Life After *Alice*: Applying the Current Standard for Patentable Subject Matter

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Part 1:

Introduction to Subject Matter Eligibility Pre-*Alice*, *Alice*, and Post-*Alice*

By: Benjamin White

What Do We Mean, "Subject Matter Eligibility?"

- 35 U.S.C. § 101 defines what "subject matter" is eligible to be patented:

  > "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…"

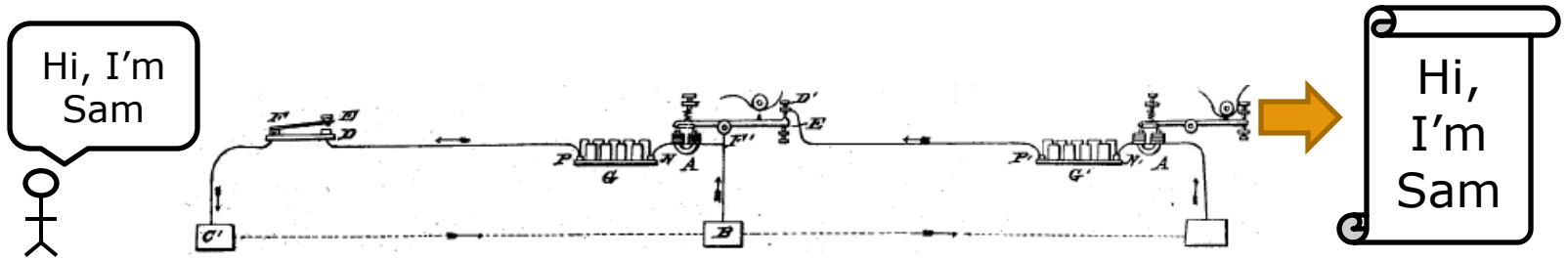
- BUT: laws of nature, natural phenomena, and abstract ideas are excluded—or "not eligible."

Alice Corp. v. CLS Bank Int'l, (USSC 2014)

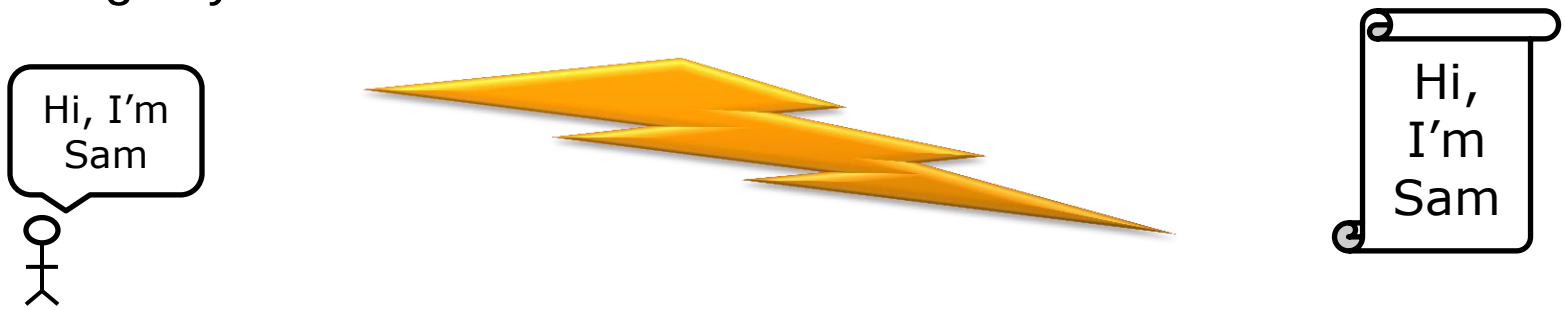
- *Alice* addressed the eligibility of "abstract ideas" in the realm of computer software
- *Alice* held: adding generic computer elements is not enough to patent an abstract idea
- Huge implications for software patents, especially business methods implemented by software.

What Do We Mean "Abstract Idea?": Morse's Telegraph Illustration

- Patent on specific equipment to use electromagnetism to print characters at a distance?



- Patent on the IDEA to use EM to print characters at a distance using any means whatsoever?



Early Cases: Programming and Computers in Industry

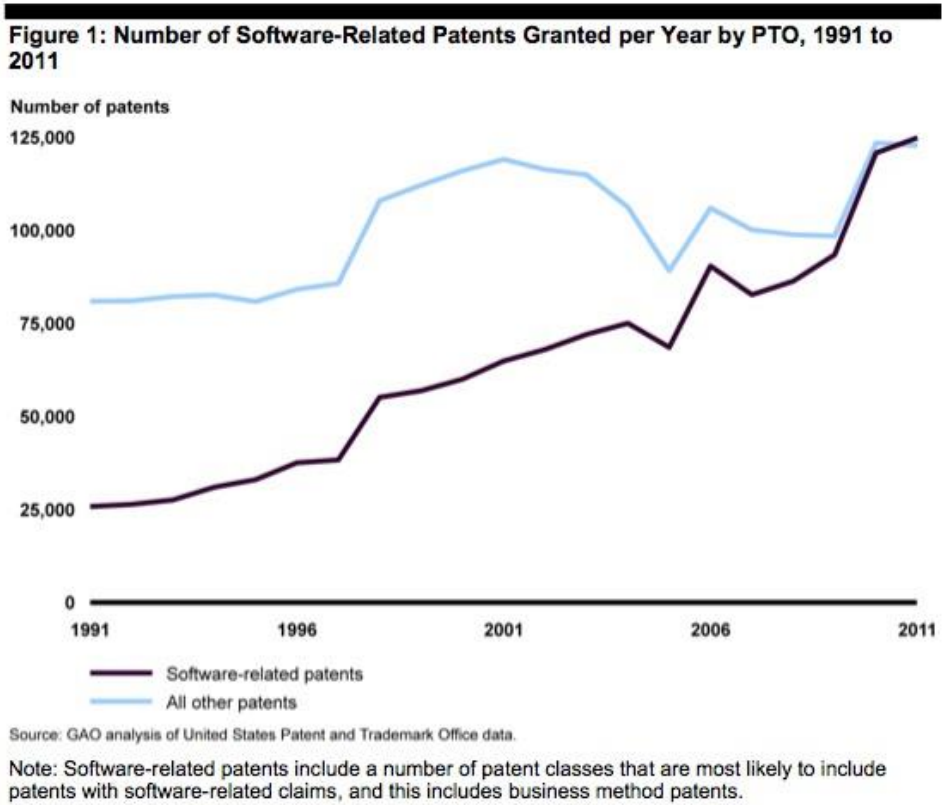
- *Gottschalk v. Benson*, 1972: USSC rejected claims to algorithm for converting binary-coded decimal to pure binary (data in one form to a second form).
  - Takeaway: Claims that would preempt all practical uses of an algorithm are not eligible.
- *Parker v. Flook*, 1978: USSC rejected claim to process using math formula to calculate alarm limits in industrial process.
  - Takeaway: mathematical formula, even if new, is ineligible when other claim elements are conventional and irrespective of preemption.
- *Diamond v. Diehr*, 1981: USSC upheld claims to process for curing rubber that includes use of a mathematical formula.
  - Takeaway: if your process transforms an article into a different state or thing—likely it is eligible.

The Prelude to *Alice: State Street Bank v. Signature Financial Group, Inc.*, 1998

- The Fed. Cir. goes rogue: upholds business method patent for calculating share price in "hub and spoke" financial system.
- Claims were to general computer programmed to perform business method.
- Court applied "useful-concrete-tangible result" test and held that the calculation of final share price is such a result:
  - Transforming data (dollar amounts) using a computer through a series of mathematical calculations into a final share price is a practical application of a mathematical algorithm—it produces "a useful, concrete and tangible result"
- USSC denied cert.

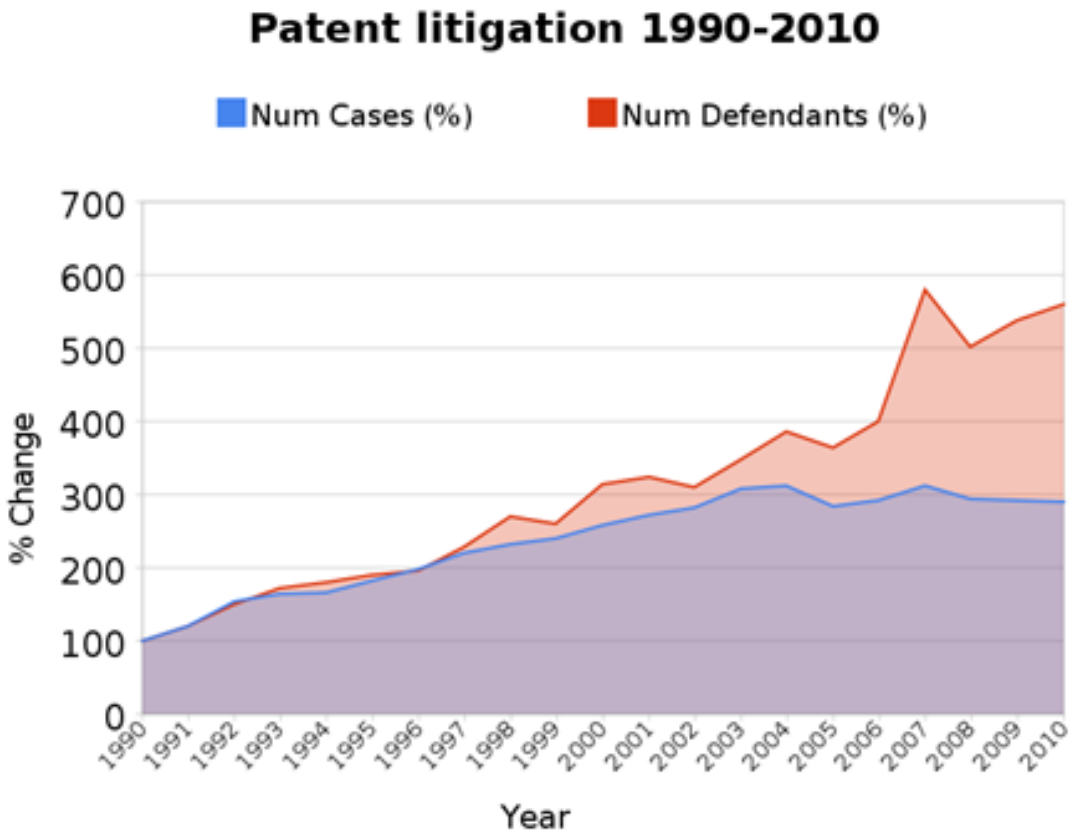
State Street Bank Opens the Floodgates

- After State Street Bank, the number of patents related to software increased dramatically



State Street Bank Opens the Floodgates

- Once those patents issued, infringement lawsuits by NPE's also increased dramatically



Source of chart: Kyle Jensen, http://patentlyo.com/patent/2010/10/guest-post-counting-defendants-in-patent-litigation.html

Backlash Against *State Street Bank*

- Congress acted: AIA enacted in 2011.
- Created streamlined USPTO procedures for attacking patents, especially business method patents
- Created restrictions on enforcement of patents in Federal Courts: only one defendant per suit
- Judicial Action: *In re Bilski*

The Prelude to *Alice*: *Bilski v. Kappos,* 2010

- Claims to method for hedging risk in a commodities market.
  - Eligible under State Street Bank?
- Fed. Cir. held: claims ineligible b/c fail the "machine-or-transformation" test, which is sole test.
  - "Useful-tangible-concrete" test gone
- USSC held: "m-o-t" test NOT the sole test, but Bilski's claims are ineligible as claiming no more than an abstract idea
- USSC expressed concern about preemption, but provided very little guidance as to how to determine eligibility

The Prelude to *Alice*: *Mayo v. Prometheus (2012)*

- USSC addressed claims to a method for diagnosing a GI disorder.
- Claims ineligible as a law of nature, provided two step framework for analyzing eligibility:

  1. Determine whether claim directed to law of nature, natural phenomenon, abstract idea
  2. If yes to 1, determine whether elements of claim, individually or in combination, make claim significantly more than abstract idea – i.e., identify "inventive concept"

Alice Corporation v. CLS Bank International 134 S. Ct. 2347 (2014)

- Alice Corp. owned patents directed to using a 3rd party intermediary to mitigate risk during settlement of financial transaction
- Patents describe no more than a general purpose computer to apply the alleged invention, but this is more than what was recited in the *Bilski* claims.
- Fed. Cir. held claims ineligible, 5-5 tie to uphold DC
- Seven different opinions—essentially asking the USSC for help

Alice Corporation v. CLS Bank International

- Claim 33: "A method of exchanging obligations as between parties … comprising the steps of:

  (a) creating a shadow credit record and a shadow debit record… ;

  (b) obtaining from each exchange institution a start-of-day balance for each shadow credit record and shadow debit record;

  (c) for every transaction resulting in an exchange obligation, the supervisory institution adjusting each respective party's shadow credit record or shadow debit record… ; and

  (d) at the end-of-day, the supervisory institution instructing ones of the exchange institutions to exchange credits or debits to the credit record and debit record of the respective parties in accordance with the adjustments of the said permitted transactions…"

Alice Corporation v. CLS Bank International

- USSC applied the 2 Step *Mayo* analysis:
- Step 1, identify abstract idea: intermediated settlement – using 3rd party intermediary to mitigate settlement risk
- Step 2, look for "inventive concept": computer recited (or inherent) in claims was general purpose and functioned in a conventional manner.
- The claims do no more than instruct to implement the abstract idea of intermediated settlement on a generic computer.
- Not enough: generic computer implementation fails to transform abstract idea into patentable invention
- Or, generically automating a business method is likely not eligible

Fallout of *Alice*: software patents dead?

- Widespread fear that thousands of software patents were now worthless.
- But what kinds of software patents?
  - Computer technology?
  - Or business methods implemented on generic computers?
- USSC opinion provided very little guidance for line between eligible/ineligible

Notable Software Eligibility Decisions After *Alice Corp.*

- Two Federal Circuit decisions are worth considering in contrast:
- *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014)
- *DDR Holdings, LLC v. Hotels.com L.P.*, 773 F.3d 1245 (Fed. Cir. 2014)

Ultramercial, LLC v. Hulu, LLC

- Patent claims permit user to view copyrighted material after watching advertisements, with advertisers compensating copyright holder for user's access:
  - Website offers copyrighted videos
  - User selects one to watch
  - User is shown advertisement, then copyrighted video
  - Advertiser pays website based on number of times advertisement is viewed
- I.e., User pays to view copyrighted material by first viewing advertisement

Ultramercial, LLC v. Hulu, LLC

- Applying *Mayo* and *Alice*, the Court held that:
  - The claims were directed to the abstract idea of using advertising as currency
  - Additional claim features were conventional or routine:
    - Updating activity log
    - Requiring request from user to view advertisement
    - Restrictions on public access
    - Explicit recitation of use of computer network or internet
  - These were held to be either no more than the abstract idea itself, routine additional steps, or a generic reference to the internet
- The claims were held to be ineligible

DDR Holdings, LLC v. Hotels.com, L.P.

- Patent sought to resolve problem of losing internet browsing traffic on website due to link to external retailer web page
- Claimed invention created hybrid web page to permit purchase through retailer's site while retaining user browser activity post-purchase. Example from Wikipedia:

This is the host website. It contains content from a number of other websites (see box with red lettering, below), along with the host's own content. But the content of the other websites is accessed by users without their browser's seeming to leave the host website. The "look and feel" presented here is that of the host.

This is the content of the third party's website. The third party's content will appear unchanged on the host website. The user will not be aware that the content is being imported from a different webpage. It will seem as if this material is part of the host webpage. The "look and feel" presented here is that of the third party.

This is the host webpage again, at the host website. It will have links permitting the user to make a purchase from the host of the items advertised on the third party's website (at left), like this: "Click here to buy this item via the host. Thank you for visiting host!" (If a purchase is made, the transaction will be processed through the host.)

DDR Holdings, LLC v. Hotels.com, L.P.

- Court held claimed invention to be eligible
- Under Step 1 of Mayo: no easily identifiable abstract idea.
  - Making two websites look the same?
  - Syndicated internet commerce?
- Important findings:
  - Claims address business challenge particular to the internet
  - Claimed solution necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks
- Under Step 2 of Mayo: not merely the routine or conventional use of the Internet.
  - Clicking hyperlink caused unconventional result

DDR Contrasted With *Alice, Ultramercial*

- *Alice* and *Ultramercial* claimed generic "use of the Internet" or generic computers to perform abstract business practice
- DDR claims were specific to problem only found on the Internet—a problem not present in "brick and mortar" retail context.
- DDR claims solve that problem by obtaining a result that is not routine and conventional on the Internet.
- Claims were specific to internet and altered typical sequence of events generated by clicking hyperlink – thus, eligible under 101

Enfish v. Microsoft, Fed. Cir. 2016

- Claims to self-referential computer database.
- Invention operated differently than conventional databases.
- Court held that claims are eligible.
- Not abstract
  - Directed to improvement to the way computers operate.
  - Specific solution to a problem in the software arts

Post-*Alice* Takeaways for Software

- Claims directed to problems specific to business on the internet can be eligible (*DDR Holdings*)

- Claims directed to improving the function of computers can be eligible (*Enfish*)