

IEEE-USA New Challenge to Software Patentability

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SOFTWARE AND BUSINESS METHOD PATENTS UNDER ATTACK:

Are software and business method patents a problem?

Yes – they can be.

Over 10,000 patents on a cell phone.

Maybe standards organizations can help.

SOFTWARE AND BUSINESS METHOD PATENTS UNDER ATTACK:

What is the difference between an engine timing system implemented with mechanical cams versus one implemented in software/firmware?

Should one be patentable and the other one not patentable?

SOFTWARE AND BUSINESS METHOD PATENTS UNDER ATTACK:

What about a 4 pound portable defibrillator that enables a 70 year old woman (with no medical training) to save the life of a traveller in an airport?

Most innovation in these devices is delivered via software.

Why shouldn't it be patentable?

SOFTWARE AND BUSINESS METHOD PATENTS UNDER ATTACK:

Enforceable patents can challenge the status quo.

America Invents Act (AIA) eroded grace period features relied on by new entities and startups.

Innovation Act of 2013 would erode enforcement.

ARE SOFTWARE PATENTS BAD, OR ARE THERE BAD SOFTWARE PATENTS?

One size fits all patent system.

Patent validity starts with examination at USPTO – job one quality

Is the mere existence of too many patents on one product justification to take away all property interests?

Who will invest in a business with no property interest?

INTRODUCTION TO INTELLECTUAL PROPERTY LAW

- A. Patents
- B. Trademarks
- C. Copyrights
- D. Trade Secrets
- E. Trade Dress

INTRODUCTION TO INTELLECTUAL PROPERTY LAW

A. Patents

What is a patent?

A grant of a property right by the US Government grounded in the US Constitution (Article 1, Section 8) through the US Patent Office.

“Congress shall have the power ...to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries;”

INTRODUCTION TO INTELLECTUAL PROPERTY LAW

A. Patents - Why do we issue patents?

Patent grant excludes others from making, using or selling.

A patent is a contract with the US Government, an enabling disclosure in exchange for an exclusive right if invention meets the test for patentability.

INTRODUCTION TO INTELLECTUAL PROPERTY LAW

A. Patents – Standard to grant a patent?

Invention is compared against prior art (what is old).

Invention must be: 1) new; 2) useful; and 3) nonobvious.

INTRODUCTION TO INTELLECTUAL PROPERTY LAW

A. Patents – Analogy to deed title

Would you repair an abandoned home in your neighborhood if you did not possess a deed or title?

Would a bank give you a loan to fix up the home?

Why would STEM workers labor over invention with no rights?

INNOVATION, PROPERTY RIGHTS AND BUSINESS GROWTH

- A. Patents are the predominant form of protection for innovation solutions.
- B. Property rights in patents help ensure that capital flows to good ideas.
- C. Businesses need to ensure that innovation property rights are not placed at risk.
 - 1. Employment agreements
 - 2. Non-disclosure agreements (NDAs)
 - 3. Trade secret practices under NEW AIA patent law(s)

INNOVATION, PROPERTY RIGHTS AND BUSINESS GROWTH

- A. Inventorship on patent that is assigned to employer often includes peer recognition/special remuneration for contribution already contemplated under employment agreement.
- B. Employed inventors – Even though inventor rarely shares in commercialization/licensing profits resulting from patent, inventorship shows key inventor attribute that is recognized on resume.
- C. Inventor with ownership interest in patent – can lead to significant remuneration to inventor.
- D. Businesses rely on innovation to impart “creative destruction” (Joseph Schumpeter) – an attribute that usurps business from competitors.

WHY ARE WE SEEING BIG BUSINESS ASSERTING THAT WE NEED TO CHANGE PATENT LAW?

- A. Some patents are of poor quality – resulting from poor agency examination, poor quality of preparation and prosecution, etc.
- B. Some patents are bought by “Texas gunslingers” who assert the patents against legitimate businesses (and who are often actual infringers).
- C. Some fields of technology have a proliferation of patents – cell phones may have 10,000 or more patents related to a device.
- D. Innovative ideas protected with patents and NOT held by a market leader are the biggest threat to the market leader’s business model (see Joseph Schumpeter).

America Invents Act (AIA)

- A. Ushered in first-to-file patent system (March 16, 2013)
- B. Eliminated unequivocal one-year grace period
- C. Provided post-grant review of newly issued patents; as of April 2014, 27 out of 28 IPR challenges invalidated the patent.
- D. Provided challenge to business method patents

Patent Litigation Reform Legislation (e.g. S.1720 et al.)

- A. Purports to end patent litigation abuse of “patent trolls” with bad-faith claims and/or frivolous demand-letters
- B. However, sweeping provisions apply to all patentees and will impair inventor(s) abilities to enforce legitimate claims, as well as increase costs for access to “day in court”
- C. What is needed is a “scalpel” solution that eliminates “Texas gunslingers”, instead of providing sweeping provisions that have the “unintended consequence” of eliminating players in a fairy tale (patent trolls)
- D. “Patent hunters” are multinational entities that most fear “creative destruction” (Joseph Schumpeter)

PATENTABLE SUBJECT MATTER REQUIREMENT (101)

35 USC § 101 Requirement:

Whoever invents or discovers any new and **useful process, machine, manufacture, or composition of matter**, or any new and useful improvement thereof, may obtain **a** patent therefor, subject to the conditions and requirements of this title.

PATENTABLE SUBJECT MATTER REQUIREMENT (101)

35 USC § 101 Requirements:



“A” patent (double patenting).



“Useful”

➤ Subject Matter Eligibility

1) Process

2) Machine

3) Manufacture

4) Composition of Matter

Subject matter eligibility – statutory categories of invention

Process, Machine, Manufacture, or Composition of Matter and Improvements Thereof

Courts have interpreted these categories to exclude:

- 1) Laws of Nature
- 2) Natural Phenomena
- 3) Abstract Ideas

Judicial Exceptions

ALICE V. CLS: BEFORE THE US SUPREME COURT

The patent at issue before the US Supreme Court disclosed a computer-implemented scheme for mitigating “settlement risk” (i.e., the risk that only one party to a financial transaction will pay what it owes) by using a third-party intermediary.

ALICE V. CLS: BEFORE THE US SUPREME COURT

IEEE-USA Intellectual Property Policy Committee – Filed an amicus brief before the US Supreme Court.

<http://www.ieeeusa.org/policy/policy/2014/012814.pdf>

IEEE-USA Policy Page:

<http://www.ieeeusa.org/policy/>

ALICE V. CLS: BEFORE THE US SUPREME COURT

Question before SCOTUS:

Whether computer-implemented inventions are patentable under 35 U.S.C. § 101?

Summary of IEEE-USA amicus brief:

Computer-implemented inventions as a class are too important to deny patent protection. There are nearly 1 million software-related U.S. patents in force today on which the public relies. In this case the Court is asked to decide whether computer-implemented inventions are patentable under 35 U.S.C. § 101. On both legal and technological grounds, IEEE-USA believes the answer is clearly yes.

ALICE V. CLS: BEFORE THE US SUPREME COURT

IEEE-USA submits that phrases such as “software patent” or “patent on software” are technologically inaccurate and misleading. Thus it is necessary to present the technological facts about software-implemented inventions, which the IEEE-USA is uniquely qualified to explain.

ALICE V. CLS: BEFORE THE US SUPREME COURT

...this explanation will make clear why these modern-day inventions are exactly the type of inventions that the patent system was created 224 years ago to protect. See *Bilski v. Kappos*, 130 S.Ct. 3218 (2010) (stating that Section 101 of the U.S. patent law is a “dynamic provision designed to encompass new and unforeseen inventions”).

ALICE V. CLS: IEEE-USA ARGUMENTS

1. The Court's jurisprudence includes recognition that the broad scope of patent eligible subject matter encompasses computer-implemented inventions
2. Computer-implemented inventions that use mathematical algorithms, and/or implement business methods, are like any other real, and physics-based, technology
3. Software is pervasive. Computer-implemented inventions are too important to a 21st century economy to deny patent protection
4. The consequences of a failure to preserve the patent-eligibility of software-implemented solutions are numerous and harmful to our country

ALICE V. CLS: IEEE-USA ARGUMENTS

2. Computer-implemented inventions that use mathematical algorithms, and/or implement business methods, are like any other real, and physics-based, technology
 - A. Equivalence of software and hardware
 - B. The execution of software depends on real, physics-based, processes
 - 1) Every bit of information, stored in a computer, depends on a physical device
 - 2) The special-purpose hardware of general-purpose computers
 - 3) What is “general,” about a general-purpose computer?
 - C. Claim 33 of the '479 patent
 - D. Expect the unexpected

ALICE V. CLS: IEEE-USA ARGUMENTS

APPENDIX

U.S. software-related patents in force

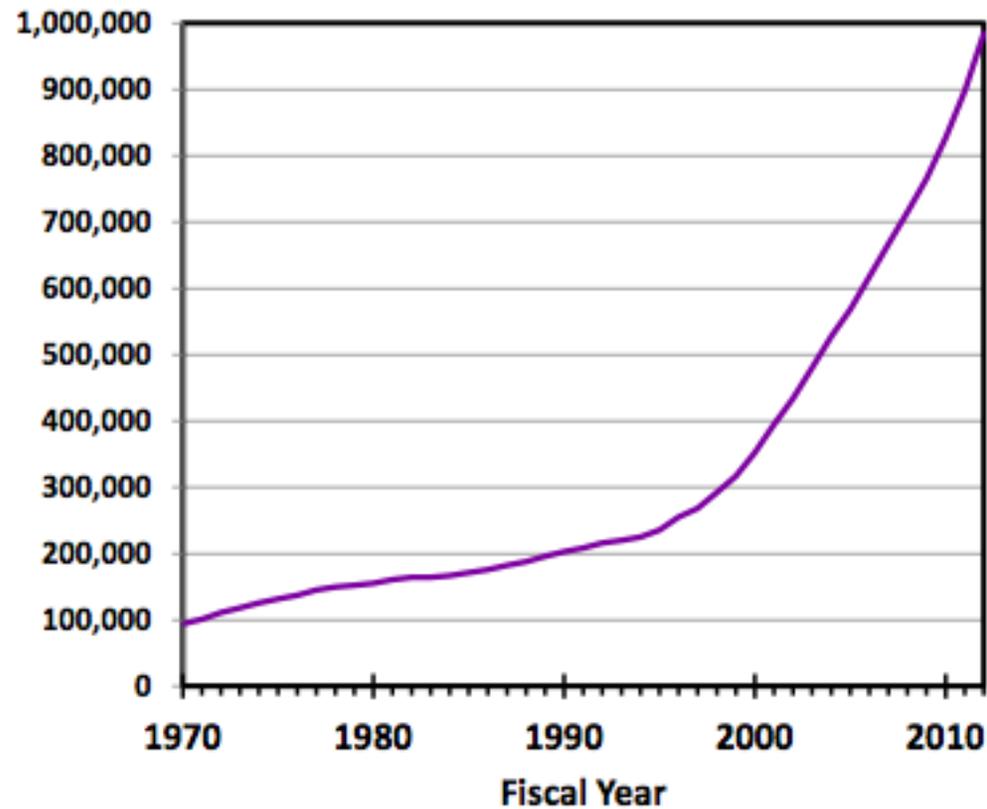


Figure 1

ALICE V. CLS: THE SUPREME COURT SPEAKS

“Software-related” patents were identified using the definitions provided in PTO 2003 at 77 (footnote 7). This definition is based on the US patent classes and subclasses that were determined by PTO experts to contain patent applications or issued patents containing some element of either general purpose software or software that is specific to some form of hardware. This is the same definition used in the GAO 2003 report. Using these classes and subclasses, a search on FeePatentsOnline.com (“FPO Database”) confined to appropriate date ranges produced the counts shown in the attached tables.

ALICE V. CLS: THE SUPREME COURT SPEAKS

“We hold that the claims at issue are drawn to the abstract idea of intermediated settlement, and that merely requiring generic computer implementation fails to transform that abstract idea into a patent-eligible invention.”

“These claims are drawn to the abstract idea of intermediated settlement.”

“In any event, we need not labor to delimit the precise contours of the “abstract ideas” category in this case. It is enough to recognize that there is no meaningful distinction between the concept of risk hedging in *Bilski* and the concept of intermediated settlement at issue here. Both are squarely within the realm of “abstract ideas” as we have used that term.”

...in other words, it is abstract and we won't labor to tell you how to precisely define abstract.

ALICE V. CLS: IEEE-USA COMMENTS ON GUIDELINES

“(W)e urge the PTO to remember that patents are fundamentally about business and about investment in innovation. Uncertainty is bad for business: investment freezes up, and because investment is typically the most constrained resource in innovation, innovation freezes up as well. Thus we urge the PTO to provide as much direction, guidance, and clarity to examiners as possible. As the President urged all agencies in 2007, “Guidance documents, used properly, can channel the discretion of agency employees, increase efficiency, and enhance fairness by providing the public clear notice of the line between permissible and impermissible conduct while ensuring equal treatment of similarly situated parties.”

ALICE V. CLS: IEEE-USA COMMENTS ON GUIDELINES

“The Alice decision itself, while unequivocally supporting the patentability of software, provides very little guidance. IEEE-USA encourages the PTO to take the initiative and show leadership in developing useful and concrete guidance that provides some predictability. Final instructions should be highly prescriptive: they should set forth precise steps and showings that are required, permissible rebuttals by applicants, examples, case studies, and the like. This is not the time for ambiguity.”

”

ALICE V. CLS: IEEE-USA COMMENTS TO GUIDELINES

- 1.1. Any action stating a § 101 subject matter rejection should begin by clearly and precisely identifying the “abstract idea,” “law of nature,” or “natural phenomenon”
- 1.2. Final instructions should restate the necessary characteristics of an “abstract idea”
- 1.3. Final instructions should make clear that the categories of “abstract idea” are not to be freely expanded
- 1.4. Final instructions should clearly state permissible grounds of rebuttal of step one
- 1.5. Final instructions should require clear and explicit written findings in step two
- 1.6. Final instructions should clearly state the bases on which an applicant may rebut step two

ALICE V. CLS: IEEE-USA COMMENTS TO GUIDELINES

1.7. The “improvement” examples drawn from Flook and Benson are not the exclusive bases to rebut step two; they are analogous to the “secondary considerations” to rebut prima facie obviousness that only come into play after a prima facie showing is set forth completely

1.8. Final instructions should clarify that examiners may not combine multiple “abstract ideas” in a claim to eviscerate the remainder of the claim

1.9. Final instructions should remind examiners of the 5-vote plurality in Bilski, that there is no broad proscription against methods of doing business

1.10. Final instructions should make clear that § 101 is not to be intermixed with other statutory requirements

1.11. Final instructions should clarify that step two must consider the claim with the precision and completeness of a § 102 or § 103 analysis

ALICE V. CLS: IEEE-USA COMMENTS TO GUIDELINES

1.12. Final instructions should require careful consideration of all statutory requirements

2. FINAL REJECTION

3. RELEVANT ADMINISTRATIVE LAW AND REGULATORY PRINCIPLES

3.1. Several laws require that the PTO seek to minimize costs and burden on the public

3.2. The Paperwork Reduction Act

3.3. The Final Bulletin on Agency Good Guidance Practices

4. CONCLUSION

ALICE V. CLS: HOW TO PROCEED FORWARD

SCOTUS provided little or no clear guidance.

Federal Circuit is now invalidating most software patents.

USPTO has withdrawn previously issued notices of allowance and is on a course to reject the majority of software patent applications (under 101).

Businesses need to decided how to proceed forward in handing their pending patent applications and securing property interests on new software-based innovations.

ALICE V. CLS: HOW TO PROCEED FORWARD

One major IP organization is recommending that members plan to allocate financial resources to keep their software cases alive for the next 6 years (until SCOTUS rules on a clarifying case, or new legislation is passed). They also recommend prosecuting very narrow claims, in the interim.

Most large corporate law departments, with exposure, are orchestrating strategies for moving forward.

IEEE-USA IPC has a working group that is attempting to discern the problem and come up with a strategy (if it can even be accomplished).

ALICE V. CLS: HOW TO PROCEED FORWARD

ONE EXEMPLARY VIEW ALICE v. CLS :

“Abstract” requires three characteristics are far more stringent than mere novelty under § 102: (a) in actual use, (a) for a *long* time, with (c) *prevalent* breadth of use.

“...the old notion of “abstract,” which turned on “always existing,” mental, and “apart from human activity,” is no longer relevant. What matters in *Alice* is “long prevalent.”

In every mention, SCOTUS deprecates the “machine or transformation test”.

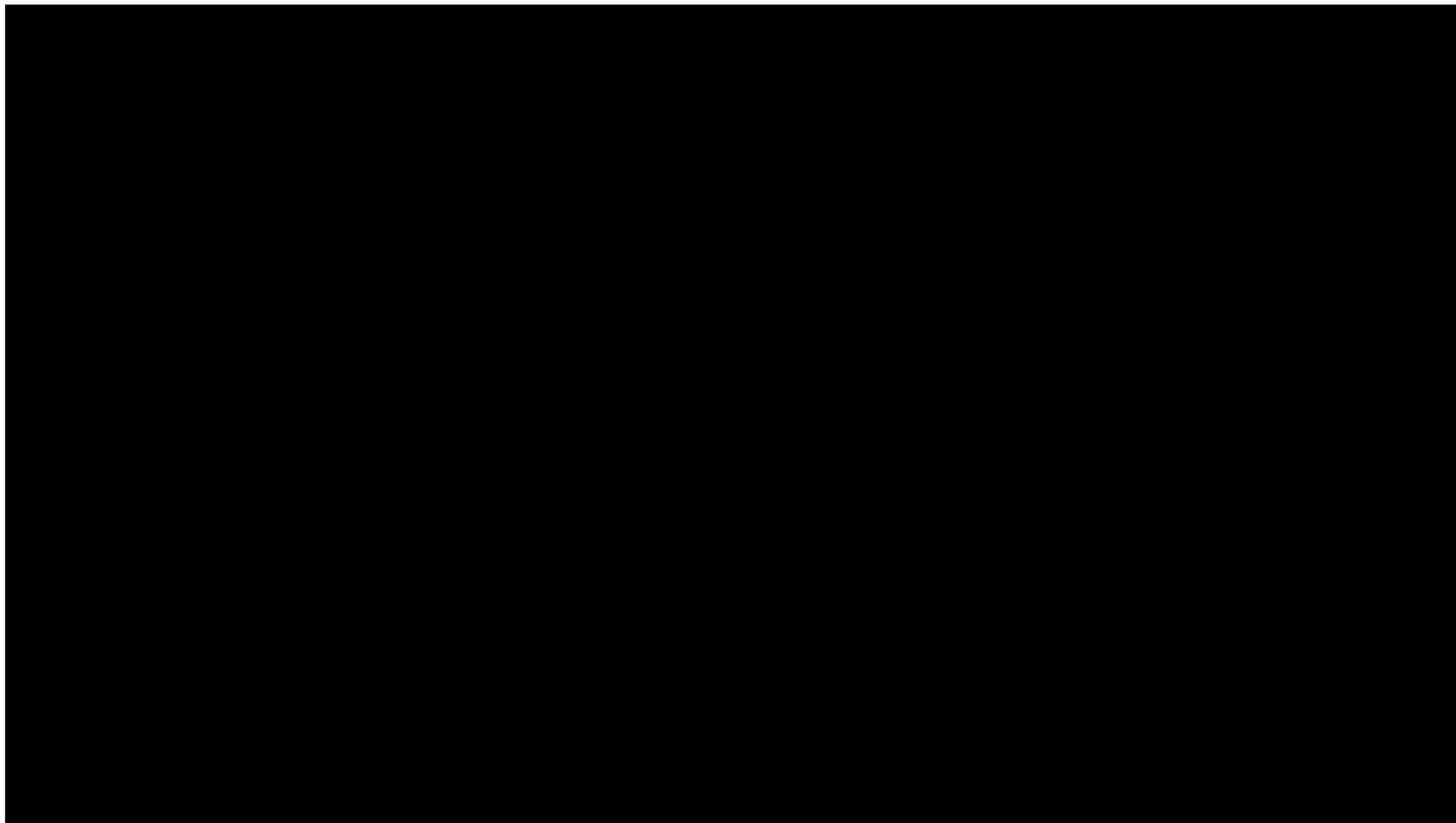
“in use for a long time by a lot of people” (the *Alice* characteristics).

David Boundy, **A Word Means Just What I Choose it to Mean—Abstractness After a Trip with *Alice* Through the Looking Glass** (draft paper)

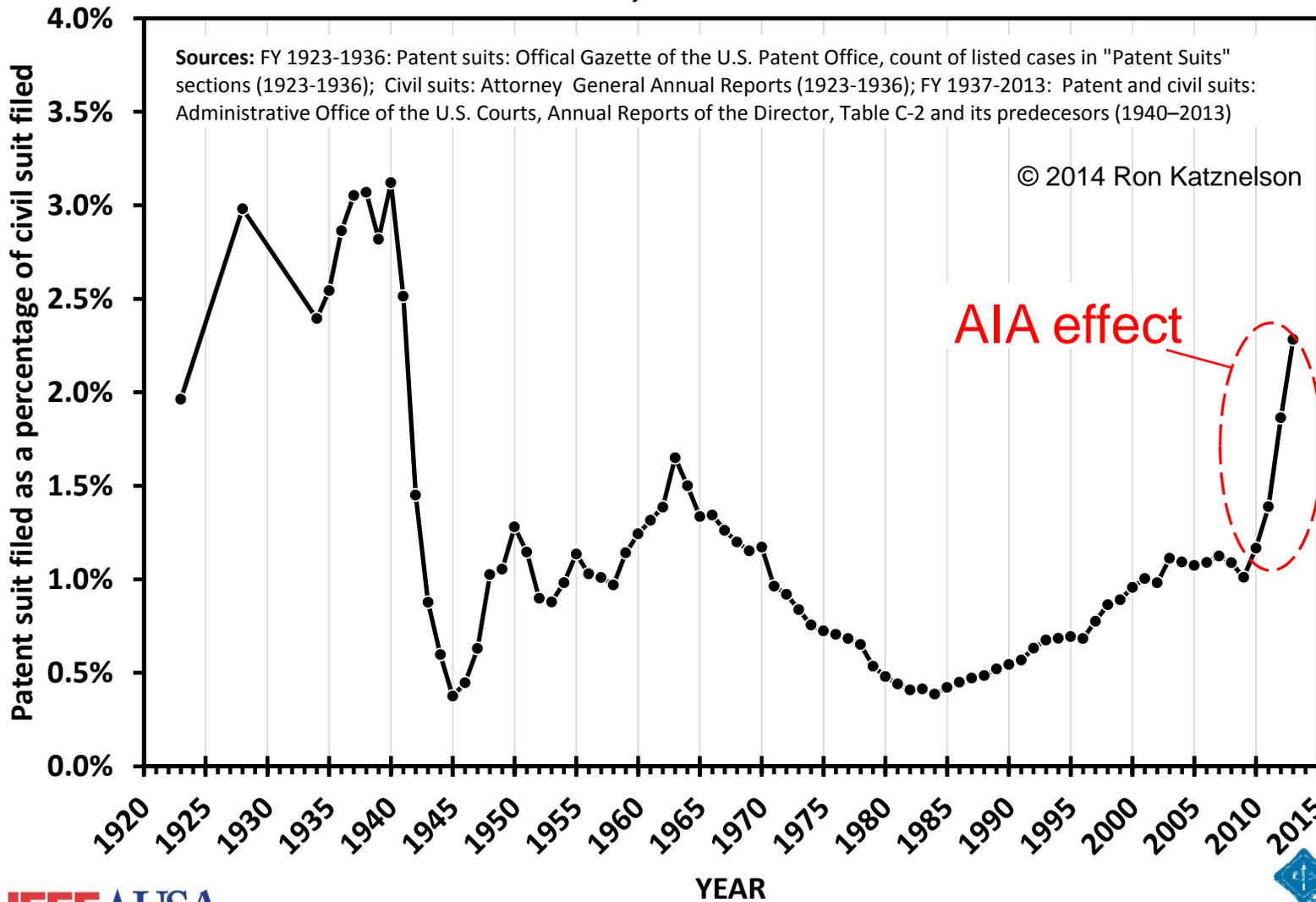
Greg Raleigh

**WHY DOES IT MATTER IF
CONGRESS TINKERS WITH PATENTS?**

Dean Kamen



Patent law suit as a fraction of federal civil suits, U.S. district courts, 1923–2013



Hear are some ideas for you to use in your home section

1. Educate members on patent principles and business practice changes resulting from new patent laws
2. Identify position of Congressional representative(s) and engage them
3. Change conversation to accurate and legitimate terminology (e.g. “patent troll” is really a “Texas gunslinger” and “fee shifting” is really “loser pays”)

**We welcome
your questions**

*and all
offers of assistance...*

