

# Protecting Computer Software

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# 35 U.S.C. § 101

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- ▶ “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.” - 35 U.S.C. § 101
- ▶ “The Court’s precedents provide three specific exceptions to § 101’s broad patent-eligibility principles: ‘laws of nature, physical phenomena, and abstract ideas.’ ... While these exceptions are not required by the statutory text, they are consistent with the notion that a patentable process must be ‘new and useful.’ And, in any case, these exceptions have defined the reach of the statute as a matter of statutory *stare decisis* going back 150 years.” - *Bilski v. Kappos*

# *Diamond v. Diehr* (SCOTUS)

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- ▶ 450 U.S. 175, March 3, 1981
- ▶ Patent relating to a process for curing rubber, using a computer-monitored thermometer and a mathematical formula to determine exactly how long to heat and mold the rubber.
- ▶ 5-4 vote: Process is patent-eligible.
  - ▶ An equation “is not patentable in isolation, but when a process for curing rubber is devised which incorporates in it a more efficient solution of the equation, that process is at the very least not barred at the threshold...”
  - ▶ “...the respondents ... seek patent protection for a process of curing synthetic rubber. Their process admittedly employs a well-known mathematical equation, but they do not seek to pre-empt the use of that equation. Rather, they seek only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process. These include installing rubber in a press, closing the mold, constantly determining the temperature of the mold, constantly recalculating the appropriate cure time through the use of the formula and a digital computer, and automatically opening the press at the proper time.”

# *Diamond v. Diehr* (SCOTUS)

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## ► Representative claim comprises:

- (a) heating [a]mold to a temperature range approximating a predetermined rubber curing temperature,
- (b) installing prepared unmolded synthetic rubber of a known compound in a molding cavity of predetermined geometry as defined by said mold,
- (c) closing said press to mold said rubber to occupy said cavity in conformance with the contour of said mold and to cure said rubber by transfer of heat thereto from said mold,
- (d) initiating an interval timer upon the closure of said press for monitoring the elapsed time of said closure,
- (e) heating said mold during said closure to maintain the temperature thereof within said range approximating said rubber curing temperature,
- (f) constantly determining the temperature of said mold at a location closely adjacent said cavity thereof throughout closure of said press,
- (g) repetitively calculating at frequent periodic intervals throughout closure of said press the Arrhenius equation for reaction time of said rubber to determine total required cure time  $v$  as follows:  $\ln v = cz + x$ , wherein  $c$  is an activation energy constant determined for said rubber being molded and cured in said press,  $z$  is the temperature of said mold at the time of each calculation of said Arrhenius equation, and  $x$  is a constant which is a function of said predetermined geometry of said mold,
- (h) for each repetition of calculation of said Arrhenius equation herein, comparing the resultant calculated total required cure time with the monitored elapsed time measured by said interval timer,
- (i) opening said press when a said comparison of calculated total required cure time and monitored elapsed time indicates equivalence, and
- (j) removing from said mold the resultant precision molded and cured rubber article.

# *Bilski v. Kappos* (SCOTUS)

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- ▶ 561 U.S. 593, June 28, 2010
- ▶ Patent relating to a business method of hedging risk in the energy market.
- ▶ Representative claim comprises:
  - ▶ (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumers;
  - ▶ (b) identifying market participants for said commodity having a counter-risk position to said consumers; and
  - ▶ (c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.

# *Bilski v. Kappos* (SCOTUS)

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- ▶ En banc Federal Circuit found the claim ineligible under § 101, applying the “machine-or-transformation test”: does a process either
  - ▶ (a) require implementation on a particular machine; or
  - ▶ (b) transform the state of an “article”.
  
- ▶ Supreme Court unanimously rejected the claim as well, but rejected the machine-or-transformation test as the final word on eligibility of a process claim.
  
- ▶ Majority by Kennedy, joined by Roberts, Scalia (in-part), Thomas, Alito: A broader examination of whether the process is “abstract” is required.
  - ▶ Stevens concurrence, joined by Breyer, Ginsburg, Sotomayor: Would reject all business methods categorically.
  - ▶ Breyer (Scalia joining in part): Machine-or-transformation is a “useful clue” but not the sole test.

# *Mayo Collaborative Services v. Prometheus Labs (SCOTUS)*

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- ▶ 132 S. Ct. 1289, March 20, 2012
- ▶ Patent for a method of giving a drug, measuring reaction to the drug (via metabolites), and adjusting the dosage accordingly.
- ▶ Representative claim comprises:
  - ▶ (a) administering a drug providing 6-thioguanine to a subject having said immune-mediated gastrointestinal disorder; and
  - ▶ (b) determining the level of 6-thioguanine in said subject having said immune-mediated gastrointestinal disorder,
  - ▶ wherein the level of 6-thioguanine less than about 230 pmol per  $8 \times 10^8$  red blood cells indicates a need to increase the amount of said drug subsequently administered to said subject and
  - ▶ wherein the level of 6-thioguanine greater than about 400 pmol per  $8 \times 10^8$  red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject.



# Mayo Collaborative Services v. Prometheus Labs (SCOTUS)

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- ▶ Federal Circuit applied machine-or-transformation, found the patent eligible as it transformed drugs to metabolites in the human body.
- ▶ Supreme Court issued a GVR (grant certiorari, vacate, remand) for further consideration in light of *Bilski*.
- ▶ Federal Circuit *again* applied machine-or-transformation, based on the SCOTUS comment that it was “a useful clue” and that the panel found no evidence to counter it.
- ▶ SCOTUS unanimously reversed:
  - ▶ Claim centers around an ineligible law of nature: the relationship between metabolite levels and the effectiveness of the drug dosage.
  - ▶ Claim only adds “well-understood, routine, conventional activity already engaged in by the scientific community” to said law.

# *Association for Molecular Pathology v. Myriad Genetics* (SCOTUS)

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- ▶ 133 S.Ct. 2107, June 13, 2013.
- ▶ Patent relating to particular genes (BRCA1 and BRCA2) that were discovered to signal an increased risk of cancer.
- ▶ Claims included:
  - ▶ each gene, isolated from the DNA strand, and
  - ▶ each gene, isolated from the DNA strand and converted to “cDNA” (i.e. DNA with “intron” nucleotides removed; a form that does not occur in nature, and is more convenient for testing).
- ▶ Federal Circuit panel found both types of claims to be eligible, but disagreed on the reasoning:
  - ▶ Lourie: Severing the chemical bonds in DNA to isolate a gene creates a new chemical composition that does not occur in nature.
  - ▶ Moore: USPTO has been granting isolated DNA claims regularly, so stare decisis and respect for the Office’s interpretation applies.
  - ▶ Bryson: cDNA is a new product and therefore eligible; merely isolated DNA is not distinguishable from natural DNA..

# *Association for Molecular Pathology v. Myriad Genetics (SCOTUS)*

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- ▶ **Supreme Court unanimously agrees with Bryson:**
  - ▶ “Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the §101 inquiry.”
  - ▶ Precedent requires that a claim based on a product of nature have “markedly different characteristics from any found in nature.”
  - ▶ Regarding the isolated DNA: “The location and order of the nucleotides existed in nature before Myriad found them.”
  - ▶ “If the patents depended upon the creation of a unique molecule, then a would-be infringer could arguably avoid at least Myriad’s patent claims on entire genes ... by isolating a DNA sequence that included both the ... gene and one additional nucleotide pair. Such a molecule would not be chemically identical to the molecule ‘invented’ by Myriad. But Myriad obviously would resist that outcome because its claim is concerned primarily with the information contained in the genetic sequence, not with the specific chemical composition of a particular molecule.”
  - ▶ Regarding the cDNA: “...creation of a cDNA sequence from mRNA results in an exons-only molecule that is not naturally occurring.”
  - ▶ That the sequence is “dictated by nature” is not relevant if the result is distinguishable from the natural variety.

# *Alice v. CLS Bank* (SCOTUS)

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- ▶ 134 S.Ct. 2347, June 19, 2014.
- ▶ Patent for a method employing an escrow, and for software and system implementing the method.
- ▶ Federal Circuit en banc: All claims found ineligible, but panel was widely split on reasoning. Tie vote on the system claims, upholding the lower court's ruling of ineligibility by default.
- ▶ One point everyone agreed on: claims must be shown § 101 ineligible by clear and convincing evidence.

# *Alice v. CLS Bank* (SCOTUS)

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- ▶ Representative method claim comprises:
  - (a) creating a shadow credit record and a shadow debit record for each stakeholder party to be held independently by a supervisory institution from the exchange institutions;
  - (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, allowing only these transactions that do not result in the value of the shadow debit record being less than the value of the shadow credit record at any time, each said adjustment taking place in chronological order; 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, the credits and debits being irrevocable, time invariant obligations placed on the exchange institutions.

# *Alice v. CLS Bank* (SCOTUS)

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- ▶ Representative system claim comprises:
  - a communications controller,
  - a first party device, coupled to said communications controller,
  - a data storage unit having stored therein
    - (a) information about a first account for a first party, independent from a second account maintained by a first exchange institution, and
    - (b) information about a third account for a second party, independent from a fourth account maintained by a second exchange institution; and
  - a computer, coupled to said data storage unit and said communications controller, that is configured to
    - (a) receive a transaction from said first party device via said communications controller;
    - (b) electronically adjust said first account and said third account in order to effect an exchange obligation arising from said transaction between said first party and said second party after ensuring that said first party and/or said second party have adequate value in said first account and/or said third account, respectively; and
    - (c) generate an instruction to said first exchange institution and/or said second exchange institution to adjust said second account and/or said fourth account in accordance with the adjustment of said first account and/or said third account, wherein said instruction being an irrevocable, time invariant obligation placed on said first exchange institution and/or said second exchange.

# *Alice v. CLS Bank* (SCOTUS)

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- ▶ The § 101 test for abstract ideas is the same as that for products of nature:
  - ▶ Step 1: Is the claim directed to an ineligible concept (a law of nature, a natural phenomena, or an abstract idea)? If so:
  - ▶ Step 2: Is there also an “inventive concept”: something that makes the claim “significantly more than a patent upon the ineligible concept itself”?
- ▶ “Apply it with a computer” will not by itself meet Step 2.
  - ▶ Although a computer is tangible, if that were enough to overcome § 101, any ineligible abstract ideas could be made patentable merely by adding such a computer. Eligibility cannot “depend simply on the draftsman’s art.”

# *Alice v. CLS Bank* (SCOTUS)

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- ▶ In the instant case, all claims are ineligible:
  - ▶ Intermediated settlements are an abstract concept, a “fundamental economic practice long prevalent in our system of commerce” similar to the hedging of *Bilski*.
  - ▶ The claimed computer details only “purely functional and generic” components that exist in nearly all modern computers; these components are not “meaningful limitations” for 101 purposes.
  - ▶ Likewise, nothing about the method steps improve the computer.
  - ▶ “Put another way, the system claims are no different from the method claims in substance.”
- ▶ Sotomayor, Ginsburg, and Breyer also added, in concurrence, that business methods should be generally ineligible.



# After *Alice*: *Digitech* (Fed. Cir.)

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- ▶ No. 2013-1600. Decided July 11, 2014.
  - ▶ Panel: Moore, Reyna, Hughes.
- ▶ Patent for ensuring consistent image display across multiple devices, including screens and printouts.
  - ▶ Claims a “device profile” for each such device to determine display characteristics, comprising two data sets for “chromatic” and “spatial” qualities of the device, respectively.
  - ▶ Also, claims to methods for generating the profile.
- ▶ Device profile claims are invalidated without even getting to *Alice*!
  - ▶ The device profile “is not a tangible or physical thing and thus does not fall within any of the categories of eligible subject matter.”
- ▶ Method claims also invalidated:
  - ▶ “Without additional limitations, a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible.”
  - ▶ “... nothing in the claim language expressly ties the method to an image processor.”

# After *Alice*: *buySAFE* (Fed. Cir.)

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- ▶ No. 2013-1575. Decided Sept. 3, 2014.
  - ▶ Panel: Taranto, Hughes. (Rader, the third panelist, retired before the decision.)
- ▶ Patent for managing guaranties for online transactions.
  - ▶ Steps are essentially: (a) receive request for transaction performance guaranty in regards to online transaction, (b) underwriting requesting party, (c) offering the guaranty service to bind the guaranty to the transaction, all using “at least one computer application program” and “a computer network.”
  - ▶ Dependent claim limits the forms of guaranties.
- ▶ Claims invalidated:
  - ▶ “The claims are squarely about creating a contractual relationship — a ‘transaction performance guaranty’ — that is beyond question of ancient lineage.”
  - ▶ Neither narrowing the type of guaranties nor adding generic computer functionality provide meaningful limitations. *Alice* limitations were similar.

# After *Alice*: *Planet Bingo* (Fed. Cir.)

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- ▶ No. 2013-1663. Decided August 26, 2014. Non-precedential.
  - ▶ Panel: Taranto, Bryson, Hughes.
- ▶ Patent for “computer-aided management of bingo games.”
  - ▶ Example claim (court summary): “...selecting, storing, and retrieving [at least] two sets of numbers, assigning a player identifier and a control number, and then comparing a winning set of bingo numbers with a selected set of bingo numbers.”
- ▶ All claims invalidated.
  - ▶ Claims are “directed to the abstract idea of solving a tampering problem and also minimizing other security risks during bingo ticket purchases”(!)
  - ▶ All steps can be carried out by any computer, or mentally and manually.
  - ▶ A generic computer implementation. Recitation of distinct software modules is not “significantly more” if the steps are still conventional.
  - ▶ Arguments that the program, as practically applied, manages thousands if not millions of numbers and players are irrelevant; the claims cover everything using at least “two sets” of numbers and one player.

# After *Alice*: *I/P Engine* (Fed. Cir.)

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- ▶ No. 2013-1307. Decided August 15, 2014. Non-precedential.
  - ▶ Panel: Wallach, Mayer (concurring), Chen (dissenting).
- ▶ Patent for a “search engine system” and methods for using it.
  - ▶ Comprises searching for information “relevant to a query,” receiving information that other parties making the same query found relevant, and combining and filtering the two sets of information.
- ▶ All claims invalidated for obviousness.
- ▶ In concurrence, Mayer also invalidates on § 101 sua sponte(!)
  - ▶ “The asserted claims simply describe the well-known and widely-applied concept that it is often helpful to have both content-based and collaborative information about a specific area of interest.”
  - ▶ Compares the patent to the idea of a tourist checking both a guidebook and other tourist ratings in deciding where to visit.
  - ▶ “The Supreme Court has dictated that the subject matter eligibility analysis must precede the obviousness Inquiry.”
  - ▶ “If this determination had been made in the first instance as directed by the Supreme Court, unnecessary litigation, and nearly two weeks of trial and imposition on citizen jurors, could have been avoided.”

# *After Alice: Benefit Funding* (Fed. Cir.)

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- ▶ No. 2014-1122. Decided Sept. 25, 2014.
  - ▶ Panel: Prost, Lourie, Hughes.
- ▶ Patent for “enabling beneficiaries of retirement benefits to convert future benefits into current resources...”
- ▶ Patentee sues; defendant counters with petition to the PTAB for covered business method (CBM) review.
  - ▶ PTAB institutes review based on § 101 ineligibility arguments.
  - ▶ District court grants stay pending review outcome.
  - ▶ Patentee seeks and is granted interlocutory appeal of stay.
- ▶ District court did not abuse discretion in granting a stay.
  - ▶ It is not appropriate to challenge the stay based on the argument that a CBM review cannot make a § 101 eligibility ruling. This would constitute an impermissible collateral attack on the PTAB decision to institute the review.
  - ▶ (Therefore, the opinion does not address whether a CBM review can indeed make a § 101 eligibility ruling.)
  - ▶ Patentee can bring up the matter on direct appeal of the PTAB review, once decided.

# After *Alice*: *University of Utah* (Fed. Cir.)

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- ▶ No. 2014-1361. Decided December 17, 2014.
- ▶ Genetic testing method based on a naturally-occurring gene.
  - ▶ “...wherein a germline nucleic acid sequence is compared by hybridizing a BRCA1 gene probe which specifically hybridizes to a BRCA1 allele to genomic DNA isolated from said sample and detecting the presence of a hybridization product wherein a presence of said product indicates the presence of said allele in the subject.”
  - ▶ Based on the same line of patents as in *Myriad*.
- ▶ Claims directed towards patent-ineligible subject matter under 101.
  - ▶ “The second paragraphs of claims 7 and 8 do nothing more than spell out what practitioners already knew—how to compare gene sequences using routine, ordinary techniques. Nothing is added by identifying the techniques to be used in making the comparison because those comparison techniques were the well-understood, routine, and conventional techniques that a scientist would have thought of when instructed to compare two gene sequences.”

# *After Alice: Ultramercial, LLC* (Fed. Cir.)

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- ▶ No. 2010-1544. Decided November 12, 2014.
  - ▶ Panel: Rader, Lourie, and O'Malley
  
- ▶ Process of watching a commercial as a condition of accessing free media content.
  - ▶ Patent directed to an 11 step method for distributing copyrighted media products over the internet where the consumer receives a copyrighted media product at no cost in exchange for viewing an advertisement, and the advertiser pays for the copyrighted content.
  
- ▶ All claims invalidated under 101.
  - ▶ Claimed invention was entrepreneurial in nature rather than technological and is therefore patent ineligible. Also used a generic computer to carry out an abstract idea.

# After *Alice: Ultramercial, LLC* (Fed. Cir.)

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- ▶ Representative Claim Comprises:

- ▶ A method for distribution of products over the Internet via a facilitator, said method comprising the steps of:

a first step of receiving, from a content provider, media products that are covered by intellectual property rights protection and are available for purchase, wherein each said media product being comprised of at least one of text data, music data, and video data;

a second step of selecting a sponsor message to be associated with the media product, said sponsor message being selected from a plurality of sponsor messages, said second step including accessing an activity log to verify that the total number of times which the sponsor message has been previously presented is less than the number of transaction cycles contracted by the sponsor of the sponsor message;

a third step of providing the media product for sale at an Internet website;

a fourth step of restricting general public access to said media product;

a fifth step of offering to a consumer access to the media product without charge to the consumer on the precondition that the consumer views the sponsor message;

a sixth step of receiving from the consumer a request to view the sponsor message, wherein the consumer submits said request in response to being offered access to the media product;

a seventh step of, in response to receiving the request from the consumer, facilitating the display of a sponsor message to the consumer;

an eighth step of, if the sponsor message is not an interactive message, allowing said consumer access to said media product after said step of facilitating the display of said sponsor message;

a ninth step of, if the sponsor message is an interactive message, presenting at least one query to the consumer and allowing said consumer access to said media product after receiving a response to said at least one query;

a tenth step of recording the transaction event to the activity log, said tenth step including updating the total number of times the sponsor message has been presented; and

an eleventh step of receiving payment from the sponsor of the sponsor message displayed.



# After *Alice*: *Ultramercial, LLC* (Fed. Cir.)

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- ▶ All claims invalidated under 101.
  - ▶ “Ultramercial’s asserted claims fall short of *Alice*’s technological arts test. Their purported inventive concept is that people will be willing to watch online advertisements in exchange for the opportunity to view copyrighted materials. Because the innovative aspect of the claimed invention is an entrepreneurial rather than a technological one, it is patent ineligible.”
  - ▶ Must root the invention in the technology, and not in the entrepreneurial method.
- ▶ Court also noted that, similar to the facts of the *Alice* case,
  - ▶ “Asserting claims which merely instruct practitioner to implement an abstract idea on a generic computer does not pass muster under 101. Computers have become a basic tool of science and technology in the world and may not be monopolized and allowed to impede innovation.”

# *After Alice: DDR Holdings LLC* (Fed. Cir.)

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- ▶ No. 2013-1505. Decided December 5, 2014.
  - ▶ Panel: Wallach, Mayer, and Chen.
- ▶ 1st Federal Circuit case to declare 101 claims to be eligible since Alice.
- ▶ System and Methods for e-commerce outsourcing.
  - ▶ To solve problem of third party-merchants taking away visitor traffic from host websites when visitors click an ad, the claimed invention instead creates a hybrid webpage that combines visual elements from the host website (the look and feel) and the third-party merchant's site (the advertisement).
- ▶ Case also found in the USPTO Dec 16, 2014 Guidelines

# After *Alice*: *DDR Holdings LLC* (Fed. Cir.)

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- ▶ **Representative Claim Comprises:**
- ▶ A system useful in an outsource provider serving web pages offering commercial opportunities, the system comprising:
  - ▶ (a) a computer store containing data, for each of a plurality of first web pages, defining a plurality of visually perceptible elements, which visually perceptible elements correspond to the plurality of first web pages;
    - (i) wherein each of the first web pages belongs to one of a plurality of web page owners;
    - (ii) wherein each of the first web pages displays at least one active link associated with a commerce object associated with a buying opportunity of a selected one of a plurality of merchants; and
    - (iii) wherein the selected merchant, the out-source provider, and the owner of the first web page displaying the associated link are each third parties with respect to one other;
  - ▶ (b) a computer server at the outsource provider, which computer server is coupled to the computer store and programmed to:
    - (i) receive from the web browser of a computer user a signal indicating activation of one of the links displayed by one of the first web pages;
    - (ii) automatically identify as the source page the one of the first web pages on which the link has been activated;
    - (iii) in response to identification of the source page, automatically retrieve the stored data corresponding to the source page; and
    - (iv) using the data retrieved, automatically generate and transmit to the web browser a second web page that displays: (A) information associated with the commerce object associated with the link that has been activated, and (B) the plurality of visually perceptible elements visually corresponding to the source page.”

# *After Alice: DDR Holdings LLC* (Fed. Cir.)

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- ▶ Claims found to be patent eligible under 101. Focus on Step 2 of the Alice/Mayo Test:
  - ▶ In step two, the court must “consider the elements of each claim — both individually and as an ordered combination — to determine whether the additional elements transform the nature of the claim into a patent-eligible application of that abstract idea.
- ▶ Court found that there were additional elements to transform the nature of the claims into patent eligible subject matter.
  - ▶ The claims addressed a technological problem “particular to the internet” by implementing a solution specific to that technological environment and different from the manner suggested by routine or conventional use within the field.
- ▶ DDR as a beacon of hope for software patents?

# After Alice: DDR Holdings LLC (Fed. Cir.)

- ▶ Distinguishing DDR Holdings from Ultramercial
  - ▶ It is hard to reconcile DDR Holdings and the Ultramercial decision. In distinguishing the Ultramercial claims, the court highlights that the Ultramercial claims broadly and generically claimed the “use of the internet” to perform an abstract business practice. The DDR Holdings claims differ by reciting an invention that is not merely a routine or conventional use of the internet. DDR Holdings used specific steps utilizing the internet that lead to non-conventional results in order to solve a specific problem.
- ▶ Potential Influence of DDR Holdings:
  - ▶ While the DDR Holdings case may provide some guidance on how to overcome the hurdle of 101, it is still one case in a sea of many cases, most of which held the patents at issue to be ineligible under 101.
  - ▶ Still, DDR Holdings may represent a shift to courts being less hostile towards potential patents on software and similar inventions that may be rejected as patent ineligible subject matter under 101.

# *After Alice: Content Extraction and Transmission, LLC (Fed. Cir.)*

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- ▶ No. 2014-1112, -1687. Decided Dec 23, 2014.
  - ▶ Panel: Dyk, Taranto and Chen.
- ▶ Method patent for extracting data from hard copy documents, recognizing specific information from the extracted data, storing that information in memory. (Similar to ATM scanning and recognizing a check).
  - ▶ Case decided shortly after DDR Holdings.
- ▶ Step 1: Claims of the asserted patents are drawn to the abstract idea of:
  - ▶ 1) collecting data,
  - ▶ 2) recognizing certain data within the collected data set, and
  - ▶ 3) storing that recognized data in a memory.
- ▶ Step 2: the asserted patents contain no limitations—either individually or as an ordered combination—that transform the claims into a patent-eligible application
  - ▶ There is no “inventive concept” in CET’s use of a generic scanner and computer to perform well-understood, routine, and conventional activities commonly used in industry.
- ▶ Claims patent ineligible under 101. No inventive step to transform the abstract idea into patent eligible subject matter.

# After *Alice*: *Smartflash LLC v. Apple Inc.* (Fed. Cir.)

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- ▶ No. 2015-1701. Decided July, 30 2015.
  - ▶ Panel: Newman, Linn, and O'Malley
- ▶ Patent for Data Storage and Access Systems are described for downloading and paying for data such as audio and video data, text, software, games and other types of data. (Think iTunes or App Store)
- ▶ Representative Claim Comprises:
  - ▶ 1: data access terminal that receives payment data and payment validation.
  - ▶ 2: Once payment is made then retrieving data and a “condition for accessing the data” from the supplier and send to the carrier.
- ▶ Smartflash alleges that Apple Inc. uses a similar method in its iTunes and App store services.
- ▶ The Court sided with Apple finding that the patent claims do recite abstract ideas under Step 1
  - ▶ the asserted claims recite methods and systems for controlling access to content data
- ▶ Under Step 2, the court ruled against Apple Inc. finding that the specific limitations found in the claims were sufficient to transform the abstract purpose to a patent eligible invention. (The specific limitations in the Claim included specific status data, use rules, and content memory.

# After Alice: *OIP Techs., Inc. v. Amazon.com Inc.* (Fed. Cir.)

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- ▶ 788 F.3d 1359 (2015). Decided on June 11, 2015.
  - ▶ Panel: Taranto, Mayer, and Hughes
- ▶ Patent for a method of price optimization in an e-commerce environment.
- ▶ **Representative Claim Comprises:** A method of pricing a product for sale, the method comprising:
  - ▶ (1) testing a plurality of prices;
  - ▶ (2) gathering statistics generated about how customers reacted to the offers testing the prices;
  - ▶ (3) using that data to estimate outcomes (i.e. mapping the demand curve over time for a given product); and
  - ▶ (4) automatically selecting and offering a new price based on the estimated outcome.
- ▶ Amazon.com Inc. filed a Motion to Dismiss based on the Alice Test, alleging that the claims are abstract and the claims merely describe what any business owner or economist does in calculating a demand curve for a given product.



# After *Alice*: *OIP Techs., Inc. v. Amazon.com Inc.* (Fed. Cir.)

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- ▶ **Ruling:** The court ruled in favor of Amazon.
  - ▶ **Under Step 1**, the court found that the concept of "offer based pricing" was similar to other "fundamental economic concepts" found to be un-patentable abstract ideas.
  - ▶ **Under Step 2 (Something Significantly More)** The court found that the additional elements recited in the claims; "conventional computer activities or routine data-gathering steps", which used the computer only to perform routine tasks more quickly and accurately, were merely "well-understood, routine conventional" activities insufficient to confer patent eligibility.

# *After Alice: Allvoice Devs. US, LLC v. Microsoft Corp.* (Fed. Cir.)

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- ▶ No. 2014-1258. Decided May 22, 2015.
  - Panel: Prost, Dyk, and O'Malley
- ▶ Patent ('273 Patent) for Automated Proofreading Using Interface Linking Recognized Words to their Audio Data while Text is Being Changed
- ▶ **Representative Claim Comprises:** A data processing apparatus is disclosed for receiving recognition data from a speech recognition engine and its corresponding dictated audio data where the recognition data includes recognized words or characters.
- ▶ A display displays the recognized words or characters and the recognized words or characters are stored as a file together with the corresponding audio data.
- ▶ Link data is formed to link the position of the words or characters in the file and the position of the corresponding audio component in the audio data.
- ▶ The recognized words or characters can be processed without losing the audio data.

## *After Alice: Allvoice Devs. US, LLC v. Microsoft Corp. (Fed. Cir.) (Cont.)*

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- ▶ Court found that some of the claims were invalid for indefiniteness. Thus, Step 1 shows that this is a patent ineligible idea for being abstract and must move on to Step 2. (Audio Identifier and Link Data needed were considered to be abstract ideas)
- ▶ Circuit Court upheld lower court's ruling that some of the claims were invalid for failing to qualify as one of the four statutory categories of invention under 35 U.S.C. § 101 (Process/Machine/Manufacture/Composition of Matter). The claims failed to describe a manufacture, and Allvoice merely claimed software instructions which alone is not a tangible object (failed Step 2; is there something “significantly more” in the claim to ensure that the claim is not merely covering just the ineligible concept).

# *After Alice: Internet Patents Corp. v. Active Network Inc. (Fed. Cir.)*

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- ▶ 790 F.3d 1343 (2015). Decided on June 23, 2015.
- ▶ Panel: Newman, Moore, Reyna
- ▶ Patent for the use of a conventional web browser, Back and Forward navigational functionalities without data loss, in an online application consisting of dynamically generated web pages.
- ▶ **Representative Claim Comprises:** A method of providing an intelligent user interface to an online application comprising the steps of: furnishing a plurality of icons on a web page displayed to a user of a web browser, wherein each of said icons is a hyperlink to a dynamically generated online application form set, and wherein said web browser comprises Back and Forward navigation functionalities;
- ▶ displaying said dynamically generated online application form set in response to the activation of said hyperlink, wherein said dynamically generated online application form set comprises a state determined by at least one user input; and
- ▶ maintaining said state upon the activation of another of said icons, wherein said maintaining allows use of said Back and Forward navigation functionalities without loss of said state.

## After Alice: *Internet Patents Corp. v. Active Network Inc.* (Fed. Cir.) (Cont.)

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- ▶ **Ruling:** The court found that the asserted claims were directed to an abstract idea (retaining information in the navigation of online forms). Thus Step 1 in describing an abstract idea is satisfied, and must move on to Step 2.
- ▶ The Court noted that the claim was directed to "maintaining" the state of user input upon "activation" of another icon (or tab), the "mechanism for maintaining the state is not described, although this is stated to be the essential invention." (Step 2 failed because the essential invention was not adequately described to be considered something more than an abstract idea).

# After *Alice*: District Courts

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- ▶ *DietGoal v. Bravo Media* (SDNY, July 8, 2014)
  - ▶ Invalidated system and method claims for meal planning involving a “meal builder” and/or picture menus as a part of an interface.
  - ▶ “Meal-planning is surely a long prevalent practice...”
  - ▶ Claims do not “recite any specialized formula or method” for the planning itself, and the visual menus are created through routine processes.
  - ▶ Footnote rejected arguments of “a machine is always patentable” because the claims merely recite systems and methods *implemented* on an *existing* machine.
  
- ▶ *Comcast v. Sprint* (D Del, July 16, 2014)
  - ▶ Invalidated method claim comprising “receiving a request...” and “determining whether a telephony parameter associated with the request requires acceptance of a user prompt...”
  - ▶ Claim was “drawn to the abstract, and fundamental, idea of a conditional decision.”
  - ▶ Computer limitations were non-inventive: resembled known methods using a human operator.

# After *Alice*: District Courts

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- ▶ *CMG Financial v. Pacific Trust* (CD Cal, August 29, 2014)
  - ▶ Invalidated business method claims for a mortgage payment plan and line of credit integrated into a single account.
  - ▶ Claims were found to “recite basic, longstanding banking principles.”
  - ▶ Patentee argued “machine-or-transformation” (specifically, machine), but court found no recitation of any specific computer; at most, a generic one.
  
- ▶ *Loyalty Conversion v. American Airlines* (ED Tex, Sept. 2, 2014)
  - ▶ Invalidated (by 12(b)(6) motion) method claims for converting “points” from one vendor’s reward system to another’s, in an online system.
  - ▶ Court treated the concept as equivalent to the abstract idea of a currency exchange, “converting a non-negotiable currency into a negotiable one.”
  - ▶ “... all of [the computer operations] consist of simple forms of data recording, storage, and calculation, all of which are conventional functions that can be performed by a generic computer without any novel programming or improvement in the operation of the computer itself.”
  - ▶ Insufficient that the claims are narrowed only to the field of loyalty rewards. Breadth of coverage within that field is enormous.

# After *Alice*: District Courts

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- ▶ *Walker Digital v. Google* (D Del, Sept. 3, 2014)
  - ▶ Invalidated method claims for exchanging identities between anonymous parties, using a computer as an intermediary.
  - ▶ Claims recite “the basic concept of controlled exchange of information about people as historically practiced by matchmakers and headhunters.”
  - ▶ The specification itself admits the basic concept is already understood. All specific steps in the claims are routine even as performed by human beings, and do not add “anything meaningful.”
  
- ▶ *Tuxis Tech. v. Amazon.com* (D Del, Sept. 3, 2014)
  - ▶ Invalidated (by 12(b)(6)) method claims for, based on a successful primary sale made through electronic communication, and on other user data, automatically offering a second sale.
  - ▶ Patent “claims the fundamental concept of upselling -- a marketing technique as old as the field itself.” No inventive concept present.
  - ▶ Pre-emption analysis: Additional limitations may have narrowed the scope of the claims to not cover certain upselling techniques, but said techniques are either ineffective or in completely different categories.



# After *Alice*: District Courts

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- ▶ *Eclipse IP v. McKinley Equipment* (CD Cal, Sept. 4, 2014)
  - ▶ Invalidated (by 12(b)(6)) method claims “directed to the abstract idea of asking someone whether they want to perform a task, and if they do, waiting for them to complete it, and if they do not, asking someone else.”
  - ▶ “...the two-step test may be more like a one step test evocative of Justice Stewart’s most famous phrase. ... ‘I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it...’”
  
- ▶ *Every Penny Counts v. Wells Fargo* (MD Fla, Sept. 11, 2014)
  - ▶ Invalidated system and method claims for rounding up debits from an account and rounding down deposits, and moving the differences to a separate account.
  - ▶ “EPC’s inventions are a computerized application of a technique known from antiquity in which a small saving on many occasions accumulates into a large saving.” Long existed in scam form as “coin clipping,” more honestly in various savings or payment plans.
  - ▶ “The function performed by the computer at each step of the method is purely conventional.”

# After *Alice*: District Courts

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- ▶ ***Open Text v. Alfresco Software* (ND Cal, Sept. 19, 2014)**
  - ▶ Invalidated (by 12(b)(6)) system and software claims for automatically communicating first with a set and then a subset of parties over a network.
  - ▶ The claims “engage in the commonplace and time-honored practice of interacting with customers to promote marketing and sales.”
  - ▶ Presence of “email server coupled to the dialog computer” merely adds “decades-old technology that is certainly not inventive.”
  
- ▶ ***Amdocs v. Openet Telecom* (ED Va, Oct. 24, 2014)**
  - ▶ Invalidated patents for correlating and merging accounting records, and for collection and storage of network usage information.
  - ▶ For the accounting patent: “...it is difficult to conceive of broader terms with which the idea of correlating two records could be described.”
  - ▶ For the network use patent: “Collecting, filtering, aggregating, and completing network information amounts to ‘electronic recordkeeping,’ which is one of the most basic functions of a computer.”
  - ▶ “The concern of § 101 is not novelty, but preemption....A person may have invented an entirely new and useful advance, but if the patent claims sweep too broadly, or only claim the idea that was achieved rather than implementation of the idea, § 101 directs that the patent is invalid.”

# After *Alice*: District Courts

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- ▶ *Card Verification v. Citigroup* (ND Ill, Sept. 29, 2014)
  - ▶ Method claims for “verifying information for a transaction.”
  - ▶ Defendant moved for a Rule 12(b)(6) dismissal on the grounds that the claims were patent ineligible, therefore invalid.
  - ▶ “To survive a motion to dismiss, the plaintiff must do more than simply recite elements of a claim; the complaint must contain sufficient factual matter, accepted as true, to state a claim to relief that is plausible on its face. ... the court construes the complaint in the light most favorable to the nonmoving party.”
  - ▶ “... a review of the diagrams demonstrates incorporation of a computer, nonsecure network, and pseudorandom tag generating software. **A plausible** interpretation of the patent is that computing devices, software, keyboards, and credit card readers would be required to use the invention.” (emphasis added)
  - ▶ “... **when viewing the patent in the light most favorable to Card Verification**, it **plausibly** recites a patent-eligible application of the abstract idea of verifying a transaction. Citigroup’s Motion to Dismiss is therefore denied without prejudice. Citigroup is free to challenge the validity of the ‘245 Patent after discovery and claim construction are completed in this case.” (emphasis added)

# After *Alice*: District Courts: *Cal. Inst. Of Tech.*

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- ▶ *Cal. Inst. OfTech. v. Hughes Communs., Inc.* (C.D. Cal., Nov. 3, 2014)
  - ▶ Software patents with claims directed to software relating to error correction using code called an irregular repeat and accumulate code.
- ▶ Court engages in *Alice/Mayo* test:
  - ▶ Whether the Claim is directed to an abstract idea:
    - ▶ “The claims explicitly recite the fundamental concepts of encoding and decoding data. See, e.g., ’032 Patent, 9:57-58 (reciting device comprising a message-passing decoder); ’710 Patent, 7:14 (reciting method of encoding a signal). The concepts of encoding and decoding are longstanding steps in the process of error correction.”
    - ▶ “A patent on these essential concepts, without something more, would threaten to preempt the entire field of error correction.”
- ▶ Under *Alice/Mayo*, the claim is directed towards an abstract idea.

# After Alice: District Courts: *Cal. Inst. Of Tech.*

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- ▶ Next Step: Whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to significantly more than the judicial exception.
- ▶ Despite being generally directed to an abstract idea, the asserted claims contain meaningful limitations that represent sufficiently inventive concepts.
  - ▶ The irregular repetition of bits and the use of linear transform operations constitutes an inventive concept.
    - ▶ Although many of these limitations are mathematical algorithms, these algorithms are narrowly defined, and they are tied to a specific error correction process.
    - ▶ These limitations are not necessary or obvious tools for achieving error correction, and they ensure that the claims do not preempt the field of error correction.
- ▶ The continuing eligibility of this patent will not preclude the use of other effective error correction techniques. Therefore, all of the asserted claims are patentable.

# After *Alice*: District Courts: *Cal. Inst. Of Tech.*

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- ▶ Hughes Motion for Summary Judgment is denied and the claims are found patent eligible under 35 U.S.C. 101.
- ▶ Demonstrates lower courts not hostile towards software patents in all cases after *Alice*.
- ▶ Court applied both Mayo and Alice Tests, but found the Supreme Court's attempts to clarify 101 to be unclear.
  - ▶ “The Supreme Court in the future may provide a clearer outline for applying section 101 to software, but to this court, it at least must be true that section 101 protects a unique computing solution that addresses a unique computing problem.”

## After Alice: District Courts: *Smartflash LLC*

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- ▶ *Smartflash LLC, et al v. Apple, Inc, et al, in the U.S. District Court for the Eastern District of Texas, No. 13-cv-447*
- ▶ Claims directed to a data access terminal that is designed to take data from a supplier and provides the data to a carrier, using software code that receives the payment data and validation, and once the payment is made, retrieves data and a “condition for accessing the data” from the supplier and sends it to the carrier.
- ▶ Claims patent eligible under 101.
  - ▶ Specific limitations in the claims were sufficient to transform the abstract purpose to a patent eligible invention.

# After Alice: District Courts: *Smartflash LLC*

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## ► Representative claim comprising:

3. A data access terminal for retrieving data from a data supplier and providing the retrieved data to a data carrier, the terminal comprising:

a first interface for communicating with the data supplier;

a data carrier interface for interfacing with the data carrier;

a program store storing code; and

a processor coupled to the first interface, the data carrier interface, and the program store for implementing the stored code, the code comprising:

code to read payment data from the data carrier and to forward the payment data to a payment validation system;

code to receive payment validation data from the payment validation system;

code responsive to the payment validation data to retrieve data from the data supplier and to write the retrieved data into the data carrier; and

code responsive to the payment validation data to receive at least one access rule from the data supplier and to write the at least one access rule into the data carrier, the at least one access rule specifying at least one condition for accessing the retrieved data written into the data carrier, the at least one condition being dependent upon the amount of payment associated with the payment data forwarded to the payment validation system.



## After *Alice*: District Courts: *Smartflash LLC*

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- ▶ The court found that for purposes the *Alice*/*Mayo* test, the claims were directed to an abstract idea. (Yes)
  - ▶ “Payment is one of the primary ways a user becomes authorized, and the patents are directed toward validating payment data, which affects the “use rules” that determine whether access is permitted. Therefore, the general purpose of the claims—conditioning and controlling access to data based on payment—is abstract and a fundamental building block of the economy in the digital age.”
- ▶ Next the court determined whether there was an inventive concept that transformed the abstract idea into patent eligible subject matter. (Yes)
  - ▶ The patents address the unique problem of controlling a user’s access to data that the user already possesses by tracking use data and restricting access according to use rules. This sort of access control was also unknown in the pre-Internet era.
  - ▶ “As in *DDR Holdings*, the patents here do not simply apply a known business practice from the pre-Internet world to computers or the Internet. “The claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.”

# After *Alice*: District Courts: *Smartflash LLC*

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- ▶ Claims patent **eligible** under 101 as they contained specific limitations in the claims were sufficient to transform the abstract purpose to a patent eligible invention.
  - ▶ “...when taken as ordered combinations, the claims recite specific ways of combining system components and method steps beyond the routine use of the Internet. The claims address specific ways of managing access to digital content data based on payment validation through storage and retrieval of use status data and use rules in distinct memory types and evaluating the use data according to the use rules. The patents’ claims include meaningful limitations that “ensure the claims are more than a drafting effort designed to monopolize the abstract idea.”
- ▶ Again, we see a lower court finding a software patent’s claims eligible and using language from the *DDR Holdings* case, demonstrating the potential influence this case has had, and may continue to have, on the lower courts.

# After *Alice*: *McRO* (CD Cal)

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- ▶ *McRO v. Activision Blizzard* (Sept. 22, 2014)
- ▶ (Same judge as in *Eclipse IP*: George Wu.)
- ▶ Software method claims that analyze sound recordings to generate lip syncing in a 3D computer-generated character.
- ▶ Analysis divides the sound into phonemes, considers “weighted morph targets and time aligned phonetic transcriptions of recorded text, and other time aligned data.”

# After *Alice*: *McRO* (CD Cal)

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► **Representative claim comprises:**

A method for automatically animating lip synchronization and facial expression of three-dimensional characters comprising:

obtaining a first set of rules that defines a morph weight set stream as a function of phoneme sequence and times associated with said phoneme sequence;

obtaining a plurality of sub-sequences of timed phonemes corresponding to a desired audio sequence for said three-dimensional characters;

generating an output morph weight set stream by applying said first set of rules to each sub-sequence of said plurality of sub-sequences of timed phonemes;

and

applying said output morph weight set stream to an input sequence of animated characters to generate an output sequence of animated characters with lip and facial expression synchronized to said audio sequence.

## After *Alice*: *McRO* (CD Cal)

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- ▶ Court invalidates. Claims appear, *in isolation*, to be tangible and specific approaches to a problem, therefore eligible. *However*, once the prior art is considered, the only thing the claims add are “the use of rules, rather than artists, to set the morph weights and transitions between phonemes.”
- ▶ In other words, a claim is ineligible under § 101 no matter how many non-abstract elements are present, so long as those non-abstract elements are obvious(!)
- ▶ Patentee disclosed most of said prior art in the specification. Court comments: “One unintended consequence of *Alice*, and perhaps of this and other decisions to come, is an incentive for patent applicants to say as little as possible about the prior art in their applications.”

# After *Alice*: District Courts

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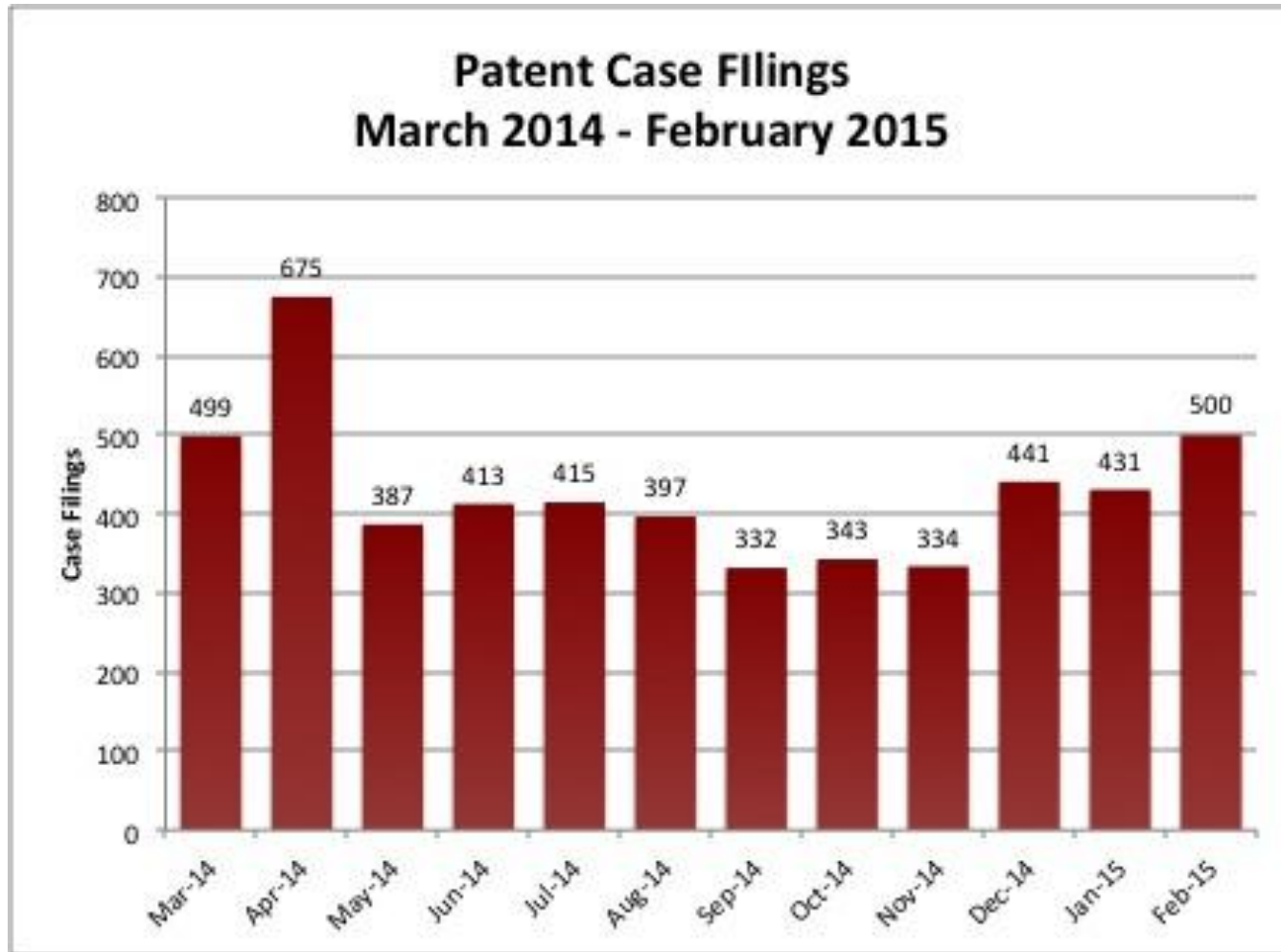
- ▶ *Helios Software LLC v. Spectorsoft Corp.* (D. Del. Sept. 25, 2014)
  - ▶ Patents covering methods of remotely monitoring data associated with an internet session and methods of controlling computer network access.
- ▶ All Claims found eligible.
  - ▶ Even if the claims cover an abstract idea, the use of a computer inserted “meaningful limitations” none of which could be performed by humans alone, such as the “real-time data capture, transmission, and reception.”

# After *Alice*: Litigation Generally

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- ▶ Summary: Between June 19, 2014 (*Alice* decision) and October 29, 2014, every claim facing a § 101 challenge in every post-*Alice* decision before the federal circuit was invalidated.
  - ▶ (See Timothy Lee, Vox.com “Software patents are crumbling, thanks to the Supreme Court”)
  - ▶ Arguable exception: *Card Verification v. Citigroup*, but only passed on the pleadings; the patents could still be defeated at a later stage.
  - ▶ On the Federal Circuit level, the June 30 retirement of Chief Judge Rader, famously hostile to § 101 invalidations, may be an additional factor.
  - ▶ *DDR Holdings, LLC v. Hotels.com, LP* in the federal circuit, and recent decisions in the lower courts may signify less hostility towards software patents.
- ▶ Patent litigation complaints filed in:
  - ▶ September 2013: 549.
  - ▶ April 2014: 675. Record high.
  - ▶ September 2014: 332. Down 40% from last year.
  - ▶ February 2015: 500.
  - ▶ (Litigation frequently slumps during the summer months, but normally recovers for the fall.)
  - ▶ Mark Lemley of Lex Machina theorizes that the post-*Alice* landscape has caused patentees to be concerned about the risk of invalidation. Result: fewer infringement lawsuits.

# After *Alice*: Litigation Generally



Source: Patently-O



# After *Alice*: Examiner Guidance

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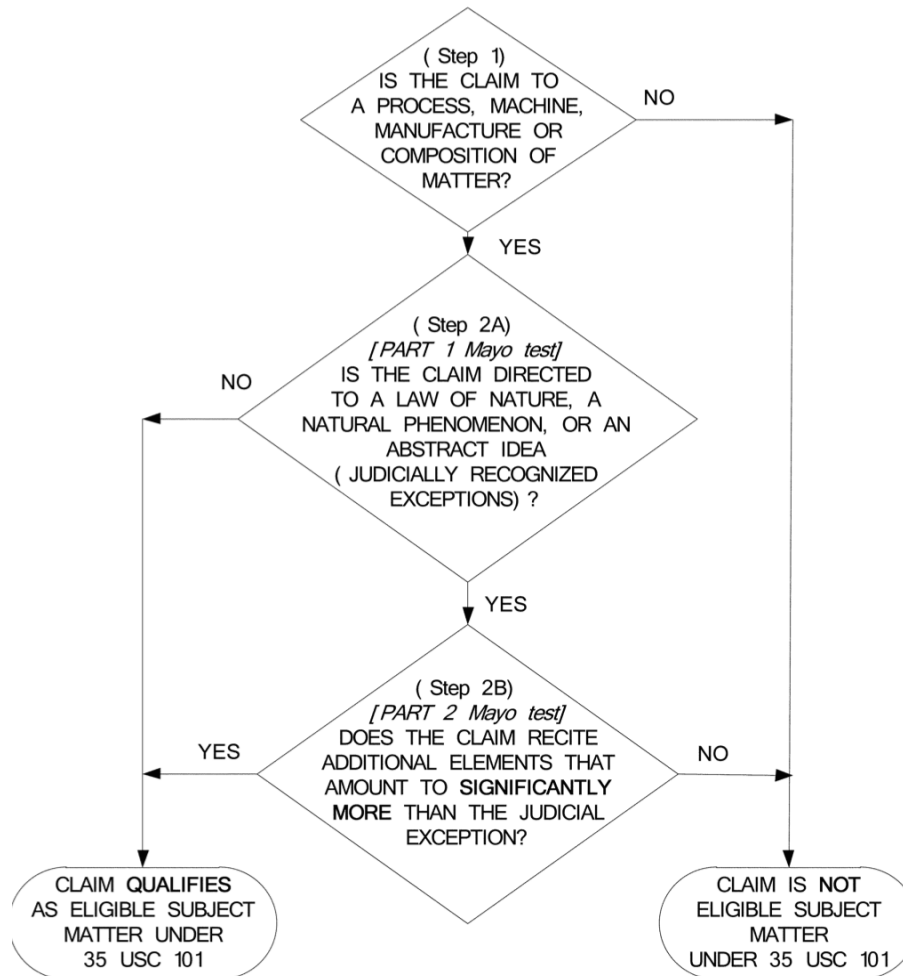
- ▶ The USPTO issued a memorandum on March 4, 2014, in response to *Mayo* and *Myriad*, supplying guidance for applications involving natural laws, phenomena, and/or products.
  - ▶ This was followed by post-*Alice* memorandums on June 25, 2014 and December 16, 2014. The December memo contained a subject matter eligibility test.
- ▶ The test from the December 16 memo is:
  - ▶ “Part 1: Is the claim to a process, machine, manufacture, or composition of matter”
  - ▶ “Part 2A: Is the claim directed to a judicial exception to what is patent eligible (abstract ideas product of nature, etc.)”
  - ▶ “Part 2B: Determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to significantly more than the judicial exception. A claim directed to a judicial exception must be analyzed to determine whether the elements of the claim, considered both individually and as an ordered combination, are sufficient to ensure that the claim as a whole amounts to **significantly more** than the exception itself.” (Inventive Concept)
- ▶ “To be patent-eligible, a claim that is directed to a judicial exception must include additional features to ensure that the claim describes a process or product that applies the exception in a meaningful way, such that it is more than a drafting effort designed to monopolize the exception. It is important to consider the claim as whole.”

# After Alice: Examiner Guidance

## SUBJECT MATTER ELIGIBILITY TEST FOR PRODUCTS AND PROCESSES

*PRIOR TO EVALUATING A CLAIM FOR PATENTABILITY, ESTABLISH THE  
BROADEST REASONABLE INTERPRETATION OF THE CLAIM.  
ANALYZE THE CLAIM AS A WHOLE WHEN EVALUATING FOR PATENTABILITY.*

From the  
December 16 Memo



# After *Alice*: Examiner Guidance

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- ▶ Limitations that may be enough to qualify as “significantly more” when recited in a claim with a judicial exception include:
  - ▶ Improvements to another technology or technical field; <sup>34</sup>
  - ▶ Improvements to the functioning of the computer itself; <sup>35</sup>
  - ▶ Applying the judicial exception with, or by use of, a particular machine; <sup>36</sup>
  - ▶ Effecting a transformation or reduction of a particular article to a different state or thing; <sup>37</sup>
  - ▶ Adding a specific limitation other than what is well-understood, routine and conventional in the field, or adding unconventional steps that confine the claim to a particular useful application; <sup>38</sup> or
  - ▶ Other meaningful limitations beyond generally linking the use of the judicial exception to a particular technological environment.
  
- ▶ Link to December 16 Guidelines:
  - ▶ <http://www.gpo.gov/fdsys/pkg/FR-2014-12-16/pdf/2014-29414.pdf>

# After *Alice*: Examiner Guidance

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- ▶ On Jan. 27, 2015, the USPTO released examples of abstract idea claims and their patentability, which included DDR Holdings claims and more:
- ▶ I. A computer-implemented method for protecting a computer from an electronic communication containing malicious code, comprising executing on a processor the steps of:
  - receiving an electronic communication containing malicious code in a computer with a memory having a boot sector, a quarantine sector and a non-quarantine sector;
  - storing the communication in the quarantine sector of the memory of the computer, wherein the quarantine sector is isolated from the boot and the non-quarantine sector in the computer memory, where code in the quarantine sector is prevented from performing write actions on other memory sectors;
  - extracting, via file parsing, the malicious code from the electronic communication to create a sanitized electronic communication, wherein the extracting comprises
    - scanning the communication for an identified beginning malicious code marker,
    - flagging each scanned byte between the beginning marker and a successive end malicious code marker,
    - continuing scanning until no further beginning malicious code marker is found, and
    - creating a new data file by sequentially copying all non-flagged data bytes into a new file that forms a sanitized communication file; transferring the sanitized electronic communication to the non-quarantine sector of the memory; and
    - deleting all data remaining in the quarantine sector.

Link: [http://www.uspto.gov/patents/law/exam/abstract\\_idea\\_examples.pdf](http://www.uspto.gov/patents/law/exam/abstract_idea_examples.pdf)

# After Alice: Examiner Guidance

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- ▶ Step 1:
- ▶ The method claim recites a series of acts for protecting a computer from an electronic communication containing malicious code. Thus, the claim is directed to a process, which is one of the statutory categories of invention (*Step 1: YES*).
  
- ▶ Step 2:
- ▶ The claim is then analyzed to determine whether it is directed to any judicial exception.
  - ▶ The claimed invention relates to software technology for isolation and extraction of malicious code contained in an electronic communication. The claim is directed towards physically isolating a received communication on a memory sector and extracting malicious code from that communication to create a sanitized communication in a new data file.
  - ▶ Such action does not describe an abstract concept, or a concept similar to those found by the courts to be abstract, such as a fundamental economic practice, a method of organizing human activity, an idea itself (standing alone), or a mathematical relationship. In contrast, the invention claimed here is directed towards performing isolation and eradication of computer viruses, worms, and other malicious code, a concept inextricably tied to computer technology and distinct from the types of concepts found by the courts to be abstract.
  
- ▶ Accordingly, the claimed steps do not recite an abstract idea. Nor do they implicate any other judicial exception. The claim is not directed to any judicial exception (*Step 2A: NO*). The claim is **Eligible**.

# After *Alice*: Examiner Guidance

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- ▶ Another Example:
- ▶ I.A computer-implemented method for halftoning a gray scale image, comprising the steps of:
  - ▶ generating, with a processor, a blue noise mask by encoding changes in pixel values across a plurality of blue noise filtered dot profiles at varying gray levels;
  - ▶ storing the blue noise mask in a first memory location;
  - ▶ receiving a gray scale image and storing the gray scale image in a second memory location;
  - ▶ comparing, with a processor on a pixel-by-pixel basis, each pixel of the gray scale image to a threshold number in the corresponding position of the blue noise mask to produce a binary image array; and converting the binary image array to a halftoned image.

# After *Alice*: Examiner Guidance

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## ▶ Step 1:

- ▶ The method claim recites a series of acts for generating a blue noise mask and using that blue noise mask to halftone a gray scale image. Thus, the claim is directed to a process, which is one of the statutory categories of invention (*Step 1: YES*).

## ▶ Step 2A:

- ▶ The claim is then analyzed to determine whether it is directed to any judicial exception. The claim recites the step of generating a blue noise mask, which as defined in the background is produced through an iterative mathematical operation. The courts have found that mathematical relationships fall within the judicial exceptions, often labelled as “abstract ideas.” Since the mathematical operation of generating a blue noise mask is recited in the claim, the claim is “directed to” a judicial exception (*Step 2A: YES*).

# After *Alice*: Examiner Guidance

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- ▶ Step 2B:
- ▶ The claim recites the additional steps of comparing the blue noise mask to a gray scale image to transform the gray scale image to a binary image array and converting the binary image array into a halftoned image.
  - ▶ These additional steps tie the mathematical operation (the blue noise mask) to the processor's ability to process digital images.
  - ▶ These steps add meaningful limitations to the abstract idea of generating the blue noise mask and therefore add **significantly more** to the abstract idea than mere computer implementation.
- ▶ The claim, when taken as a whole, does not simply describe the generation of a blue noise mask via a mathematical operation and receiving and storing data, but combines the steps of generating a blue noise mask with the steps for comparing the image to the blue noise mask and converting the resulting binary image array to a halftoned image.
- ▶ By this, the claim goes beyond the mere concept of simply retrieving and combining data using a computer.



# After *Alice*: Examiner Guidance

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- ▶ Step 2B Continued:
- ▶ Finally, viewing the claim elements as an ordered combination, the steps recited in addition to the blue noise mask **improve** the functioning of the claimed computer itself.
  - ▶ In particular, the claimed process with the improved blue noise mask allows the computer to use to less memory than required for prior masks, results in faster computation time without sacrificing the quality of the resulting image as occurred in prior processes, and produces an improved digital image.
- ▶ Taking all the additional claim elements individually, and in combination, the claim as a whole amounts to significantly more than the abstract idea of generating a blue noise mask (*Step 2B: YES*). The claim recites **patent eligible** subject matter.

# After *Alice*: Examiner Guidance

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- ▶ Natural products include: chemicals derived from natural sources; foods; nucleic acids, proteins and peptides, and organisms; metals and metallic compounds that exist in nature; minerals and natural materials. Products of nature are not patent eligible.
  - ▶ But not when the “natural product” is actually non-naturally occurring and markedly different in structure or function from naturally occurring products, even if the difference is the result of routine human activity.
  - ▶ USPTO Guidelines released in December of 2014 explains that a claimed invention can now be found “markedly different” from a naturally occurring product by not only differences in structure, but also differences in biological or pharmacological functions, chemical and physical properties, and phenotype.
  - ▶ The new “markedly different” standard provides practitioners with more options for distinguishing their product from a potential naturally occurring counterpart.
- ▶ Abstract ideas include: fundamental economic practices; certain methods of organizing human activities; "an idea of itself" ("a principle, an original cause, a motive"); mathematical relationships or formulas.
- ▶ When in doubt, the examiner should assume an ineligible concept is present in the claim.

# After *Alice*: Examiner Guidance

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- ▶ “Markedly Different” Standard for Products of Nature can now be shown with more than just differences in structure:
  - ▶ This revised analysis represents a change from prior guidance, because now changes in functional characteristics and other non-structural properties can evidence markedly different characteristics, whereas in the March 2014 Procedure only structural changes were sufficient to show a marked difference.
- ▶ The markedly different characteristics analysis compares the nature-based product limitation to its naturally occurring counterpart in its natural state.
  - ▶ “In the case of a nature-based combination, the closest counterpart may be the individual nature-based components that form the combination.”

# After *Alice*: Examiner Guidance

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- ▶ Non-limiting examples of the types of characteristics considered by the courts when determining whether there is a marked difference include:
  - ▶ Biological or pharmacological functions or activities;
  - ▶ Chemical and physical properties;
  - ▶ Phenotype, including functional and structural characteristics;
  - ▶ And structure and form, whether chemical, genetic or physical.
- ▶ If the claim includes a nature-based product that has markedly different characteristics, the claim does not recite a “product of nature” exception and is patent eligible.

# After *Alice*: Examiner Guidance

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- ▶ The USPTO also released examples of claims directed to products of nature with the December guidelines.
- ▶ Example Claims
- ▶ An inoculant for leguminous plants comprising:
  - ▶ 1. A plurality of selected mutually non-inhibitive strains of different species of bacteria of the genus *Rhizobium*, said strains being unaffected by each other in respect to their ability to fix nitrogen in the leguminous plant for which they are specific;
  - ▶ 2. An inoculant for leguminous plants comprising a mixture of *Rhizobium californiana* and *Rhizobium phaseoli*.
- ▶ Link: [http://www.uspto.gov/patents/law/exam/mdc\\_examples\\_nature-based\\_products.pdf](http://www.uspto.gov/patents/law/exam/mdc_examples_nature-based_products.pdf)

# After *Alice*: Examiner Guidance

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- ▶ Analysis of Claim 1:
- ▶ Claim 1: **Ineligible**. There is no indication in the specification that the claimed mixture of bacteria has any characteristics (structural, functional, or otherwise) that are different from the naturally occurring bacteria.
  - ▶ Thus, the mixture does not have markedly different characteristics from what occurs in nature, and is a “product of nature” exception.
  - ▶ Accordingly, the claim is directed to an exception (*Step 2A: YES*).
- ▶ Because the claim does not include any additional features that could add significantly more to the exception (*Step 2B: NO*), the claim does not qualify as eligible subject matter, and should be rejected under 35 U.S.C. § 101.

# After *Alice*: Examiner Guidance

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- ▶ Analysis of Claim 2:
  
- ▶ Claim 2: Eligible. In nature, *R. phaseoli* only infects garden beans, and *R. californiana* only infects lupine. When mixed together as claimed, the combination now infects a third species of plant: *R. californiana* infects both lupine and wild indigo, but *R. phaseoli* continues to only infect garden beans.
  - ▶ The combination of species thus has changed *R. californiana* such that, when combined with *R. phaseoli*, it has a different characteristic (biological function) than it had in nature, i.e., the claimed combination infects a new group of leguminous plants (wild indigo) as compared to the naturally occurring bacteria by themselves.
  - ▶ This functional difference rises to the level of a marked difference, and accordingly the claimed mixture is not a “product of nature” exception.
  
- ▶ Thus, the claim is not directed to an exception of what may be patented, (Step 2A: NO), and qualifies as eligible subject matter.

# After *Alice*: Examiner Guidance

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- ▶ Claims may be “significantly different” from an ineligible concept (therefore eligible), notwithstanding its use of a ineligible concept, if they recite additional elements (or steps) that:
  - ▶ impose meaningful limits on claim scope,
  - ▶ relate to the ineligible concept in a significant way (“more than nominally, insignificantly, or tangentially related to” it),
  - ▶ do more than describe the ineligible concepts with instructions to apply or use them, with or without a generic computer performing routine and well-understood functions,
  - ▶ add a feature that is more than well-understood, purely conventional or routine in the relevant field,
  - ▶ (for natural element claims) include a particular machine or transformation of a particular article that implements the natural elements into a particular practical application,
  - ▶ (for abstract idea claims) improve another technology, technical field, or the functioning of the computer itself.



# New USPTO Subject Matter Eligibility Guidelines – July and September 2015

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- ▶ On July 30, 2015, the USPTO issued a July 2015 Update on Subject Matter Eligibility. The new guidelines were to update the guidelines issued the USPTO just issued in December 2014 and January 2015. The new update offers:
  1. July 2015 Update: Subject Matter Eligibility;  
<https://www.gpo.gov/fdsys/pkg/FR-2015-07-30/pdf/2015-18628.pdf>
  2. Update Appendix 1: Examples;  
<http://www.uspto.gov/sites/default/files/documents/ieg-july-2015-app1.pdf>
  3. Update Appendix 2: Index of Eligibility Examples;  
<http://www.uspto.gov/sites/default/files/documents/ieg-july-2015-app2.pdf>
  4. Update Appendix 3: Subject Matter Eligibility Court Decisions; and  
<http://www.uspto.gov/sites/default/files/documents/ieg-july-2015-app3.pdf>
  5. Update: Interim Eligibility Guidance Quick Reference Sheet  
<http://www.uspto.gov/sites/default/files/documents/ieg-july-2015-qrs.pdf>

# New USPTO Subject Matter Eligibility Guidelines

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- ▶ More examples are provided and the case law regarding decisions relating to I01 have been updated
- ▶ Guidelines on-line can be found at <http://www.uspto.gov/patent/laws-and-regulations/examination-policy/2014-interim-guidance-subject-matter-eligibility-0>

# After *Alice*: Before the USPTO

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- ▶ After the *Alice* memo, supplemental office actions with the following form paragraph have issued for many software applications previously considered acceptable under § 101:
  - ▶ “Claims... are rejected under 35 U.S.C. 101 because the claimed invention is directed to non statutory subject matter. In the instant invention, the claims are directed towards the concept of... The claims do not recite limitations that are ‘significantly more’ than the abstract idea because the claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment. It should be noted the limitations of the current claims are performed by the generically recited processor. The limitations are merely instructions to implement the abstract idea on a computer and require no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry...”
- ▶ Additionally, some Notices of Allowance were withdrawn in the months immediately following *Alice*, even after issue fee payment.
  - ▶ (Source: Gene Quinn, IPWatchdog. With no NoAs that predate the *Alice* memo still pending, presumably this is now a non-issue.)

# After *Alice*: Before the USPTO

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- ▶ § 101 rejection rate for applications in business method art units (3620, 3680, and 3690) have reached almost 89% by June 2015.
  - ▶ (Source: Robert Sahs, “Patent Invalidity Rates: The Summertime Blues Continue”)
- ▶ However, note the post-*Alice* issuance of the following “business method on a computer” patents:
  - ▶ Patent No. 8,799,155: “Mortgage Matching System and Method” (due to complex analysis of “compliance” in meeting payments?)
  - ▶ Patent No. 8,800,857: “System and Method for Crediting Loyalty Program Points and Providing Loyalty Rewards by Use of an Electronic Tag” (due to “tag” hardware?)
  - ▶ Patent No. 8,805,740: “Mobile Device Credit Account”
  - ▶ Patent No. 8,811,711: “Recognizing Financial Document Images” (due to video stream analysis?)
  - ▶ Patent No. 8,818,868: “Foreign Currency Solution” (due to use of a GPS to determine the location and an applicable currency account?)
  - ▶ Patent No. 8,818,893: “Dynamic Payment Generator” (due to a “rules engine” and form generator?)
  - ▶ Patent No. 8,844,058: “Systems and Methods for Providing Privacy Settings for Applications Associated with a User Profile”

# After *Alice*: Before the USPTO

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- ▶ **8,799,155 representative claim comprises:**
  - ▶ providing enrollment in a mortgage matching system to eligible mortgage customers, wherein eligibility requirements include the requirement that eligible mortgage customers hold both a mortgage account and an additional account with the financial institution and that each monthly mortgage payment is automatically paid from the additional account;
  - ▶ monitoring continued compliance with the eligibility requirements by a monitoring engine implemented by at least one computer processor;
  - ▶ terminating enrollment of non-compliant mortgage customers in the rewards program;
  - ▶ determining a reward payment amount to be made by the financial institution to each complying mortgage customer using a fulfillment engine implemented by the at least one computer processor, wherein the reward payment amount is a predetermined percentage of principal and interest paid by each complying mortgage customer during a predetermined time period;
  - ▶ providing the customer with multiple selectable locations for depositing the calculated reward payment amount to allow the customer to pre-select a location; and
  - ▶ transferring the calculated reward payment amount to the pre-selected location for each complying mortgage customer, wherein the pre-selected location is accessible to the corresponding complying mortgage customer.

# After *Alice*: Before the USPTO

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- ▶ **8,805,740** representative claim comprises:
  - ▶ associating a unique ID of a MCD with a credit account, the unique ID corresponding to a user of the MCD, the credit account sponsored by a financial entity;
  - ▶ dividing the credit account into one or more sub-credit accounts;
  - ▶ apportioning credit from a credit line of the credit account to at least some of the one or more sub-credit accounts;
  - ▶ initiating a transaction on behalf of the MCD;
  - ▶ obtaining transaction approval for the transaction based on one or more predetermined transaction rules and no link between the credit account sponsored by the financial entity and the MCD at the time of the transaction; and
  - ▶ synchronizing a server of the financial entity with the MCD based on the transaction initiated by the MCD, wherein the synchronizing occurs when a link between the server of the financial entity and the MCD is available, and
  - ▶ wherein at least some of at least one of the associating, initiating, obtaining, or synchronizing are implemented at least in part via a processing unit.

# After *Alice*: Before the USPTO

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- ▶ *U.S. Bancorp v. Solutran, Inc.* (PTAB, August 7, 2014).
  - ▶ Patent on method for processing paper checks, using check data to promptly make a deposit into a merchant's account and then creating a check image to match with the check data.
  - ▶ PTAB found the “basic, core concept” of the patent to be closer to a technological process than an abstract idea.
  - ▶ The method of processing paper checks was therefore patent eligible under 101.
  
- ▶ *Salesforce.com Inc. v Virtualagility, Inc* (PTAB, September 16, 2014).
  - ▶ Patent directed towards managing a collaborative activity by using a computer database filled with various types of data related to a company- such as customer information and economic data- so that a user could sort the information to show how best to allocate company resources.
  - ▶ The PTAB found that claiming the use of models to aid in processing management information was a “disembodied concept” not tied to a specialized computer and was therefore an abstract idea under step 1 of the *Alice/Mayo* test .
  - ▶ The claims were found ineligible under step 2. The PTAB held that having a conventional generic computer perform the patent's steps was not an inventive concept.

# After *Alice*: Before the USPTO

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- ▶ *Ex parte Jung* (PTAB, August 27, 2014).
  - ▶ Patent for methods of calculating risk using epigenetic information, using a computer. Some claims had VERY generic implementation.
  - ▶ Examiner rejected several (though not all) claims under § 101.
  - ▶ PTAB agrees. Calculating risk based on factors, even when a factor is explicitly “epigenetic,” is abstract. Computer implementation was too generic in the rejected claims.
  
- ▶ *Ex parte Cote* (PTAB, Sept. 3, 2014).
  - ▶ Patent in the field of electronic design automation, for “phase shifting” “clusters” representing “a plurality of shapes,” the shapes defined using a “grow operation” to determine proximity.
  - ▶ Originally rejected by the Examiner as obvious. PTAB found the Examiner’s interpretation of the claims were overbroad.
  - ▶ However, a new ground of rejection under § 101 was entered: the concept of phase shifting is abstract.



# After *Alice*: Before the USPTO

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- ▶ **Dell Inc. v. Disposition Servs. LLC., (PTAB Jan. 9, 2015)**
  - ▶ Disposition Servs owns patent 5,424,944 which claims a method for creating records for assets being disposed and tracking them through the disposal process.
- ▶ **PTAB found that the claims simply involved the abstract idea of a conventional method for handling a customer's physical item in such a way that the customer can verify that its handling instructions were followed.**
  - ▶ The computer and database limitations recited in some claims were not meaningful given the function performed by the computer was purely conventional. Not enough to transform the unpatentable process into a patentable one.

# Lessons of § 101 Case Law

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- ▶ Do not claim so broadly as to preempt all practical uses of an abstract idea or natural law/product.
  - ▶ Add “meaningful limitations” which are neither conventional nor obvious at the time of invention.
  - ▶ Include one or more specific implementations.
  - ▶ When challenged on § 101 grounds, define said idea or law much more broadly than the claims in question.
- ▶ Write claims (and a description) that emphasize the technological contribution or improvement of the innovation. Consider how the invention improves the function of the computer itself or in any other technology or technical field.
- ▶ Passing the “machine-or-transformation” test is helpful, although not a guarantee.
  - ▶ Where possible, tie to a specific machine.
  - ▶ Also tie method operations to specific components. E.g. don’t just “store,” “store in a memory.”

# Lessons of § 101 Case Law

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- ▶ File a large number of claims of different classes, including means-plus-function.
  - ▶ Add dependent claims to help apply in the doctrine of claim differentiation (differentiating between the idea and one implementation thereof).
- ▶ Confirm that:
  - ▶ method claims cannot be performed by a human being, especially mentally. (For instance, can a human determine which branch of each decision point in a flowchart to take, without computer assistance?)
  - ▶ system claims, if existing to execute a method, comprise more than the components of a basic, “generic” computer.

# Lessons of § 101 Case Law

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- ▶ Remember that the claim language is what matters; non-abstract details in the specification will not help you.
- ▶ But in case means-plus-function is applied, in the specification:
  - ▶ Add as much hardware as possible.
  - ▶ Add flowcharts setting forth algorithms.
- ▶ For software drawings, do not use a simplistic line chart (a box with a few smaller boxes inside to represent a computer) or a simplistic flow chart, but complex and layered line and flow charts.
- ▶ Avoid claiming anything that could be considered “a method of organizing human activity.”
- ▶ Claim any software as encoded on a “non-transitory” medium.

# Lessons of § 101 Case Law

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- ▶ Address rejections inconsistent with USPTO's current guidance (which appears more flexible than it has been applied by some examiners).
  - ▶ Speak with the examiner, then the supervisor, then the group director.
  - ▶ If all else fails, file a response on the record explaining your position.
- ▶ Appeal every claim rejection, not just some, to avoid potential estoppel.
- ▶ *Alice* and its guidelines are retroactive, so consider filing reissues to address § 101 deficiencies of issued patents.
- ▶ When responding to a Post-Alice 101 rejection:
  - ▶ Consider interviewing every office action, and have prepared responses to the examiners potential arguments. (Including proposed amendments if possible.
  - ▶ Then file a response after the interview.

# Lessons of § 101 Case Law

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- ▶ How practitioners can benefit from the DDR ruling:
  - ▶ Determine whether your claims are necessarily rooted in computer technology to overcome a problem that is specific to the realm of computer networks
- ▶ Draft the claims in a way that does not merely recite the performance of a known business practice that has existed longer than the internet, and provide that the internet be used to solve the problem.
  - ▶ Ensure that if the claims specify an interaction with the internet or a computer, that this interaction yields a result that is different from the conventional or expected result.
  - ▶ Determine whether the claims provide a specific way to solve a problem that is specific to computer networks, and in doing so, do not preempt every application of the abstract idea.

# Lessons of § 101 Case Law

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- ▶ How practitioners can benefit from *Cal. Inst. OfTech. v. Hughes Communs., Inc.*
  - ▶ Ask whether your claims improve a computer's functionality by applying unique concepts to solve a unique problem.
  - ▶ If a claim is directed to an abstract idea, include meaningful limitations that are both narrowly defined and tied to solving a specific problem. So long as your claims do not preempt the entire field associated with solving the specific problem, the asserted claims may be patentable. In other words, focus on an unconventional way to fix a conventional problem.
  - ▶ Just because an algorithm can be reduced to a mathematical formula, does not mean it is unpatentable. This would make almost all software patents ineligible, and the Supreme Court has stated mathematical formulas may be considered patentable in the right context. See *Diehr*, 450 U.S. at 189.

# Lessons of § 101 Case Law

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- ▶ For biotech, to avoid a 101 rejection, claim a method of use and a composition specifically tied to the method of use as taught in the specification. Remember, showing changes in structure from a product of nature is no longer the only way to show a marked difference. You may bolster your argument by relying on changes in functionality as well. For example, you have found a particular DNA sequence found in nature that is useful, when attached to a tumor killing molecule, for targeting a particular malignant cell type. Claim the sequence attached to the molecule (not a product of nature). For example, a claim might read:
  - ▶ 1. A composition comprising a sequence of the formula xxxx attached to a molecule Z in a pharmaceutically acceptable carrier.
  - ▶ 2. The composition of claim 1 wherein the carrier is an isotonic solution.
  - ▶ 3. A method of treating (disease ZZ) by administration of a therapeutically effective amount of a composition according to claim 1.
  - ▶ 4. The method of claim 3 wherein there is administered to a mammal a dosage of .01 to .1 mg.



# Design Patents

March 2016



# Generally

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- ▶ 35 U.S.C. §171: Patents for designs.
  - ▶ Whoever invents any new, original, and ornamental design for an article of manufacture may obtain a patent therefor, subject to the conditions and requirements of this title.
  - ▶ The provisions of this title relating to patents for inventions shall apply to patents for designs, except as otherwise provided.
- ▶ For information regarding international design patents and the Hague Convention, there is whole other presentation

# Generally (Cont.)

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- ▶ Design Patents used to protect novel and non-obvious designs
  - ▶ Not the functional aspects
  - ▶ Must be attached to an article of manufacture
    - ▶ Not music
    - ▶ Not artwork on a canvas
  - ▶ Not required to show distinctiveness in mind of consumer
  - ▶ Not required to show use in commerce
  - ▶ Protects visual appearance
    - ▶ Configuration or shape of article
    - ▶ Surface ornamentation
    - ▶ Combination thereof

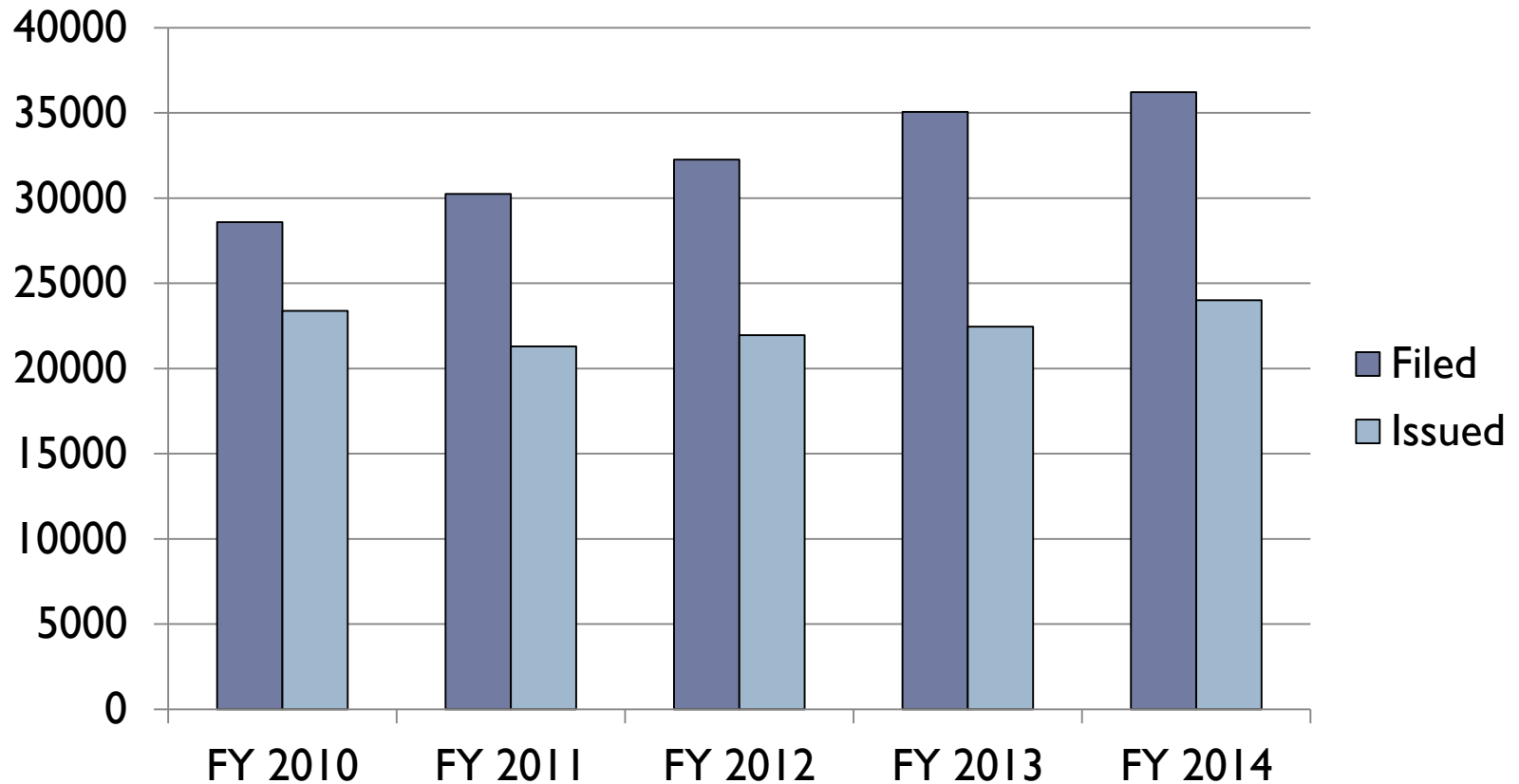
# Generally (Cont.)

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- ▶ Granted for ornamental features
  - ▶ Look has to be driven by ornamentation, not function
  - ▶ To determine if design is primarily ornamental, consider:
    - ▶ If there are alternative designs that might serve the same function
    - ▶ If alternative designs would affect the utility
    - ▶ If a utility patent covers the same article
    - ▶ How the ornamental features are advertised
    - ▶ Whether some design elements are not clearly dictated by any function
- ▶ Infringement test (*Egyptian Goddess, Inc. v. Swisa, Inc.*)
  - ▶ whether an ordinary observer, familiar with the prior art, would be deceived into thinking that the accused design was the same as the patented design

# Design Patents at the USPTO

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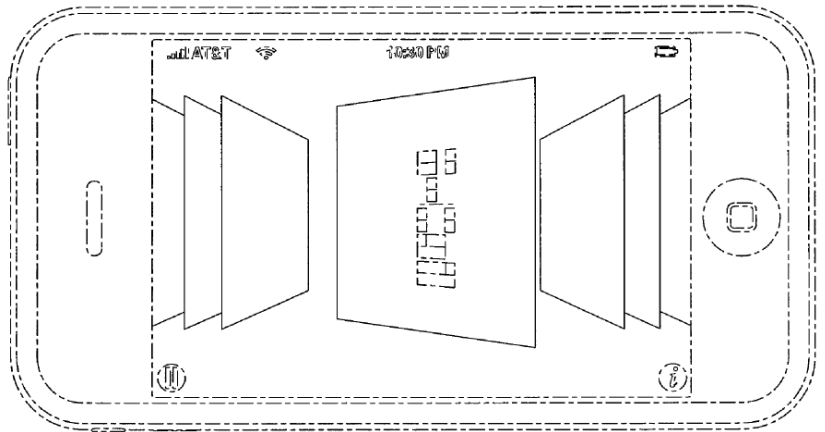
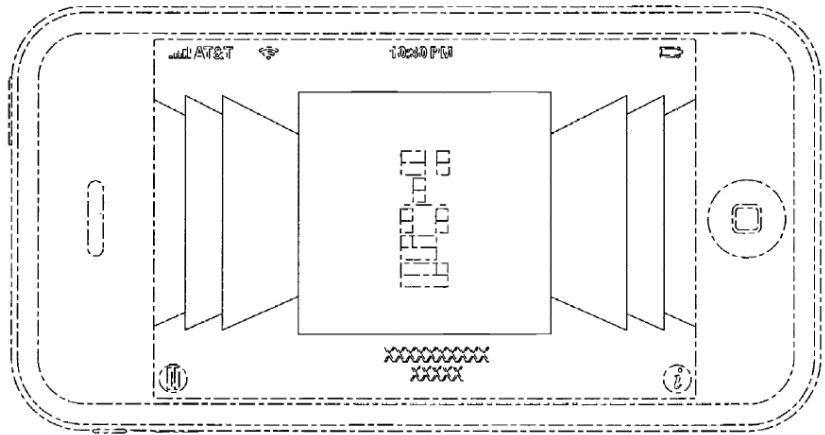
# Examples

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–Patent No.: US D613,300 S

–Claim: The ornamental design for an animated graphical user interface for a display screen or portion thereof, as shown and described.

–The broken lines showing of the display screen, electronic device and other features form no part of the claimed design.



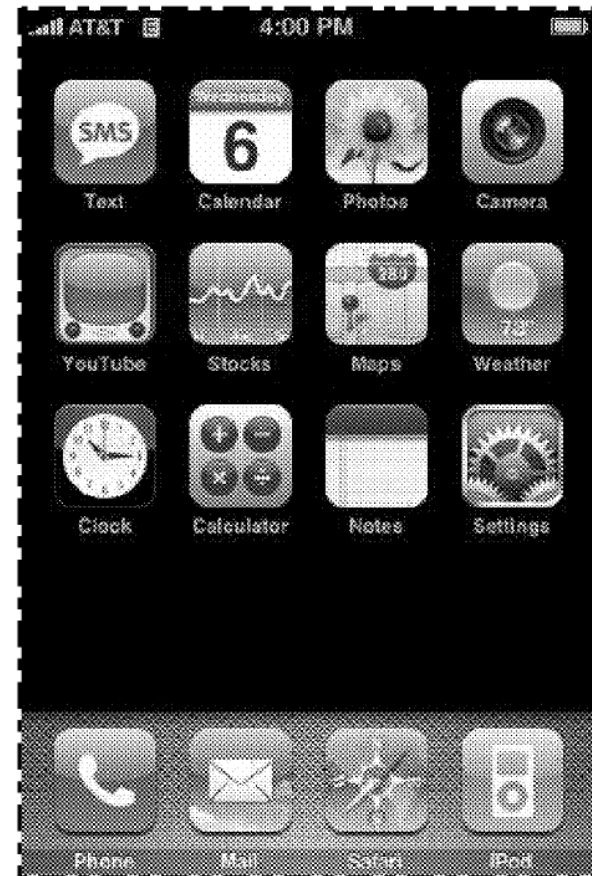
# Examples

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–Patent No.: US D604,305 S

–Claim: The ornamental design for a graphical user interface for a display screen or portion thereof, as shown and described.

–The broken lines showing of a display screen in both views forms no part of the claimed design.



# U.S. Provisional Patent Application

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- ▶ Lower-cost first patent filing
- ▶ Filed under 35 U.S.C. § 111(b)
- ▶ Does not need a formal patent claim or oath or declaration
- ▶ Should not include prior art statement
- ▶ Application is not examined
- ▶ Allows inventor to establish an early effective filing date in a later filed nonprovisional application
- ▶ Allows inventor to use “Patent Pending” in connection with the description of the invention



# U.S. Provisional Patent Application (cont.)

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- ▶ Lasts 12 months from the date of filing
  - ▶ Cannot be extended
  - ▶ Must file a corresponding nonprovisional application for a patent during this period
    - ▶ Must contain specific reference to the provisional application
- ▶ A public disclosure more than 1 year before the provisional application filing date would preclude patenting in the United States

# U.S. Provisional Patent Application (cont.)

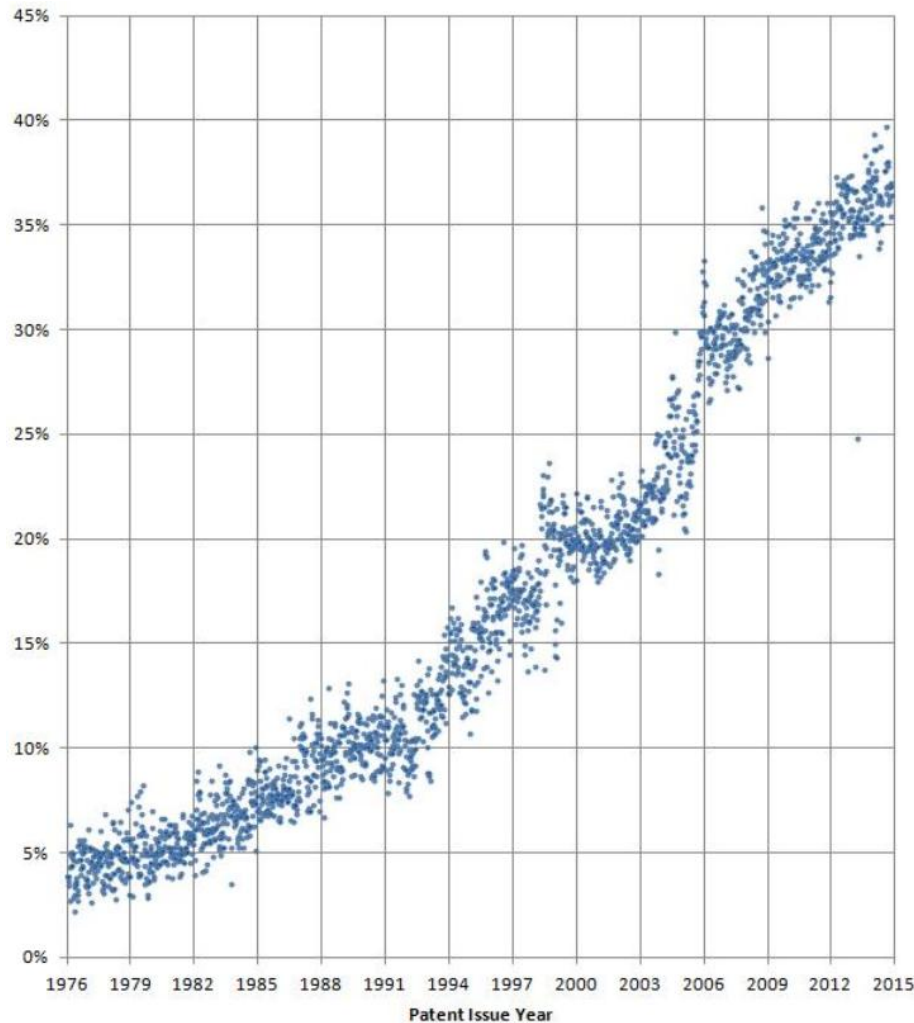
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## ▶ Requirements

- ▶ Filing Fee
- ▶ Written Description of the Invention
- ▶ Preferably drawings necessary to understand the invention
- ▶ Cover Sheet Identifying
  - ▶ the application as a provisional application for patent;
  - ▶ the name(s) of all inventors;
  - ▶ inventor residence(s);
  - ▶ title of the invention;
  - ▶ name and registration number of attorney or agent and docket number (if applicable);
  - ▶ correspondence address; and
  - ▶ any U.S. Government agency that has a property interest in the application.

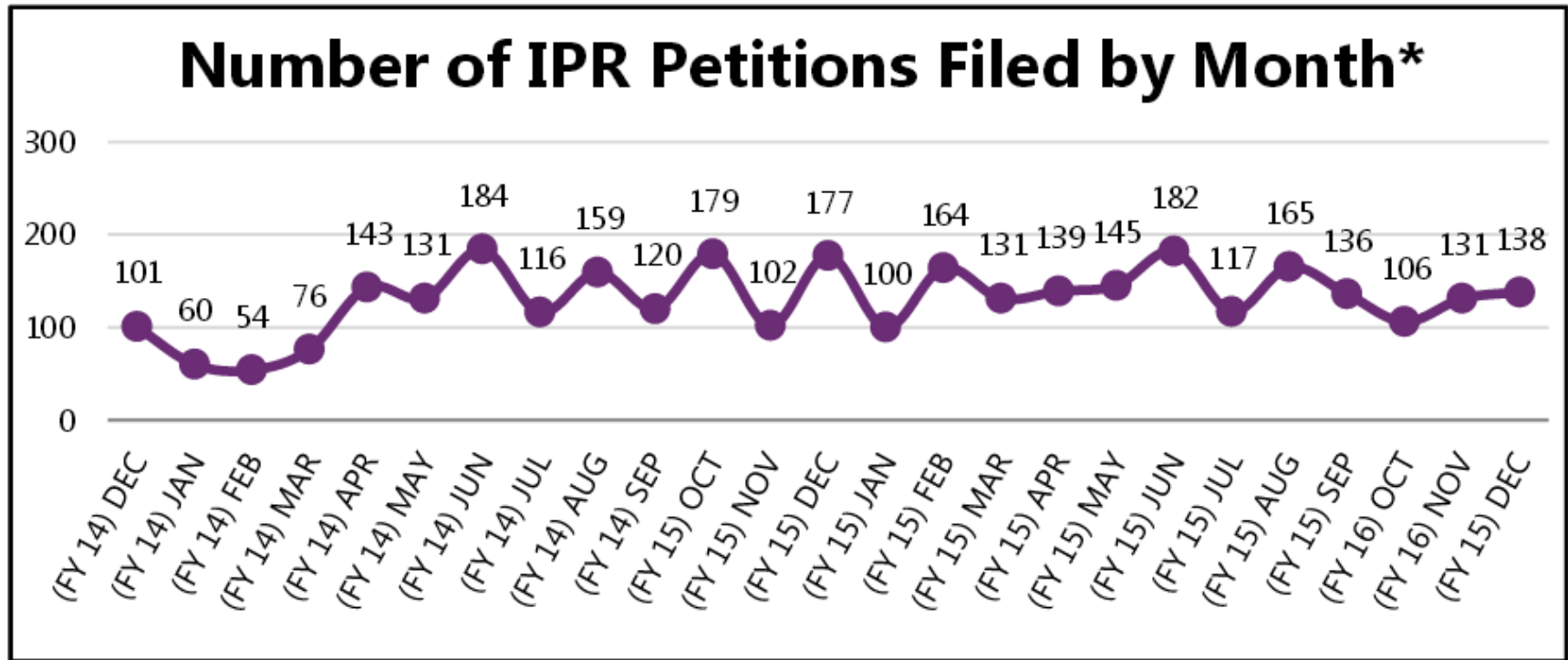
# Statistics: Issued Computer Patents

% of Patents that are Computer Patents



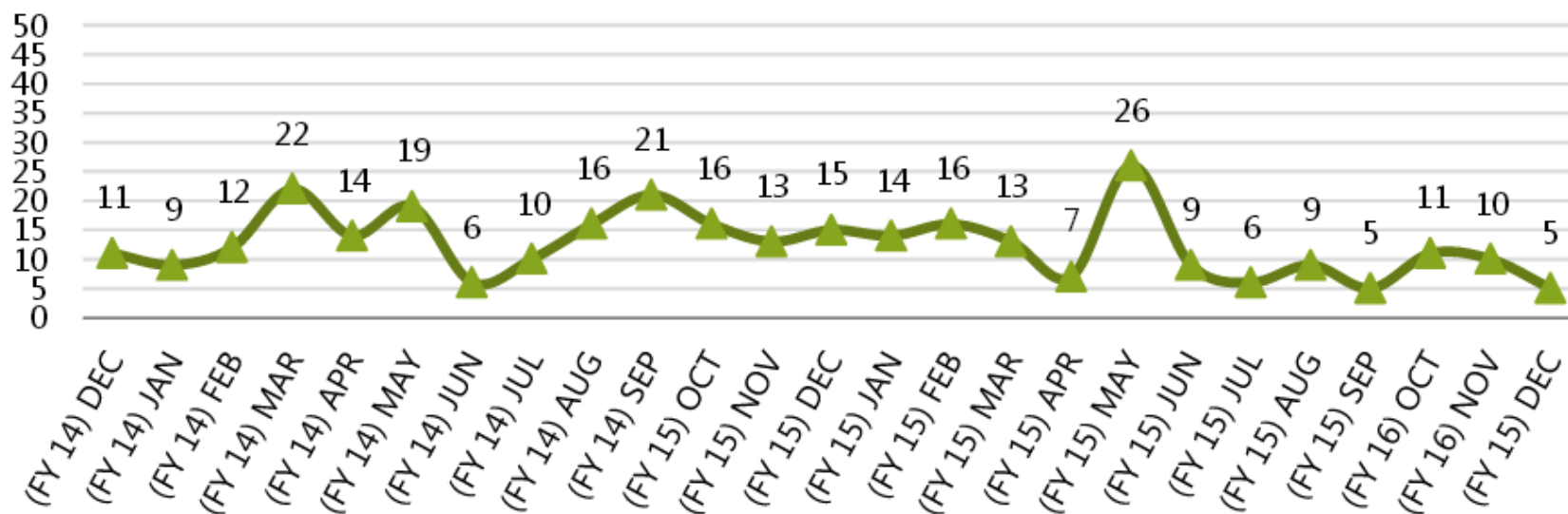
“Computer patents” meaning any patent with an independent claim containing at least one of the following terms: computer, processor, software, machine-readable, information, memory, data, virtual, or storage-media

# Statistics: BPAI/PTAB

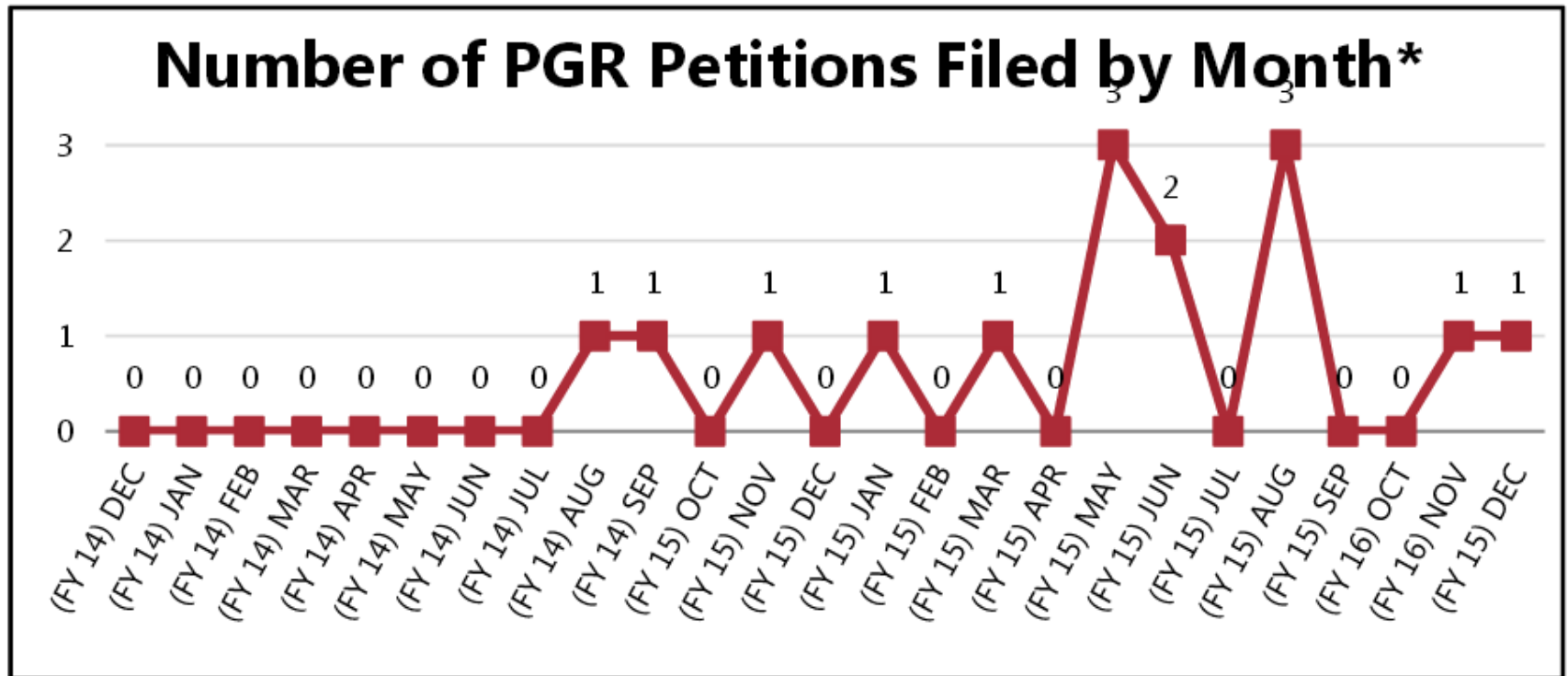


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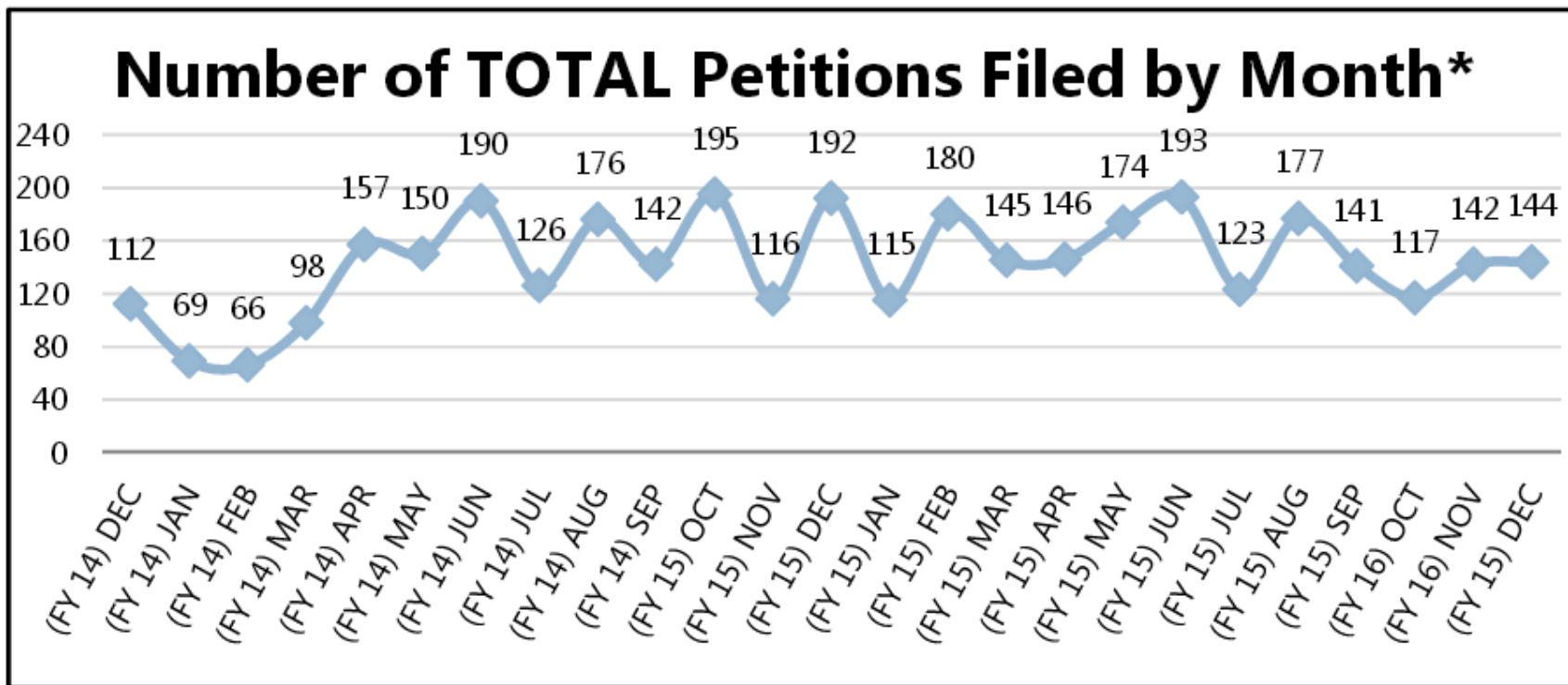
### Number of CBM Petitions Filed by Month\*



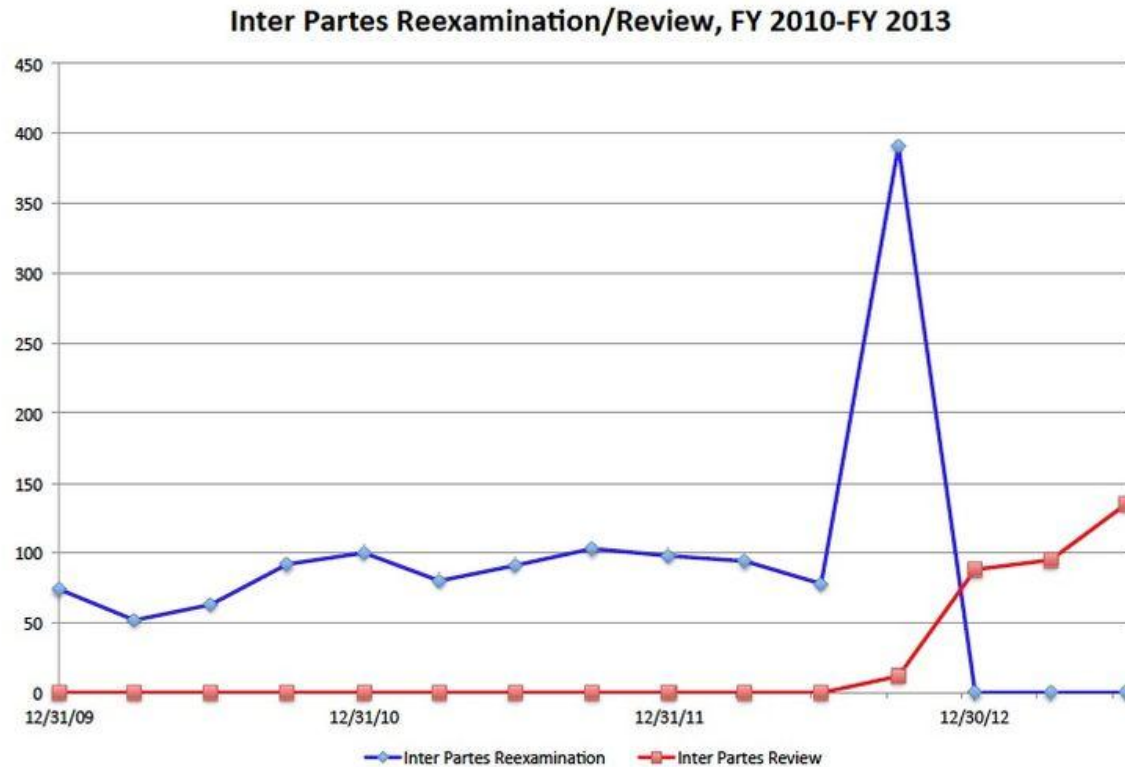
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# Statistics: BPAI/PTAB



# Statistics: BPAI/PTAB

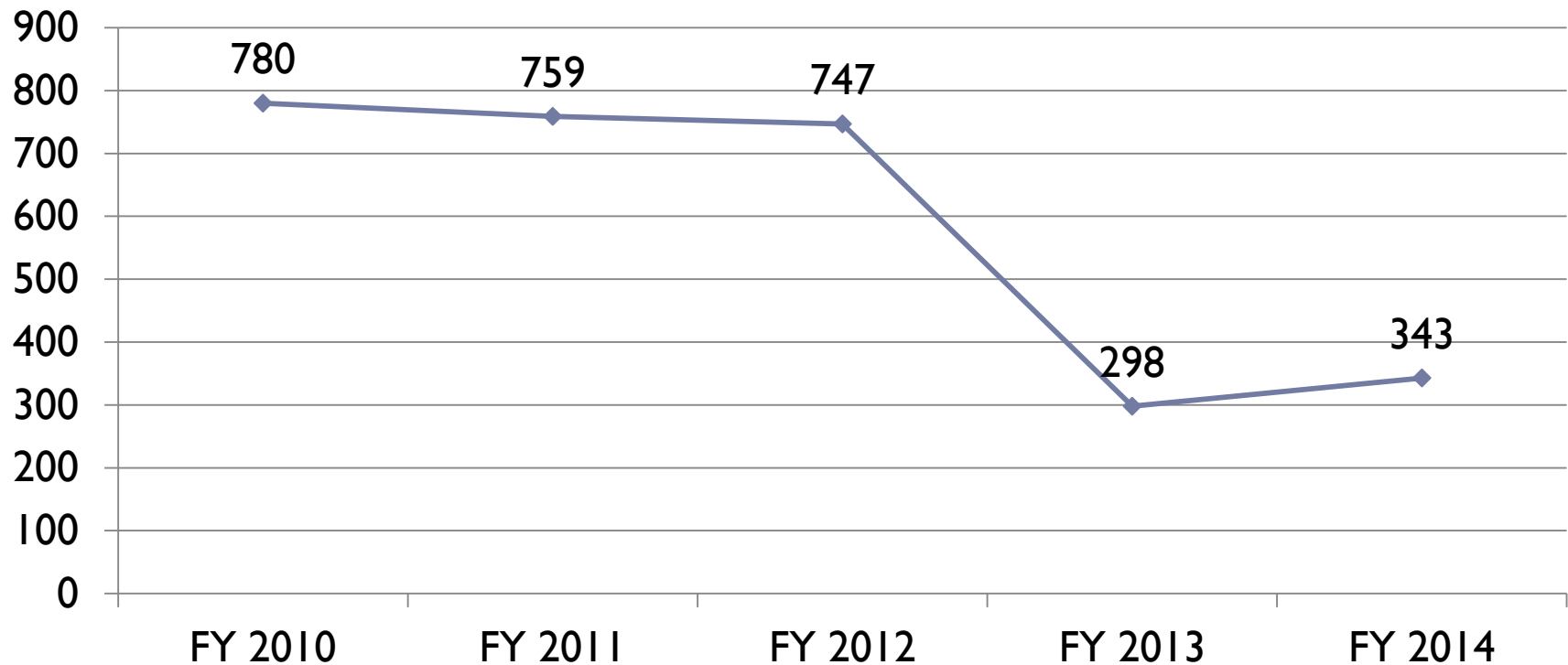


From Patently-O Blog



## Statistics: BPAI/PTAB

### Total Ex Parte Reexamination Requests Filed



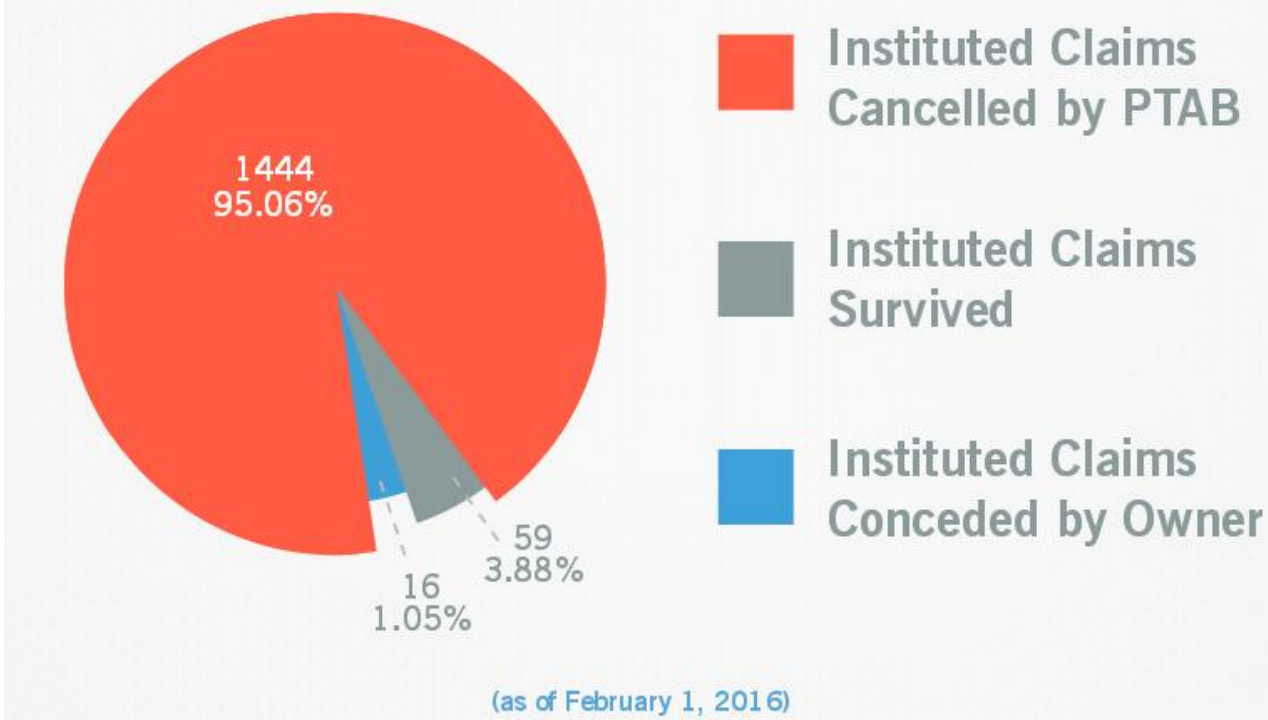
From USPTO.gov

# Statistics: BPAI/PTAB

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## Post-Grant Review: Covered Business Methods

### CBM Results by Claim



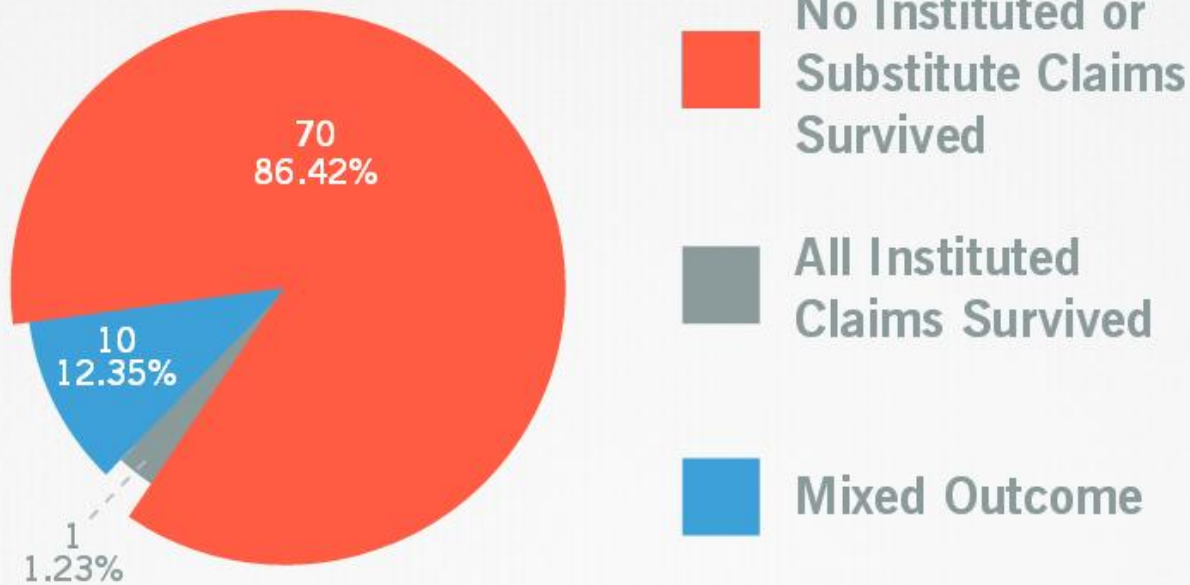
From AIABlog.com

# Statistics: BPAI/PTAB

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## Post-Grant Review: Covered Business Methods

### CBM Results by Case



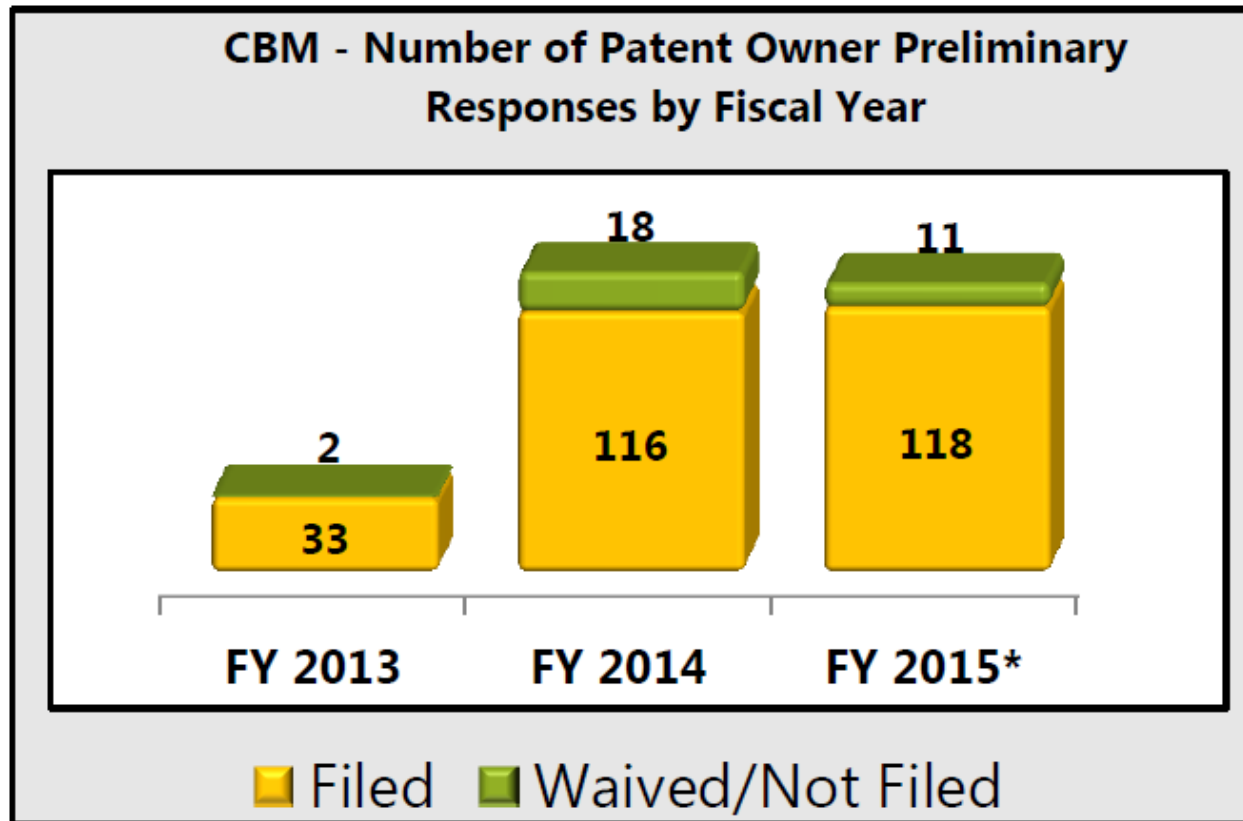
(as of February 1, 2016)

From AIABlog.com

# Statistics: BPAI/PTAB

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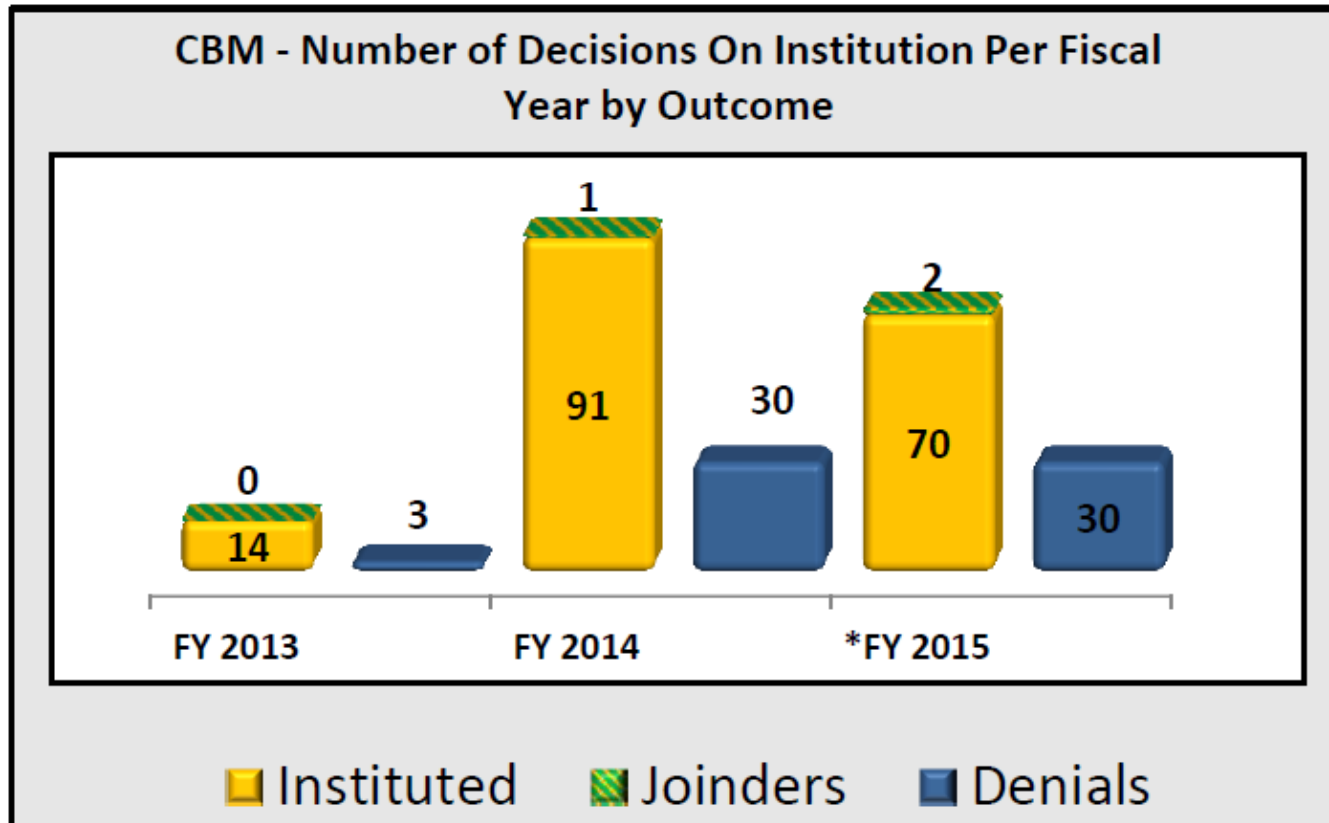
## Post-Grant Review: Covered Business Methods



From USPTO.gov

# Statistics: BPAI/PTAB

## Post-Grant Review: Covered Business Methods

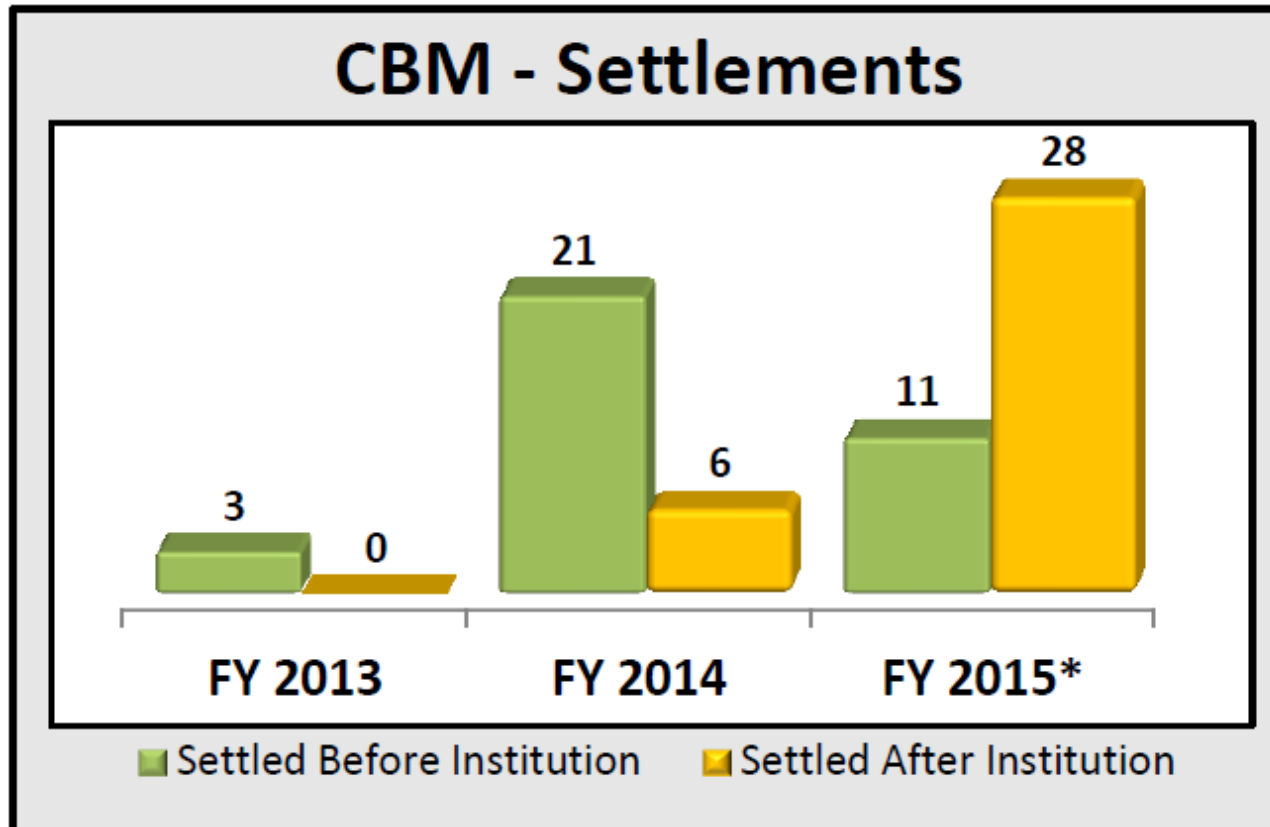


From USPTO.gov

# Statistics: BPAI/PTAB

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Post-Grant Review: Covered Business Methods

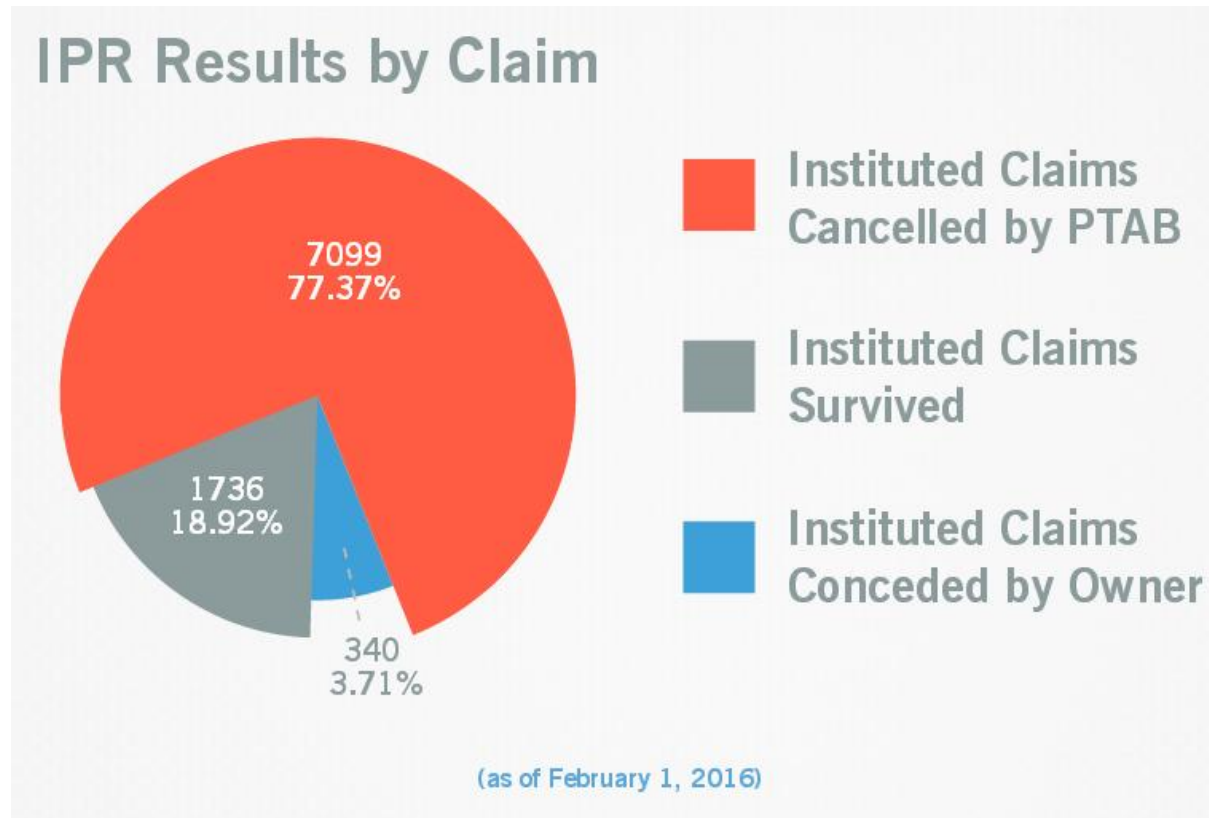


From USPTO.gov

# Statistics: BPAI/PTAB

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## Post-Grant Review: Inter Partes Review

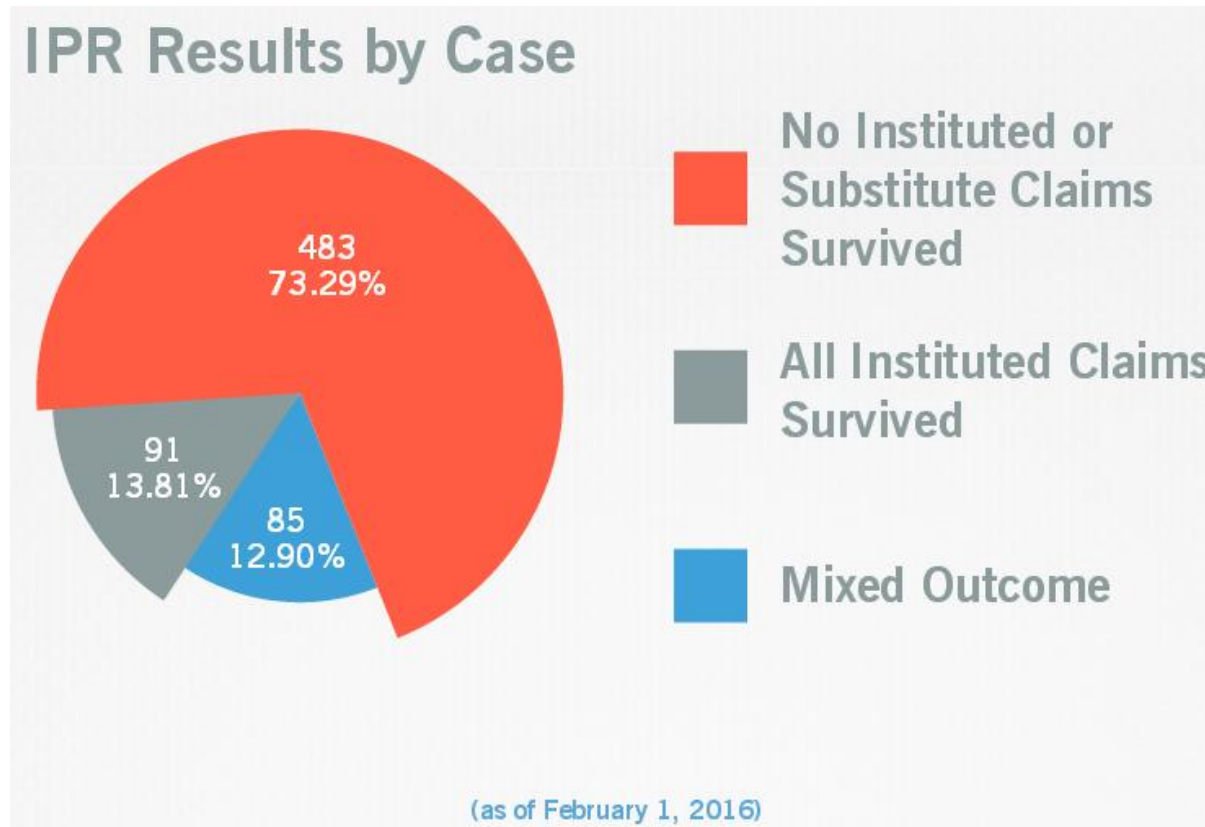


From AIABlog.com

# Statistics: BPAI/PTAB

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## Post-Grant Review: Inter Partes Review



From AIABlog.com

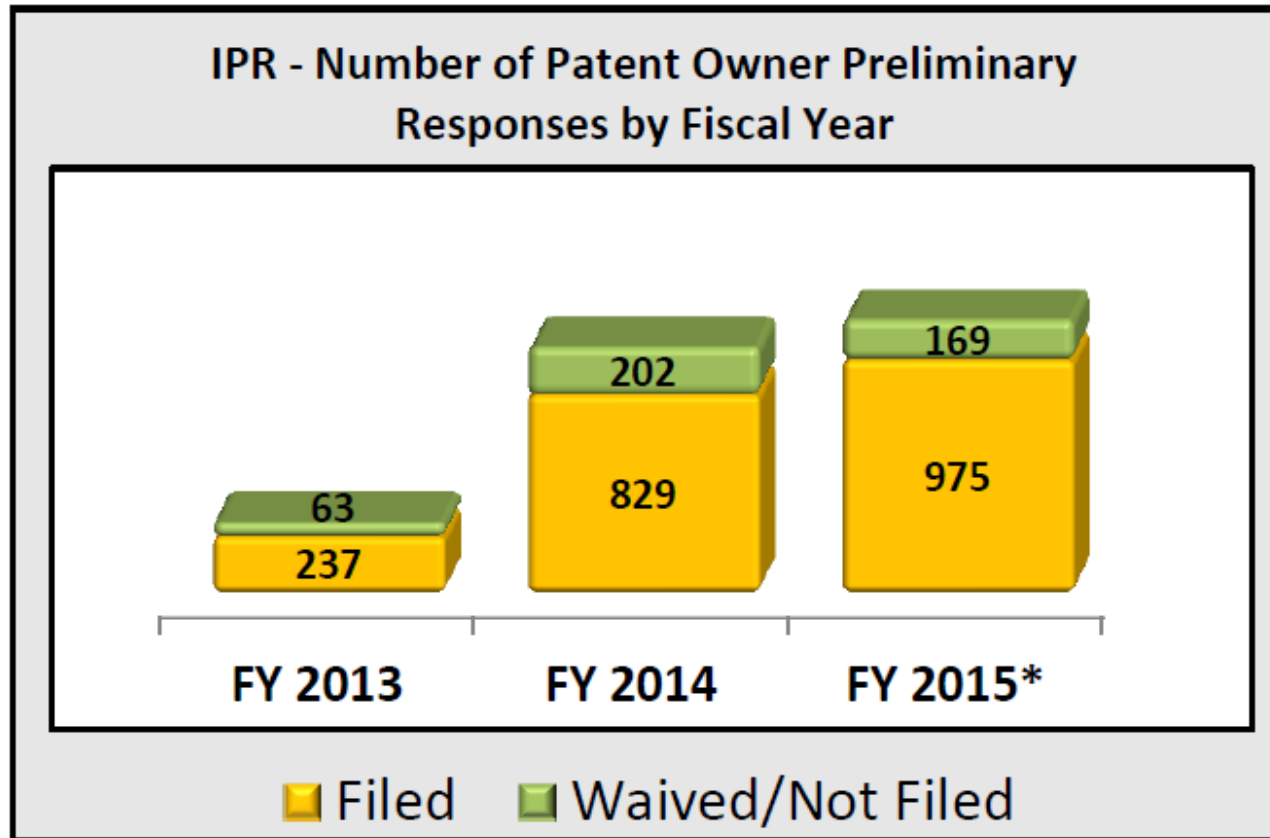


# Statistics: BPAI/PTAB

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## Post-Grant Review: Inter Partes Review

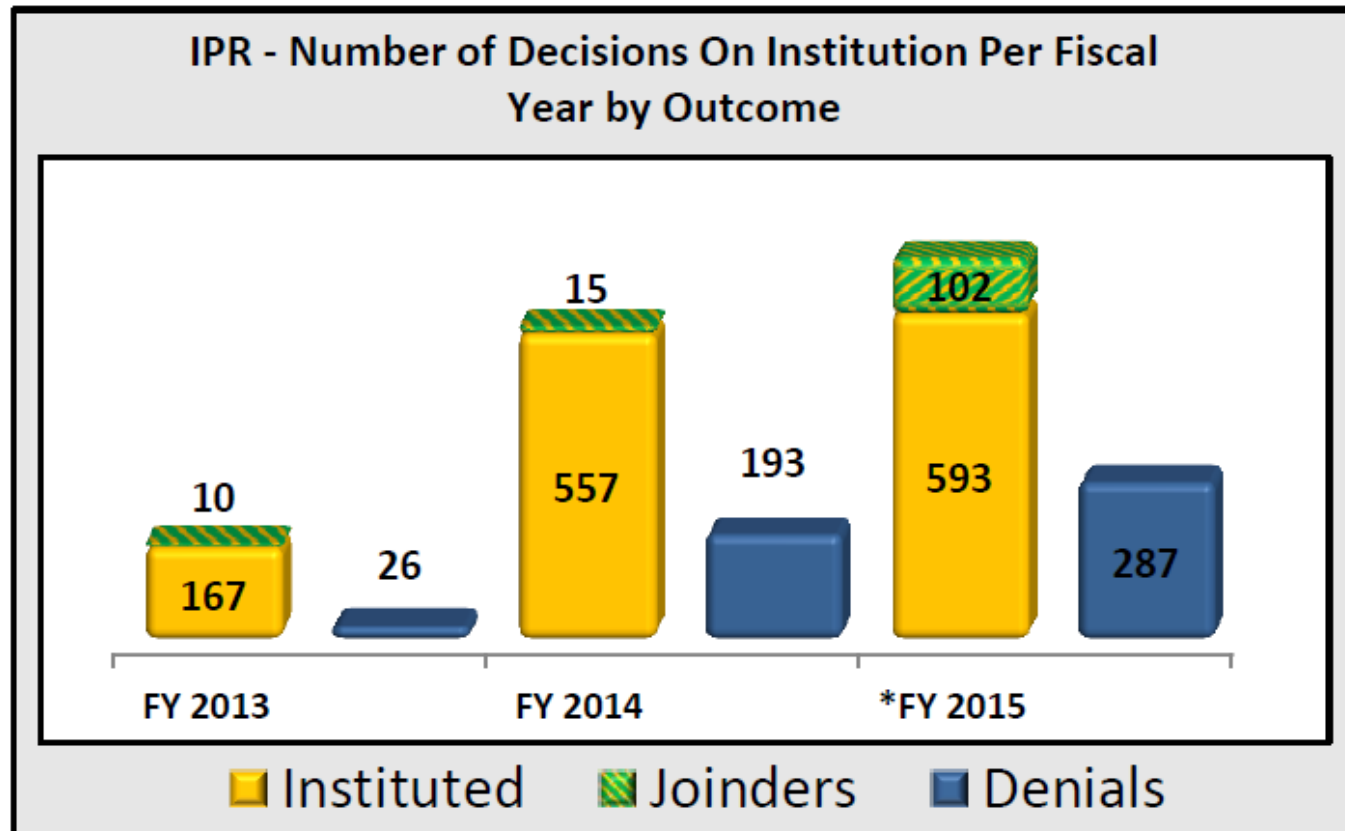
### IPR - Number of Patent Owner Preliminary Responses by Fiscal Year



From USPTO.gov

# Statistics: BPAI/PTAB

## Post-Grant Review: Inter Partes Review

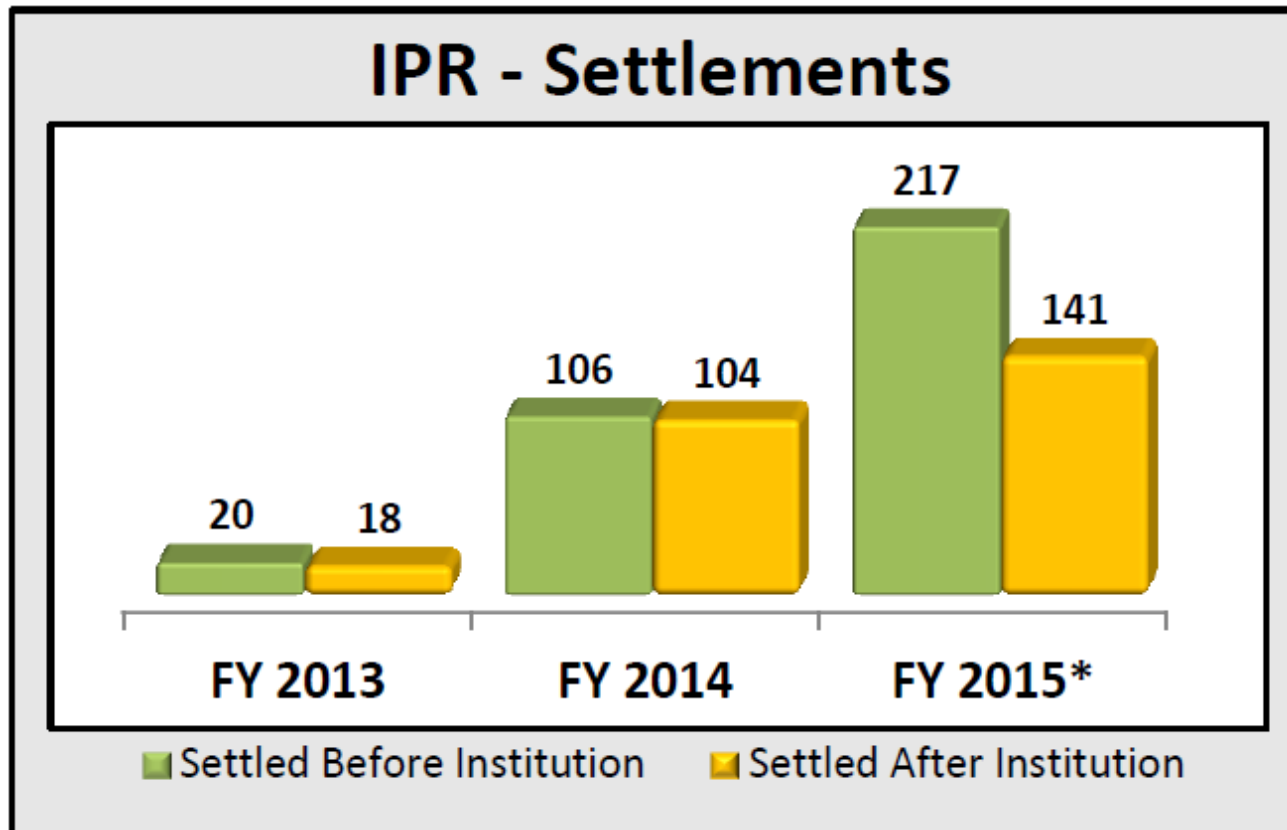


From USPTO.gov

# Statistics: BPAI/PTAB

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## Post-Grant Review: Inter Partes Review



From USPTO.gov

# Copyright of Computer Software: Advantages and Disadvantages

March 2016



# Copyrights Generally

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- ▶ Copyrights are governed exclusively by federal law
  - ▶ U.S. Const. art. I, § 8
    - ▶ “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.”
  - ▶ It is exclusive rights to authors to their work, for a limited time, to promote knowledge and learning
- ▶ 17 U.S.C. § 102
  - ▶ “Original works of authorship” fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated
  - ▶ Fixation (not necessarily permanent)
    - ▶ Words fixed to a page
    - ▶ Voices fixed to a compact disc
    - ▶ Images fixed to a videotape or paper or
    - ▶ Computer software fixed to a memory medium

# Copyrights Subject Matter

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- ▶ 17 U.S.C. § 102 (cont.)
  - ▶ A work includes:
    - ▶ Literary works (including computer programs)
    - ▶ Musical works
    - ▶ Dramatic works
    - ▶ Pantomimes, choreographic works
    - ▶ Pictorial, graphic, sculptural works
    - ▶ Motion pictures and other audiovisual works
    - ▶ Sound recordings
    - ▶ Architectural works
- ▶ Original work does not extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work

# Copyrights Requirements

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- ▶ **Originality**
  - ▶ Low bar
- ▶ **Fixation in a tangible medium**
  - ▶ Element sought to be protected is the expression and is not functional

# Copyright Registration

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- ▶ Original works need not be registered with the Copyright Office, nor is a copyright notice (© plus year of publication or creation plus name of copyright owner) needed on the work to receive copyright protection.
- ▶ Registration remains desirable
  - ▶ Registration within 5 years of first publication is prima facie evidence of copyright's validity
  - ▶ Registration is required in an infringement action
- ▶ Notice is still recommended
  - ▶ Maximizes damages in an infringement action
  - ▶ Removes defense of innocent infringement



# Copyright Registration

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- ▶ **Computer Programs**
  - ▶ Defined as “a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result”
- ▶ **Application for Computer Program**
  - ▶ Completed application form
  - ▶ Nonrefundable filing fee
    - ▶ \$35 for a single application
    - ▶ \$55 for a standard application
  - ▶ Nonreturnable deposit
    - ▶ Copy or copies of the work being registered
- ▶ Date of registration is when all elements of the application are received in acceptable form
- ▶ Copyright Office just checks to make sure there is an appropriate deposit and the work meets the minimal level of originality

# Copyright Registration (cont.)

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## ▶ Types of registrations

- ▶ Can register code as literary work
- ▶ Can register GUI or other graphics as “pictorial, graphic, or sculptural” work
- ▶ May register “structure, sequence, and operation” or overall program architecture

## ▶ Computer Programs without Trade Secrets

- ▶ Provide the Copyright Office with one copy of identifying portions of the program (first 25 and last 25 pages of source code) in a form that can be seen without the aid of a machine or device
  - ▶ Include the page with the copyright notice if there is one

# Copyright Registration (cont.)

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## ▶ Computer Programs with Trade Secrets

- ▶ Include a cover letter stating there are trade secrets and the page with the copyright notice (if any)
- ▶ For new computer programs, provide:
  - ▶ First 25 and last 25 pages of source code with portions containing trade secrets blocked out, or
  - ▶ First 10 and last 10 pages of source code alone, with no blocked out portions, or
  - ▶ First 25 and last 25 pages of object code plus any 10 or more consecutive pages of source code, with no blocked-out portions, or
  - ▶ For programs 50 pages or less in length, entire source code with trade secret portions blocked out

## ▶ For more information, go to

<http://copyright.gov/circs/circ61.pdf>



# Copyright Rights

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- ▶ Exclusive rights (17 U.S.C. § 106):
  - ▶ (1) to reproduce the copyrighted work;
  - ▶ (2) to prepare derivative works based upon the copyrighted work;
  - ▶ (3) to distribute copies of the copyrighted work for sale, transfer, rental or lending;
  - ▶ (4) to perform the copyrighted work publicly, in the case of literary, musical, dramatic, and choreographic works, pantomimes, motion pictures and other audiovisual works; and
  - ▶ (5) to display the copyrighted work publicly, in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works

# Copyright Term

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- ▶ **Term (For U.S. work published with notice on or after 1978 (Berne Convention))**
  - ▶ Author: Life + 70 years
  - ▶ Corporation: shorter of 95 years after 1st publication -or- 120 years after creation
- ▶ **Subsisting works: Copyrights before 1978:**
  - ▶ Copyright Term Extension Act, Public Law No: 105-298, incorporated into 17 U.S.C. §§ 302-304 (aka Mickey Mouse Protection Act)
    - ▶ Extended the term by 20 years.

# Copyright Scope of Protection

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- ▶ Copyright only protects against “copying”
  - ▶ Shown through
    - ▶ Similarity between the works, and
    - ▶ The defendant had access to your work
- ▶ Copyright does not protect functionality

# Copyright Defenses

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## ▶ Fair Use Exception:

- ▶ Fair use of a copyrighted work for purposes like criticism or comment is not an infringement
- ▶ 4 Factor Test
  - ▶ Purpose and character of use of the copyrighted work
  - ▶ Nature of the copied work
  - ▶ Amount and Substantiality of the portion used
  - ▶ Effect of the use upon the potential market for or value of the copied work
- ▶ Examples
  - ▶ a comparative advertisement
  - ▶ a “Parody”

## ▶ Problem: All infringers think their infringement is “fair”

- ▶ Test: Does use affect commercial market of copyright owner

# Copyright Defenses (cont.)

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- ▶ **First sale doctrine**

- ▶ An individual who knowingly purchases a copy of a copyrighted work from the copyright holder has the right to sell, display or otherwise dispose of that particular copy, notwithstanding the interests of the copyright owner.

- ▶ **Independent creation is not infringement**



# Originality/Creativity – Useful Article Exception

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## ▶ Software

- ▶ Is the design purely driven by the function and what functions are separable to show infringement?

## ▶ Computer Associates International, Inc. v. Altai, Inc., 61 F.3d 6, 23 U.S.P.Q.2d 1241 (2d Cir. 1992)

- ▶ Copyright protects against paraphrasing (slight rewording)
- ▶ Abstraction, filtration, and comparison test
- ▶ Look beyond literal code to structure to find broadest protection for non-literal elements

# Originality/Creativity – Useful Article Exception (cont.)

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- ▶ Limit: Lotus Development Corp. v. Borland International, Inc., 49 F.3d 807, 34 U.S.P.Q.2d 1014 (1st Cir. 1995)
  - ▶ Cannot use abstraction, filtration, and comparison test to copyright mode of operation
  - ▶ 17 U.S.C. § 102(b) prevents this
- ▶ Patents are more likely to provide broad protection (if you can get one)

# Case Law – Computer Software

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- ▶ *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339 (Fed. Cir. 2014)
  - ▶ Background
    - ▶ Oracle alleged that Google's Android mobile operating system infringes upon Oracle's copyrighted code
    - ▶ District court held the elements were not protectable
    - ▶ Federal Circuit reversed
      - There was originality and creativity on part of Oracle in designing the packages

# Case Law – Computer Software

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- ▶ *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339 (Fed. Cir. 2014) (cont.)
  - ▶ Utilized the abstraction/filtration/comparison test to determine whether non-literal elements of software have been infringed
    - ▶ Abstraction
      - Dissect the allegedly copied program's structure and isolate each level of abstraction within it
    - ▶ Filtration
      - Filter out non-protectable elements that are necessarily incidental to the ideas
    - ▶ Comparison
      - Compare abstracted and filtered software to the allegedly infringing software

# Case Law – Computer Software

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- ▶ *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339 (Fed. Cir. 2014)
  - ▶ Reaffirmed the copyright protections are available for computer software
  - ▶ Provided more clarity about what non-literal elements of software are copyrightable
    - ▶ Copyright protections may extend to a program's structure, sequence and organization
      - a set of commands to instruct a computer to carry out desired operations may contain expression eligible for protection because the author had multiple ways to express the underlying idea
  - ▶ § 102 covers more than just the exact code
    - ▶ Includes the overall design and architecture of the software and particular arrangement of methods and classes within

# Copyright Issues for the Web

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## ▶ Eligible Works

- ▶ Formalities not needed
- ▶ Original works of authorship would include any posting on the net (essentially)
  - ▶ Blogs
  - ▶ Pictures
  - ▶ Email
- ▶ What is copying in digital context?
  - ▶ Any loading of work into RAM is considered a copy
    - MAI Systems Corp. v. Peak Computer Inc., 991 F.2d 511, 26 U.S.P.Q.2d 1458 (9th Cir. 1993)
  - ▶ Cached copies may be infringing

# Copyright Issues for the Web (cont.)

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- ▶ Problems on the web:
  - ▶ Rapid Distribution
  - ▶ Attribution to author
  - ▶ Who do you pay
- ▶ Every webpage is using copies at user end creating large liabilities for Internet Service Providers

# Copyright Issues for the Web (cont.)

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- ▶ Do copyright laws need to be adjusted due to Internet?
  - ▶ Depends on who we ask
- ▶ Proponent of strengthening copyright: Content providers
  - ▶ Record companies, software companies, authors
  - ▶ Argument:
    - ▶ Materials can be easily copied and transmitted
    - ▶ Need stronger copyright to protect the owner & prevent the public from copying writing, music, graphics, software, and other works without author's permission



# Copyright Issues for the Web (cont.)

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- ▶ Opponent of strong copyright: Content distributors
  - ▶ Electronics manufacturers, technology companies, internet service providers (ISPs)
  - ▶ Argument
    - ▶ Digital transmission is not a copy
    - ▶ Fair use: Public should be allowed to share, lend, and pass on digital materials just like copies of books, tapes, etc.
    - ▶ Strengthening copyright inhibits web-based technology and exposes technology companies and ISPs to large liability for end user behavior which is out of their control
- ▶ Somewhat resolved under Digital Millennium Copyright Act

# Digital Millennium Copyright Act (DMCA)

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- ▶ Effective October 2000 and incorporated into the Copyright Act
- ▶ Implemented WIPO requirements and treaties
- ▶ DMCA is divided into five titles
  - ▶ WIPO Copyright and Performances and Phonograms Treaties Implementation Act
  - ▶ Online Copyright Infringement Liability Limitation Act
  - ▶ Computer Maintenance Competition Assurance Act
  - ▶ Miscellaneous Provisions
  - ▶ Vessel Hull Design Protection Act

# DMCA Liability Limitations

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- ▶ “Safe Harbors” for “Service Providers”  
(17 U.S.C. § 512)
  - ▶ “Conduit” function
    - ▶ “transmitting, routing, or providing connections for, material through a system or network controlled or operated by or for the service provider.”
  - ▶ “Caching” function
    - ▶ network servers facilitating access to material requested online by others.
  - ▶ “Storage or Hosting” function
    - ▶ storage, at the direction of a user, of material on the provider’s system or network. Imposes a number of additional requirements.
  - ▶ Providing Links, Directories, and other “Information Location Tools”
    - ▶ providing links or other means of accessing or locating infringing content, again subject to additional requirements.

# DMCA Liability Limitations (cont.)

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- ▶ “Service provider” is broadly defined
  - ▶ Internet access providers
  - ▶ Web site and news group hosts
  - ▶ Universities providing access to students and staff
  - ▶ Businesses providing network access to employees
  - ▶ Other services yet to be invented...

# DMCA Liability Limitations (cont.)

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- ▶ **Requirements to qualifying for safe harbors:**
  - ▶ Adopt, reasonably implement and inform users of a policy for the termination, in “appropriate circumstances,” of users who are repeat infringers.
  - ▶ Accommodate certain “standard technical measures.”
  - ▶ With respect to storage function (and possibly for caching and information location tools), designate an agent for receipt of notice and file with the U.S. Copyright Office.
  - ▶ With respect to storage function and information location tools, comply with “notice and takedown” procedure.

# Defenses to Secondary Liability: *Betamax*

**WATCH  
WHATEVER  
WHENEVER.**



With Sony's Betamax SL-6600 video recorder, you can see any TV show you want to see anytime you want to see it. Because Betamax, which plugs into any TV set and is easy to operate, can videotape a show up to three-hours long (with the L-750 videocassette) while you're doing something else—even while you're out of the house, by setting the electronic timer.

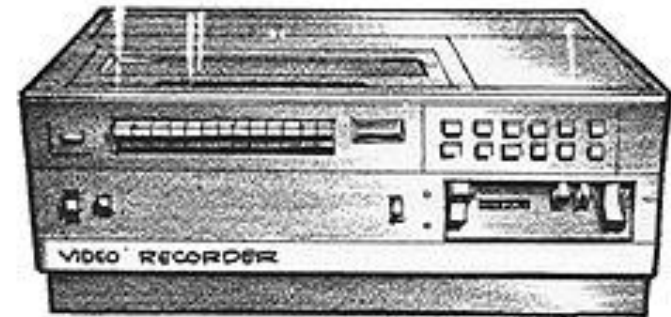
It can also videotape something off one channel while you're watching another channel.

And remember, Sony has more experience in videorecorders than anyone (over 20 years!). In fact, we've sold more videorecorders to broadcasters and industry than any other consumer manufacturer. We even make our own tape.

For years you've watched TV shows at the times you've had to. Now you can watch them at the times you want to.

**SONY BETAMAX**  
THE LEADER IN VIDEO RECORDING

© 1978 Sony Corp. of America. SONY and Betamax are registered trademarks of Sony Corp.



**SONY**  
Official Videotape Recorder

On which item have the courts ruled that manufacturers and retailers be held responsible for having supplied the equipment?

## Secondary Liability: *Betamax* (cont.)

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- ▶ U.S. Supreme Court rules 5-4:
- ▶ Sony not liable because the product is “capable of substantial noninfringing uses.” 464 U.S. 417, 442 (1984).
  - ▶ (1) authorized recording by some copyright owners (e.g., public television)
  - ▶ (2) unauthorized “time shifting” is fair use
- ▶ But in the section immediately following this announced test, the Court states, “The question is thus whether the Betamax is capable of commercially significant noninfringing uses.”
  - ▶ The content and technology industries have debated the interplay between these two descriptions for three decades.

# Secondary Liability: *Betamax* in the Internet Era

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- ▶ To what extent does the *Betamax* “staple article of commerce” doctrine apply to software and Internet services (as opposed to devices)?
- ▶ What rises to the level of a “substantial” or “commercially significant” noninfringing use?
- ▶ To what extent is the focus on future, theoretical uses?



# Metro-Goldwyn-Mayer v. Grokster

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- ▶ Unlike Napster, no centralized server needed to index, search, or distribute files
- ▶ But like Napster, abundant evidence of intentional wrongdoing, intent to profit from infringement:
  - ▶ Advertisements reading “When the lights went out at Napster, where did the users go?”
- ▶ District court and appeals court found no basis for imposing secondary liability on Grokster.
- ▶ Supreme Court case attracts over 60 amicus briefs (most of the year), major news networks.

# Metro-Goldwyn-Mayer v. Grokster (cont.)

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- ▶ Unanimous Court: “We hold that one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of third parties.”

# Metro-Goldwyn-Mayer v. Grokster (cont.)

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- ▶ Ruling establishes new “intentional inducement” basis for liability. Factors include:
  - ▶ (1) Aiming to satisfy a known source of demand for copyright infringement.
    - In this case, capturing base of Napster users when Napster shut down.
  - ▶ (2) Failure to take affirmative steps to prevent infringement.
    - ...Such as filtering
    - However, this factor alone cannot create liability.
  - ▶ (3) Building the business upon a high volume of infringing use.
    - Again, this factor alone cannot create liability.

# Metro-Goldwyn-Mayer v. Grokster (cont.)

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The United States Supreme Court unanimously confirmed that using this service to trade copyrighted material is illegal. Copying copyrighted motion picture and music files using unauthorized peer-to-peer services is illegal and is prosecuted by copyright owners.

There are legal services for downloading music and movies. This service is not one of them.

Grokster hopes to have a safe and legal service available soon.

If you are interested in that service, go to [www.grokster3g.com](http://www.grokster3g.com), or send an email to:

[info@grokster3g.com](mailto:info@grokster3g.com)

to be included in the beta for the next generation.

Grokster3G

In the meantime, please visit [www.respectcopyrights.com](http://www.respectcopyrights.com) and [www.musicunited.org](http://www.musicunited.org) to learn more about copyright.

# Metro-Goldwyn-Mayer v. Grokster (cont.)

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## ► Questions still to be answered:

- How will *Betamax* apply, if at all, to future cases where the new “intentional inducement” theory is not proved?
  - Sharply contrasting concurring opinions, regarding (1) what constitutes “substantial” noninfringing uses, and (2) importance of future, potential uses.
- What are the boundaries of intentional inducement?
  - Technology reviews of already-released products?
  - Implicit, rather than explicit, instructions or encouragement?
  - Impact of ever-improving DRM technology, weighed against cost to implement?
  - Well-advised defendant that did not write down early plans?
  - Continued “improvement” or alteration of products previously known to be sources of infringement: P2P applications?

# Trade Secrets

March 2016



# Generally

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- ▶ Trade Secrets are governed solely by state law.
- ▶ Uniform Trade Secret Act (UTSA) provides a model, uniform treatment of trade secrets among the states
  - ▶ Only New York, North Carolina, and Massachusetts have not adopted it
  - ▶ Defines “trade secret” as
    - ▶ information, including a formula, pattern, compilation, program, device, method, technique, or process,
    - ▶ that derives independent economic value, actual or potential, from not being generally known to or readily ascertainable through appropriate means by other persons who might obtain economic value from its disclosure or use; and
    - ▶ is the subject of efforts that are reasonable under the circumstances to maintain its secrecy

# Economic Espionage Act of 1996

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- ▶ 18 U.S.C. § 1831

- ▶ Enacted in October 11, 1996

- ▶ Economic espionage is

- ▶ Whoever, intending or knowing that the offense will benefit any foreign government, foreign instrumentality, or foreign agent, knowingly
    - ▶ (1) steals, or without authorization appropriates, takes, carries away, or conceals, or by fraud, artifice, or deception obtains a trade secret;
    - ▶ (2) without authorization copies, duplicates, sketches, draws, photographs, downloads, uploads, alters, destroys, photocopies, replicates, transmits, delivers, sends, mails, communicates, or conveys a trade secret;
    - ▶ (3) receives, buys, or possesses a trade secret, knowing the same to have been stolen or appropriated, obtained, or converted without authorization;
    - ▶ (4) attempts to commit any offense described in any of paragraphs (1) through (3); or
    - ▶ (5) conspires with one or more other persons to commit any offense described in any of paragraphs (1) through (3), and one or more of such persons do any act to effect the object of the conspiracy



# Potential Legislation

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## ▶ Potential Federal Trade Secret Legislation

### ▶ Defend Trade Secrets Act (proposed)

- ▶ Civil claims for trade secret misappropriation may be brought in federal court
  - Provides federal recourse for interstate disputes
- ▶ Courts can issue ex parte injunctions for preservation and seizure of evidence
- ▶ Courts may enjoin actual or threatened misappropriation
- ▶ Treble damages and/or attorneys' fees for willful and malicious misappropriation
- ▶ Five-year statute of limitations
- ▶ Would not preempt state law

# What is a Trade Secret

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- ▶ Such information includes: a formula, pattern, compilation, program, device, method, technique, or process that is actually or potentially valuable to its owner.
- ▶ Such “reasonable efforts” can include:
  - ▶ advising employees of the existence of a trade secret,
  - ▶ limiting access to the information on a 'need to know basis,'
  - ▶ requiring employees to sign confidentiality or non-disclosure agreements, and
  - ▶ keeping secret documents under lock
    - ▶ E.g., formula for Coca-Cola

# What is a Trade Secret (Cont.)

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- ▶ **Characteristics of a Trade Secret**
  - ▶ Information that provides owner with competitive advantage in the marketplace
  - ▶ Owner guards the information
    - ▶ Treats information in ways to prevent the public or competitors from learning about the information
      - Example: Labeled “Proprietary”
  - ▶ Information not otherwise known

# Term of Protection

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- ▶ Trade Secrets exist until made public, then no longer valuable
  - ▶ As long as the secret is kept confidential
    - ▶ May be shorter or longer than for patents, copyrights
  - ▶ Can be made public through reverse engineering or independent discovery
- ▶ No specific term limits as with patent or copyright

# Trade Secret Rights

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- ▶ Rights Attaching to Trade Secrets
  - ▶ Prevent others from
    - ▶ copying
    - ▶ using
    - ▶ benefiting from
    - ▶ disclosing to others
  - ▶ Rights attach to the information
    - ▶ Not dependent on information being fixed on medium
    - ▶ Can protect oral discussions
      - Useful where giving presentation or tour of facility

# Trade Secret Considerations

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- ▶ Owner has primary responsibility to
  - ▶ Establish rules and procedures
  - ▶ Ensure compliance with the procedures
  - ▶ Enforce rules and procedures
- ▶ Three areas of concern
  - ▶ Information itself
  - ▶ Employees
    - ▶ Non-compete agreements may be allowed if reasonable such as in terms of duration and geography, but depends on jurisdiction
      - Generally not enforceable in the legal profession
  - ▶ Actual items

# Trade Secret Advantages

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## ▶ Advantages

- ▶ Protect information not sheltered by other intellectual property law
- ▶ Protect ideas that offer a business a competitive advantage
- ▶ Get ahead of the competition
- ▶ Keep competitors from learning of product or service under development
- ▶ Keep competitors from discovering functional or technical attributes

# Trade Secret Remedies

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## ▶ Civil Remedies

- ▶ Obtain an injunction
- ▶ Recover compensatory damages for actual loss
- ▶ Recover compensatory damages for defendant's unjust enrichment
- ▶ Obtain payment from defendant of a reasonable royalty
- ▶ Recover punitive damages not exceeding twice the compensatory damages award if misappropriation was willful and malicious
- ▶ Recover attorneys' fees for bad faith tactics of willful and malicious misappropriation



# Thanks

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