress shall have the power :
 - *To promote the Progress of Science (thought) and useful Arts (technology), by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries (monopoly)*
 - ***MONOPOLY! Huge business advantage***

Limited Monopolies



For Writings (~copyright) and
Discoveries (~patents)

Copyrights and Patents

- The Constitutional mandate therefore must be that protections and laws will promote or further promote the sciences and the arts
- If they are for justice, fairness or protection, or any other rationale, the constitutional mandate is compromised

Trademarks



U.S. Commerce Clause

- Article I, Section 8, Clause 3:
- Gives Congress the power...
 - *“to regulate commerce with foreign nations, and among the several states, and with the Indian tribes.”*
 - *Are Indian (Native American) tribes distinct from U.S. law?*
 - *Casinos, Cigarette sales, etc on Native American*

The phenomenon of Trademark Genericide

Genericide: Overuse of a Trademark

1. Escalator
2. Elevator
3. Zipper

Close?

1. Google?
2. Xerox?
3. Velcro?
4. Video -

Trade Secrets

Commerce Law?

“to regulate commerce with foreign nations, and among the several states, and with the Indian tribes.”

Constitutional Mandate?



- Made federal law, model act in 2016, Individual State laws, modeled after **Uniform Trade Secrets Act (UTSA)**

Famous Trade Secrets – a business decision/gamble

- Coca Cola Recipe
- Google's algorithm
- Thomas English Muffins



- Why Trade Secrets and Not Patents?

FUNDAMENTAL RULES FOR IP

US Patent: Elements Importance for Business

First to File / First to Invent

- If your invention happened in 2011 or after, you must be first to file rather than first to invent.
 - America Invents Act
- What are the advantages of first to file? First to invent?

§ 101 Patentable Subject Matter

- To be patent eligible subject matter, an invention must fall within one of the four statutory categories of acceptable subject matter:
- (1) process, (2) machine, (3) manufacture, or (4) composition of matter.

Computers

- What if you wrote a computer program that allowed the variables to be input and gave you the correct output? That's a process no?
- What if that computer program were part of another patent you were petitioning?
- Could you make it a trade secret? How? Why?

§101 Patentable Subject Matter

- Second, it must not be directed to subject matter encompassing a judicially recognized exception:
- (1) laws of nature, (2) physical phenomena, and (3) abstract ideas.
 - Could they alternatively function in some way as trade secrets? How?

Physical Phenomena

- Earthquakes
- Plant Growth !
- Hurricanes
- Northern Lights - L'aurore boréale

Laws of Nature / Abstract Ideas

- Force = Mass * Acceleration?
- Pythagorean Theorem? $A^2 + B^2 = C^2$?
- $E = MC^2$?
- Justice? Peace?

But - as Trade Secrets?

Also USC 101 - Utility

The Office must examine each application to ensure compliance with the “useful invention” or utility requirement of 35 U.S.C. 101.

Utility USC 101

IV. UTILITY

A claimed invention must be useful or have a utility that is specific, substantial and credible.

A rejection on the ground of lack of utility is appropriate when

(1) it is not apparent why the invention is “useful” because applicant has failed to identify any specific and substantial utility and there is no well established utility, or

(2) an assertion of specific and substantial utility for the invention is not credible. Such a rejection can include the more specific grounds of inoperativeness, such as inventions involving perpetual motion.

“Morally Questionable” Patents OK for Utility

A rejection under [35 U.S.C. 101](#) for lack of utility should NOT be based on grounds that the invention is frivolous, fraudulent or against public policy. See *Juicy Whip* →

Juicy Whip Inc. v. Orange Bang Inc.

- *"[Y]ears ago courts invalidated patents on gambling devices on the ground that they were immoral..., but that is no longer the law...Congress never intended that the patent laws should displace the police powers of the States, meaning by that term those powers by which the health, good order, peace and general welfare of the community are promoted..."*
- *...we find no basis in section 101 to hold that inventions can be ruled unpatentable for lack of utility simply because they have the capacity to fool some members of the public."*

Novelty §102

- The claimed invention cannot have been:
 1. Already patented
 2. Described in a printed publication
 3. In public use, on sale, or otherwise available to the public

Nonobviousness (§103) (Intl: “Inventive step”)

- An invention that would have been obvious to a person of ordinary skill at the time of the invention is not patentable (POSITA).
- Is some part of your business process new but fairly obvious?

the POSITA/PHOSITA

- Why is a POSITA the necessary standard
- Person of Ordinary Skill In The Art
 - What does that mean?

Hindsight Bias

BEFORE EXAM

I feel I should study these topics. These might be asked in exam.



AFTER EXAM

I knew that question will come in the exam, I should have studied it



261



2

How to Prevent Hindsight Bias for Judging Nonobviousness

- Periodicals
- Evidence that much effort has been made with no solution
- Can you think of some things that we take for granted now, that were impossible to imagine 30 years ago? 50 years ago? 100 years ago?
- Get it right so you do not waste your company's time!

Duration of Protection:
20 years

Challenges:
Patent Trolls
(Non practicing Entities)
NPEs

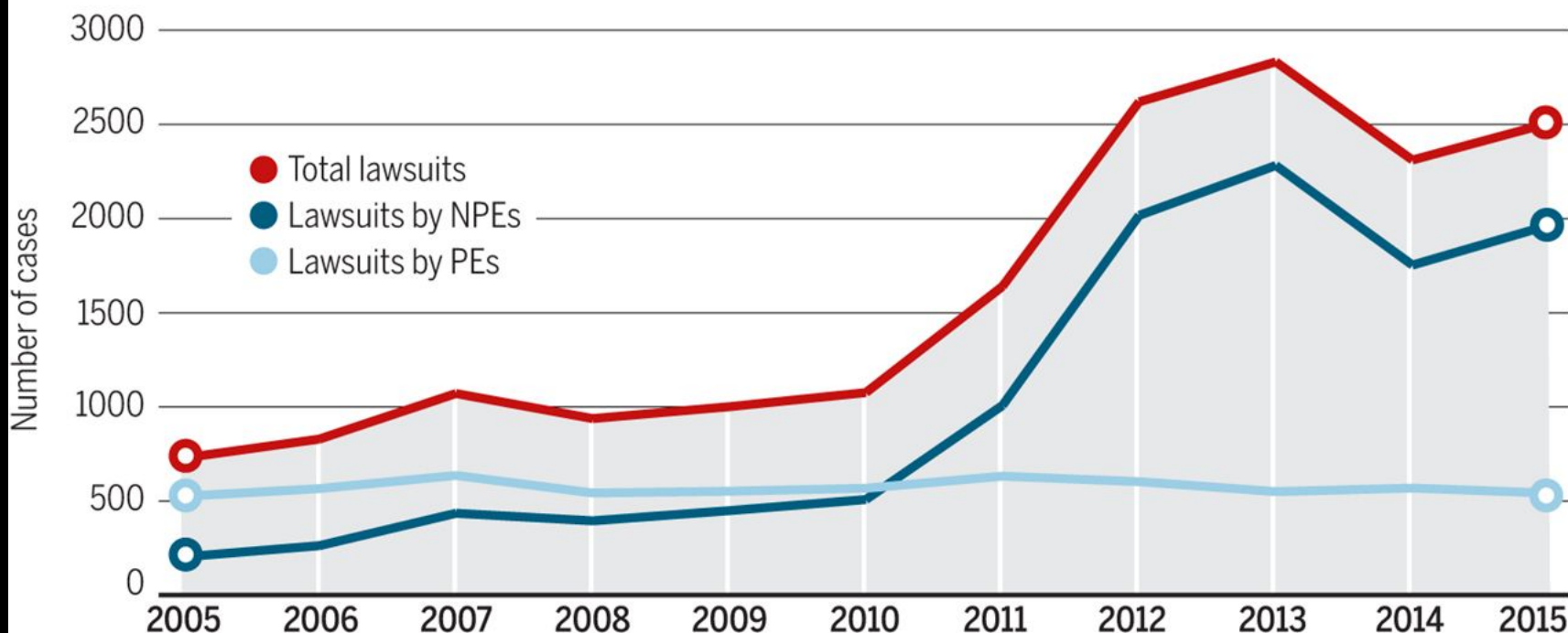


What is a Patent Troll or NPE?

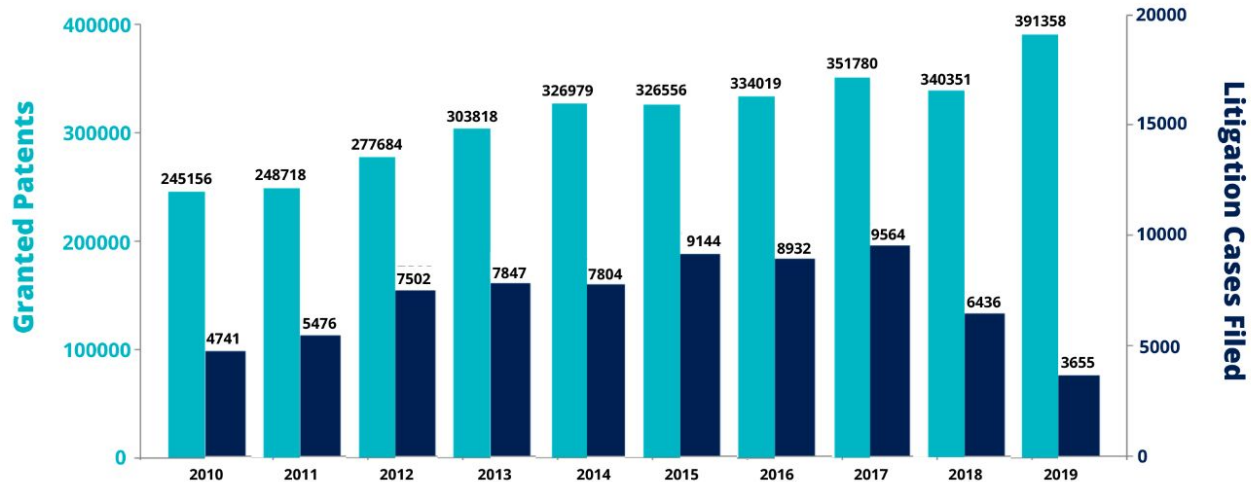
Patent Litigation 2015

Recent trends in patent litigation

NPE, PE, and total patent litigation against publicly traded firms, 2005–2015. Data derived from public filings [Public Access to Court Records (PACER)]. See SM for data and methods.

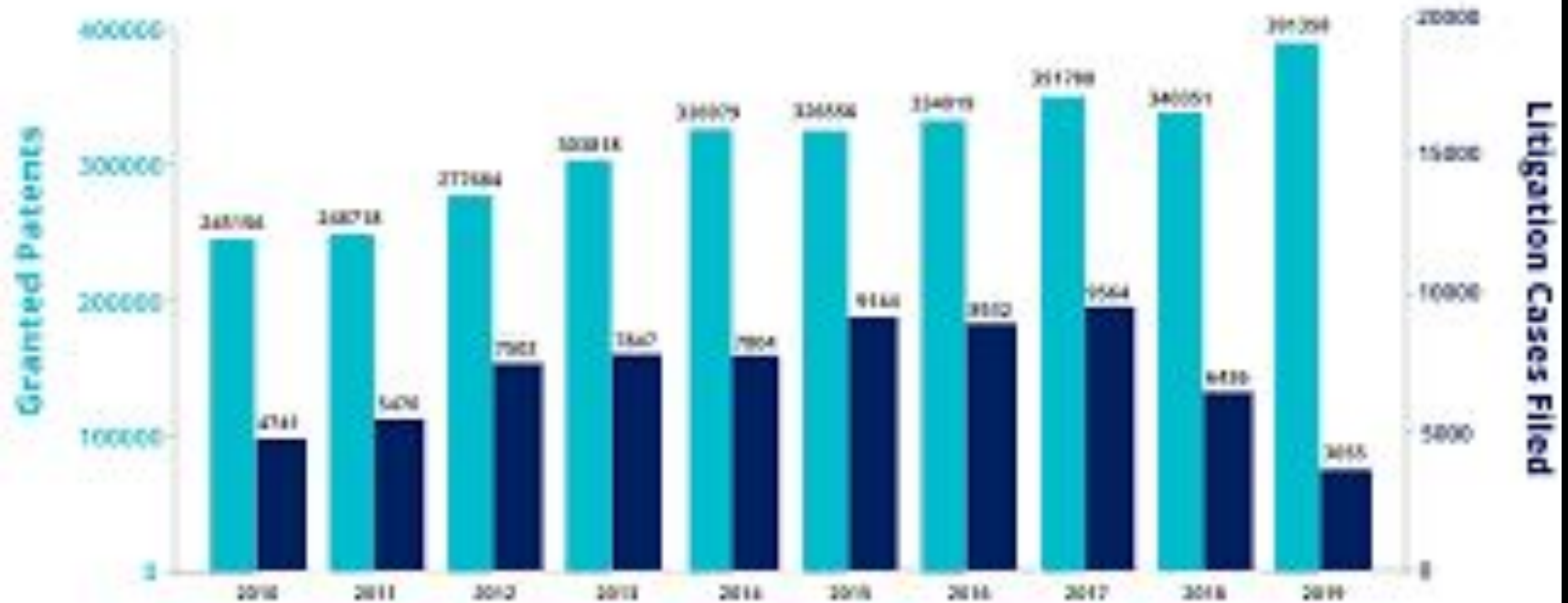


the LOT Network effect?



Litigation data is demonstrating a declining pattern particularly after 2017 while the number of granted patents at USPTO has been increasing for a long time. The decline after 2017 could be a direct result of LOT Network, an initiative of Canon, Google, and Red Hat-led in 2014.

Litigation through 2019



Do Patent Trolls Promote the Progress of Science?

- Article I, Clause 8, Section 8 -
 - Congress shall have the power :
- *To **promote the Progress of Science (thought) and useful Arts (technology)**, ...by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries (monopoly)*
 - Does Patent Law Litigation “promote the progress of the Arts and Sciences”?

Ebay v. MercExchange (2006)

What is Ebay?
Have you ever used it?

Ebay v. MercExchange

- Online auction site eBay uses practices in its online auction technology for which MercExchange owns patents for over 30 percent of the company's business.
- In 2000, eBay initiated negotiations to outright purchase MercExchange's online auction patent portfolio.

Ebay v. Merc Exchange (cont)

- When eBay abandoned its effort, MercExchange sued eBay for patent infringement and prevailed in a 2003 Virginia jury trial, which found eBay had willfully infringed the MercExchange's patents and ordered a payment of nearly \$30 million in damages.

Ebay v. MercExchange (cont)

- Following the verdict, MercExchange sought an injunction to prevent eBay's continued use of its intellectual property, but the District Court denied the request.

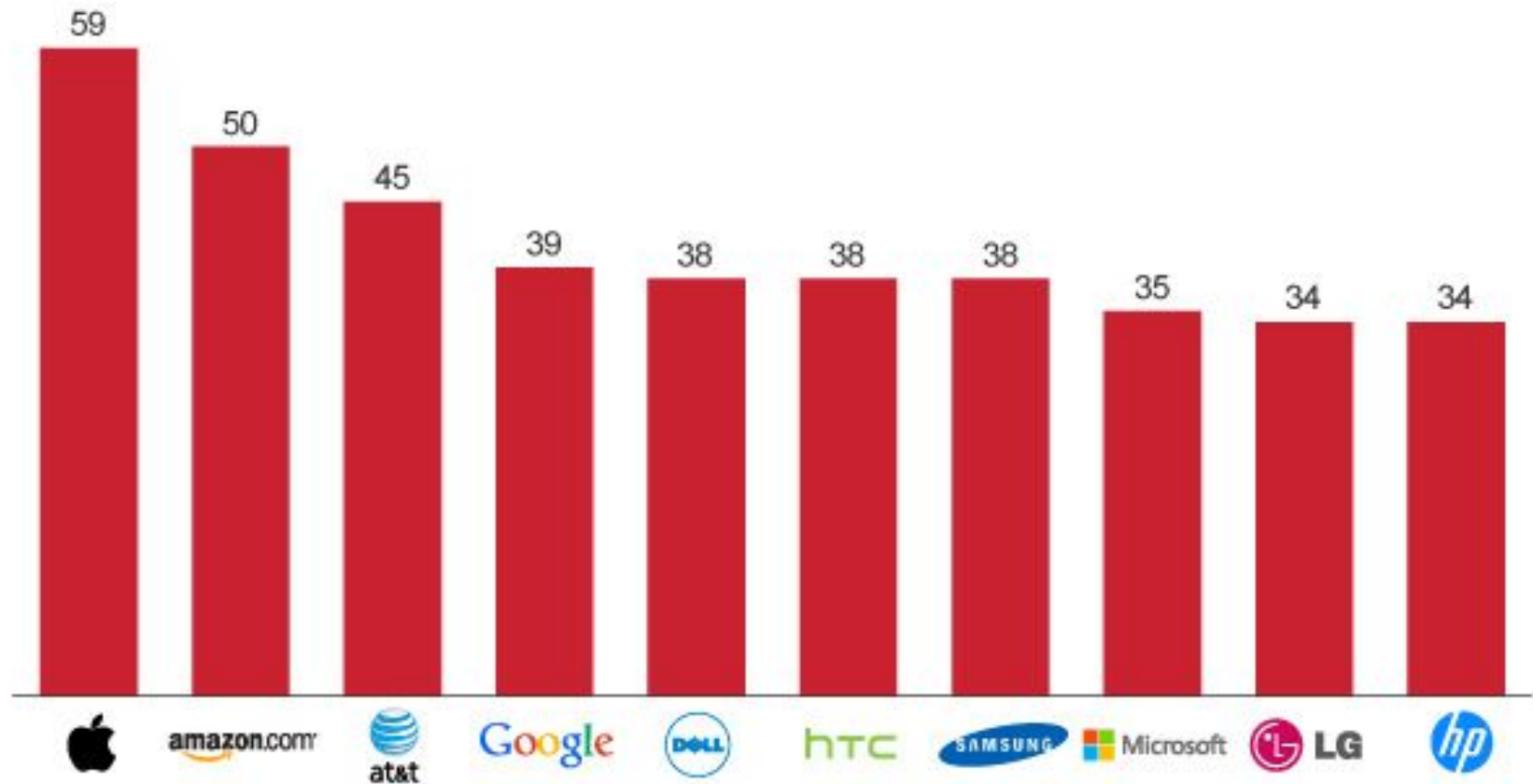
Ebay v. MercExchange

(4 factor Injunction Test)

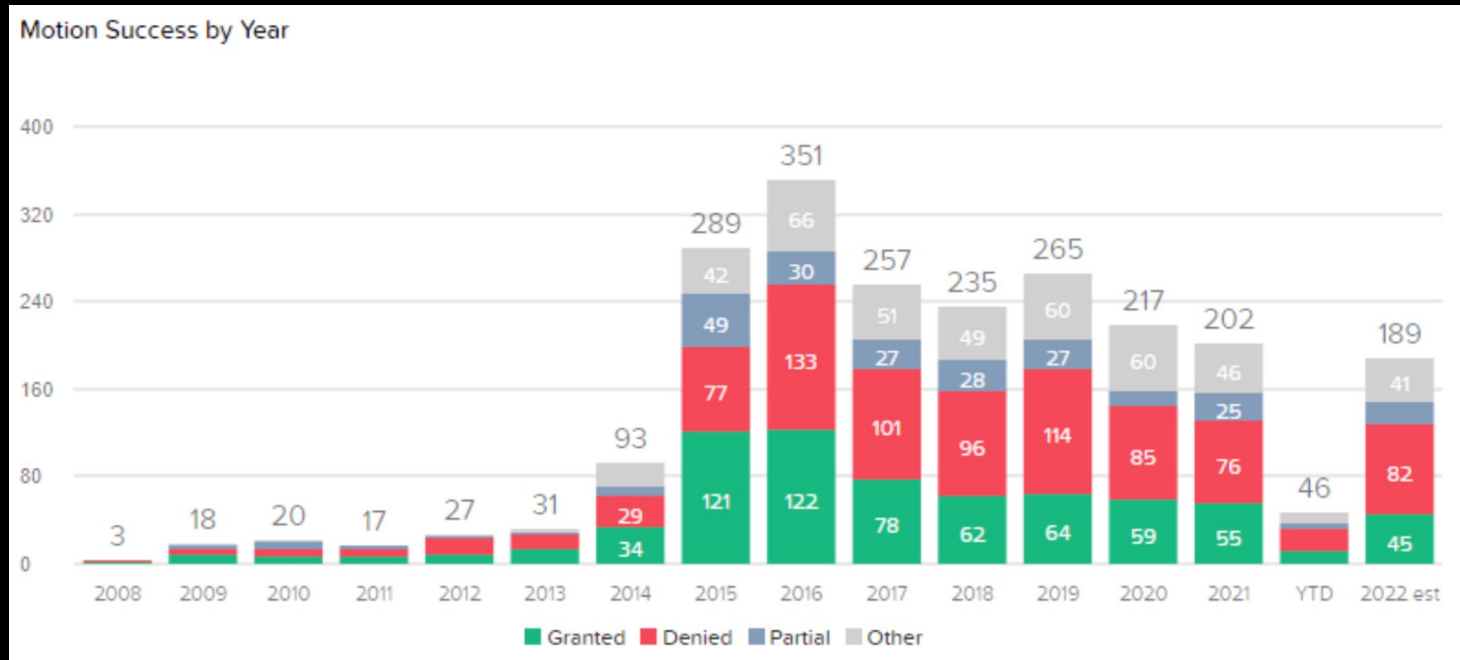
- (1) that it has suffered an irreparable injury;
- (2) that remedies available at law are inadequate to compensate for that injury;
- (3) that considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and
- (4) that the public interest would not be disserved by a permanent injunction.

Who sues the most?

Who Sues? (2013)



Total Patent Motions (2022)



Patent Case Law

Patent Case law

- **Patentable Subject Matter**
 - *Diamond v. Chakrabarty*
- **Utility or Industrial Application**
 - *Diamond v. Diehr*
- **Novelty**
 - *Rosaire v. National Lead Co*
- **Nonobviousness or Inventive Step**
 - *Graham v. Deere*

Patentable Subject Matter

Diamond v. Chakrabarty

- Any of you interested in pursuing business in the area of science?
 - Title 35 U.S.C. 101 provides for the issuance of a patent to a person who invents or discovers "any" new and useful "manufacture" or "composition of matter."
 - Chakrabarty filed a patent application relating to his invention of a human-made, genetically engineered bacterium capable of breaking down crude oil, a property which is possessed by no naturally occurring bacteria.
 - Useful? Nonobvious? Novel?

Diamond v. Chakrabarty

- Patent office rejected – why?
- Patent Office Board of Appeals Affirmed
- Court of Customs and Patent Appeals Reversed– Why?
- Supreme Court Affirmed

Diamond v. Chakrabarty



- Court of Customs and Patent Appeals:
 - The Court of Customs and Patent Appeals reversed, concluding that the fact that micro-organisms are alive is without legal significance for purposes of the patent law.
- Supreme Court
 - A live, human-made micro-organism is patentable subject matter under 101.
 - Respondent's micro-organism constitutes a "manufacture" or "composition of matter" within that statute.

Utility or Industrial Application

Diamond v. Diehr

- Addressed the issue of converting rubber into cured precision products (mainly tires).
- While it was possible, by using well-known time, temperature, and cure relationships, to calculate by means of an established mathematical equation when to open the molding press and remove the cured product,
- according to respondents the industry had not been able to measure precisely the temperature inside the press, thus making it difficult to make the necessary computations to determine the proper cure time.

Diamond v. Diehr

The rare algorithm that becomes part of a patent!

- Respondents characterized their contribution to the art to reside in the process of constantly measuring the temperature inside the mold and feeding the temperature measurements into a computer that repeatedly recalculates the cure time by use of the mathematical equation and then signals a device to open the press at the proper time.

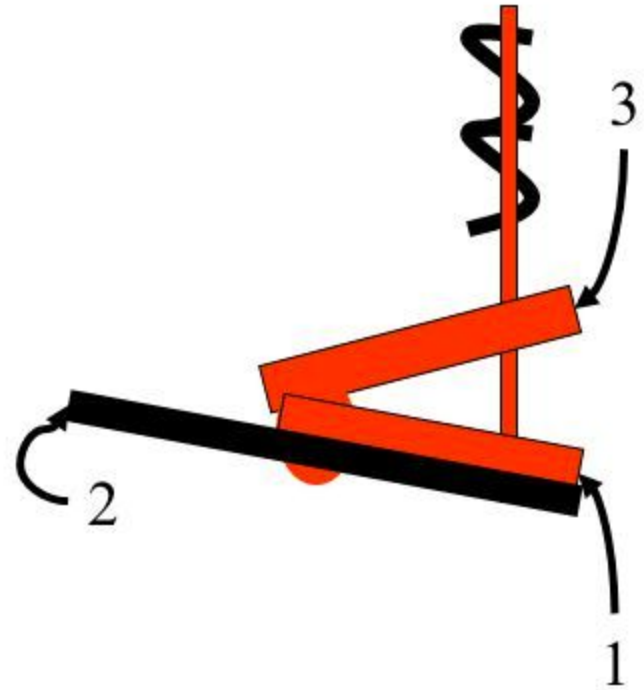
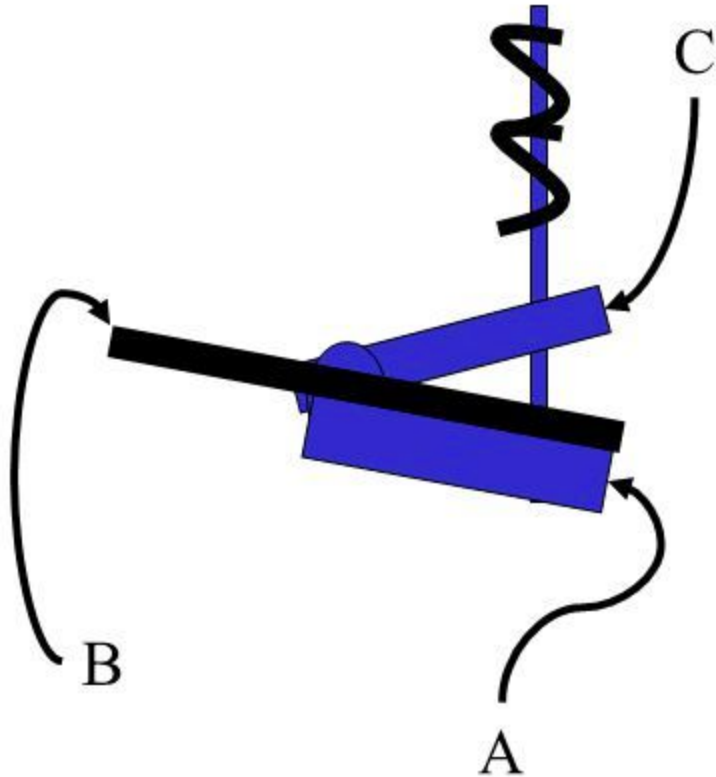
Diamond v. Diehr

- The patent examiner rejected respondents' claims on the ground that they were drawn to nonstatutory subject matter under 35 U.S.C. 101, which provides for the issuance of patents to:
 - *"[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof"* The Patent and Trademark Office Board of Appeals agreed, but the Court of Customs and Patent Appeals reversed.

Nonobviousness
Graham v. Deere

Graham v. John Deere

Is it obvious to move the hinge plate from position A under the shank to position 1 above the shank?



Nonobviousness or Inventive Step

Graham v. Deere

- Petitioners sued for infringement of a patent, consisting of a combination of old mechanical elements, for a device designed to absorb shock from plow shanks in rocky soil to prevent damage to the plow.
- the Fifth Circuit held the patent valid, ruling that a combination is patentable when it produces an "old result in a cheaper and otherwise more advantageous way."

-

Graham v. Deere

- the Eighth Circuit, however, held that since there was no new result in the combination the patent was invalid.
- Petitioners filed actions declaring invalid respondent's patent relating to a plastic finger sprayer with a "hold-down" cap used as a built-in dispenser for containers with liquids, principally insecticides. By cross-action respondent claimed infringement.

Graham v. Deere

- The District Court and the Court of Appeals sustained the patent.
- Held:
 - The patents do not meet the test of the "nonobvious" nature of the "subject matter sought to be patented" to a **person having ordinary skill in the pertinent art.**

Graham v. Deere

- "[U]nless more ingenuity and skill . . . were required . . . than were possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention. In other words, the improvement is the work of the skillful mechanic, not that of the inventor." At p. 267.

Graham v. Deere

- Certainly a person having ordinary skill in the prior art, given the fact that the flex in the shank could be utilized more effectively if allowed to run the entire length of the shank, would immediately see that this was the thing to do.

Graham v. Deere

- In other words, the stirrup in Glencoe serves exactly the same function as the heel of the hinge plate in '798.
- The mere shifting of the wear point to the heel of the '798 hinge plate from the stirrup of Glencoe - itself a part of the hinge plate - presents no operative mechanical distinctions, much less nonobvious differences.

Nonobvious?
Arkie Lures

Arkie Lures

- Gene Larew, a retired engineer, set out to make a plastisol fishing lure that would have a salty taste for a prolonged period in water, as compared with the salty baits then known.
- In his patent, Larew noted that a striking fish will retain a salty-tasting lure for a longer time, thereby improving the fisherman's chance to set the hook.
-

Arkie Lure v. Larew

- Upon extreme persistence by Mr. Larew the product was eventually produced.
- The first commercial salt-impregnated plastic lure was called the “Gene Larew Salty Frog.”
- It was an immediate commercial success. Arkie Lures copied the Larew lure and, declined Mr. Larew's offer of a license, stating that the addition of salt to a lure was “obvious”.
 - Is it?

Larger Question:
Being a Lawyer
STRICTLY Applying the elements
Assault - The Elements

- (1) The act was intended to cause apprehension of harmful or offensive contact; and
- (2) The act indeed caused reasonable apprehension in the victim that harmful or offensive contact would occur.
- (3) An imminent physical gesture signifying a threat

BATTERY

(Elements)

The prima facie case for battery contains 4 components:

- (1) The defendant acts.
- (2) The defendant intends to cause contact with the victim.
- (3) The defendant's contact with the victim is harmful or offensive.
- (4) The defendant's contact causes the victim to suffer a contact that is harmful or offensive.

Scenario - Assault or Battery

George is looking for Joe who he is sure wants to hurt him. He is walking down the highway.

Joe is driving his car and sees that George is on the other side. George does not see Joe. Joe turns his car around to park and confront Joe and loses control of his vehicle, running into and hurting George. Was their assault? Battery?

Assault - The Elements

- (1) The act was intended to cause apprehension of harmful or offensive contact; and
- (2) The act indeed caused reasonable apprehension in the victim that harmful or offensive contact would occur.
- (3) An imminent physical gesture signifying a threat

Battery - the elements

BATTERY

The prima facie case for battery contains 4 components:

- (1) The defendant acts.
- (2) The defendant intends to cause contact with the victim.
- (3) The defendant's contact with the victim is harmful or offensive.
- (4) The defendant's contact causes the victim to suffer a contact that is harmful or offensive.

Trends and Themes in International Patent Law

- Working with the inventive step
- Defining Scope of those eligible for inventive step:
 - (1) Agriculture
 - (2) Pharmaceuticals

END PATENT LAW