



Trends in IP Litigation and the Potential Utility of Arbitration

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Trends in IP Litigation and the Potential Utility of Arbitration

Abraham D. Sofaer

Welcome to this session on IP Litigation. I plan to summarize briefly some of the main developments during the last year, and the potential uses of arbitration. My colleagues will then give their views on some of these important issues, leaving time for your questions.

IP litigation was very much in the spotlight in 2014. 2015 will be another active year. This is not necessarily good news for GCs. But important, new opportunities have developed, and facing the difficulties is the essential first step to dealing with them effectively.

This session makes no effort to cover all the substantive developments and trends in IP. Rather, it focuses on the extent and types of IP litigation, and the potential steps GCs can take in managing litigation, and specifically in utilizing arbitration.

In general, IP litigation increased in 2014, with some major companies suing each other in federal court, very large numbers of suits by Non-Producing Entities (NPEs), a major increase in Section 101 challenges, and a huge increase of Post-Grant Reviews. Here are some highlights:

- The most dramatic development is the huge increase in the number of Post-Grant Proceedings, especially Inter Partes Reviews (“IPRs”) and Covered Business Method Reviews (“CBMs”), authorized by the America Invents Act of 2011 (“AIA”). Lex Machina reports an increase in IPRs and CBMs from 90 and 15 respectively in 2012 to 1,501 and 173 in 2014. Filings are now over 200 per month. The great majority of challenges are to claims made by the biggest patent-enforcement NPEs. Of the written decisions issued about 60% have resulted in the declared invalidity of all claims, with another 15% or so finding at least one claim invalid.
- Another major development is the increase in both the number and success of motions under Title 35 U.S.C., Section 101 to dismiss patent claims for invalidity. Since the Supreme Court’s decision in *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014), the number of motions to dismiss based on invalidity has increased from about 10 per year to 48 in 2014, and at a rate that seems likely to result in well over 100 such motions in 2015. The two-part test in *Alice* had resulted in 49 district court decisions by early this year, 35 of which dismissed all claims, and 3 of which dismissed at least one claim.
- IP litigation, especially patent suits, continue to be targeted at specific venues. California had the most trademark and copyright filings, and trailed only Texas in patent cases filed. Those two states, together with New York and Florida, account for the vast majority of IP cases filed between Nov 2013 and October 2014. Significant differences have developed between the results in certain districts and the rest of the US, as for example in the granting of stays of federal litigation after Post-Grant Proceedings are commenced. Overall, stays are granted in

response to about 70% of all applications, but this number includes a variation among districts with a high of about 80% in most districts and a low of some 54% in California and the Eastern District of Texas.

- A pre-existing complication of patent law – the different standards applied in claim constructions in the Patent Trial and Appeal Board (“PTAB”) and District Courts – has become potentially more significant in light of the increased importance of Post-Grant Proceedings. The PTAB is required to use the “broadest reasonable construction” standard in the light of the specification (“BRI”), when performing claim construction, while District Courts are obliged to apply the meaning that a term at issue would have to a person of ordinary skill in the art in question at the time of the invention, taking all evidence into account. This difference has thus far had limited consequences, but is a factor counsel must take into consideration in shaping litigation strategy. See Jacob Oylo et al., “Claim Construction in PTAB Vs. District Court,” Law 360, New York (Oct. 6, 2014).
- Much of domestic patent litigation is attributable to patent-enforcement NPEs. Significant measures have been adopted to curb abuse, including the application of recent Supreme Court decisions and the AIA Post-Grant options. In addition, the Court’s decisions in *Octane Fitness v. Icon Health & Fitness*, 134 S. Ct. 1749 (2014) and *Highmark v. Allcare Health Management System*, 134 S. Ct. 1744 (2014) have made it more likely that courts will grant attorneys’ fees under 35 USC 285 to prevailing defendants in “exceptional” cases.

Arbitration as a Potential Option

- Domestic arbitrations filed with the AAA have leveled off, even declined, whereas international filings with the ICDR have increased substantially. Many IP cases are international, in that they involve at least one party that is a non-US company. Some ICC cases that involve US companies take place in the US, and US arbitration services other than the AAA administer these cases.
- The potential advantages of arbitration have often been stated, and the principal ones are summarized in a talk given by PTO General Counsel Bernard J. Knight in a presentation in 2012: choice of arbitrators (ensuring competence); choice of law; increased speed; reduced cost due to limited discovery and informality; procedural control; confidentiality; reduced likelihood of disrupting business relationships; and finality. See also, e.g., Joseph P. Zammit & Jamie Hu, “Arbitrating International Intellectual Property Disputes,” *Dispute Resolution Journal* (AAA 2009); Anne St. Martin and J. Derek Mason, “Arbitration: A Quick and Effective Means for Patent Dispute Resolution,” 12 N.C.L. & Tech. 301 (2011).
- It is important to note what arbitration is unable to provide. The AIA’s Post-Grant Proceedings have thus far been popular and effective; arbitration cannot be viewed as an alternative to them as all parties are unlikely to agree to such processes. Also, arbitration cannot provide its potential advantages if the parties use rules that allow delays at the will of arbitrators; such delays are as a practical matter difficult to deny without risking arbitrator resentment, and more time means more cost. Some arbitration agreements (including some regimes) call on arbitrators to “do equity” or otherwise to achieve commercially oriented, business results; these standards will inevitably lead arbitrators to make decisions based on considerations other than legal precedent.

- Arbitration awards are binding only on the parties to the proceeding. Patent awards are expressly so limited in their authority by statute. This can be a disadvantage, for example where a party wants a generally applicable ruling on a patent's validity. It can be an advantage, however, where the parties want to avoid rulings of general applicability, and parties are free to agree to modify an arbitration ruling on the basis of an inconsistent decision by a court or the PTO.
- Arbitration provides some important flexibility regarding claim construction. The absence of a jury theoretically justifies treating claim construction as part of the award in arbitration. Instead, it appears to be used as a method for educating the arbitration panel on the technology and issues involved, with the use by experienced arbitrators of some innovative, non-confrontational presentation methods. Other uses of arbitration to enhance the value of claim construction include the idea of defining the claims early, in order to limit the scope of necessary discovery. Another idea is to use arbitration for claim construction, even when the overall litigation is in federal court, in order to insulate the definitions of terms from appellate review by the Federal Circuit, which often leads to retrials. See, Stephen P. Gilbert, "Arbitrating to Avoid the Markman Do-Over," *Dispute Resolution Journal* (AAA 2006). While *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, No. 13-854 (S. Ct., Jan. 20, 2015), requires the Federal Circuit to apply the clearly erroneous standard in reviewing findings underlying claim construction, the Circuit Court continues to review *de novo* a district court's constructions of terms.
- IP arbitration has another advantage related to the fact that no jury is present: no need exists for an *in limine* motion and separate hearings to determine whether an expert's testimony is so scientifically inadequate that it should be excluded from evidence under *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993) or *Kumho Tire Co. v. Carmichael*, 526 U.S. 127 (1999). An arbitration tribunal can simply admit such evidence, giving it such weight as the tribunal sees fit, since it will be far less likely than a jury to be misled. This process not only saves time and effort, it avoids the potential complication of a challenge under Section 10 of the FAA that the tribunal excluded evidence offered by the losing party.
- Whether an arbitration should be stayed pending a Post-Grant Proceeding is unlikely to be authoritatively settled. The potential advantage here is that the parties can agree in advance on how this issue should be handled, and can instruct the tribunal accordingly. In the absence of agreement, however, tribunal decisions refusing stays are likely to be immune from review. Nonetheless, the notion that arbitrators can decide to disregard the PTO process and its decisions is troubling and arguably inconsistent with the principle that private adjudication of such public-law issues is allowed on the premise that the adjudicators are obliged in good faith to apply federal administrative law.
- A specific, creative use of arbitration in patent cases is proposed by Mark A. Lemley and Carl Shapiro, in their article: "A Simple Approach to Setting Reasonable Royalties for Standard-Essential Patents," provided to you with your materials. Professor Lemley will discuss his proposal in more detail. The FTC should not only adopt the idea, it should also set time limits for the process to ensure it serves the parties' and public interests effectively.

Many thanks for attending this seminar. At FedArb we look forward to developing and implementing arbitration services that satisfy the needs of the legal community.

The America Invents Act Alternative Dispute Resolution

**Bernard J. Knight Jr.
General Counsel
United States Patent and Trademark Office**

March 8, 2012



Increase in Court Litigation

- In the U.S., litigation of IP disputes has drastically increased. Specifically, in a 2007 Patent and Trademark Damages Study (Price Waterhouse Cooper), patent and trademark case filings in U.S. courts almost doubled from approximately 3,400 cases in 1991 to 6,400 cases in 2005.
- In a knowledge economy, intellectual property may be the most significant asset and affect a company's ability to survive.



Disadvantages of United States Court Litigation

- In the average patent infringement case, a party incurs about US\$2.6 million in legal fees and costs. (AIPLA).
- Judges must be educated.
- Court litigation is time consuming and often appealed to higher courts.



Arbitration of Intellectual Property Disputes

- Available by agreement. Include an arbitration clause in licensing agreement or agree after the dispute has arisen.
- In 1983 the U.S. patent laws were amended to include a “voluntary arbitration” provision, 35 U.S.C. § 294.
- International Disputes. Award enforceable under New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards.



Advantages of Arbitration

- Less Costly.
- Faster Resolution-(average time to award 12 months or less; AAA).
- Party Autonomy - Parties have flexibility to narrow the scope of the issues.
- Expertise - Parties may select arbitrators that have background in the legal and technical fields that are the subject of the dispute.
- Flexibility - Arbitrators have broad remedial powers including the power to award damages and issue injunctions.



Advantages of Arbitration - *continued*

- Confidentiality - Arbitrations can provide greater confidentiality than litigation in courts (for example, other licensees).
- Finality – Arbitration awards are only subject to appeal on narrow grounds, not including issues interpretation and adjudication of law.
- Preservation of Business Relationships - Arbitrations are normally viewed as less formal, less antagonistic proceedings which can lead to the preservation of business relationships.



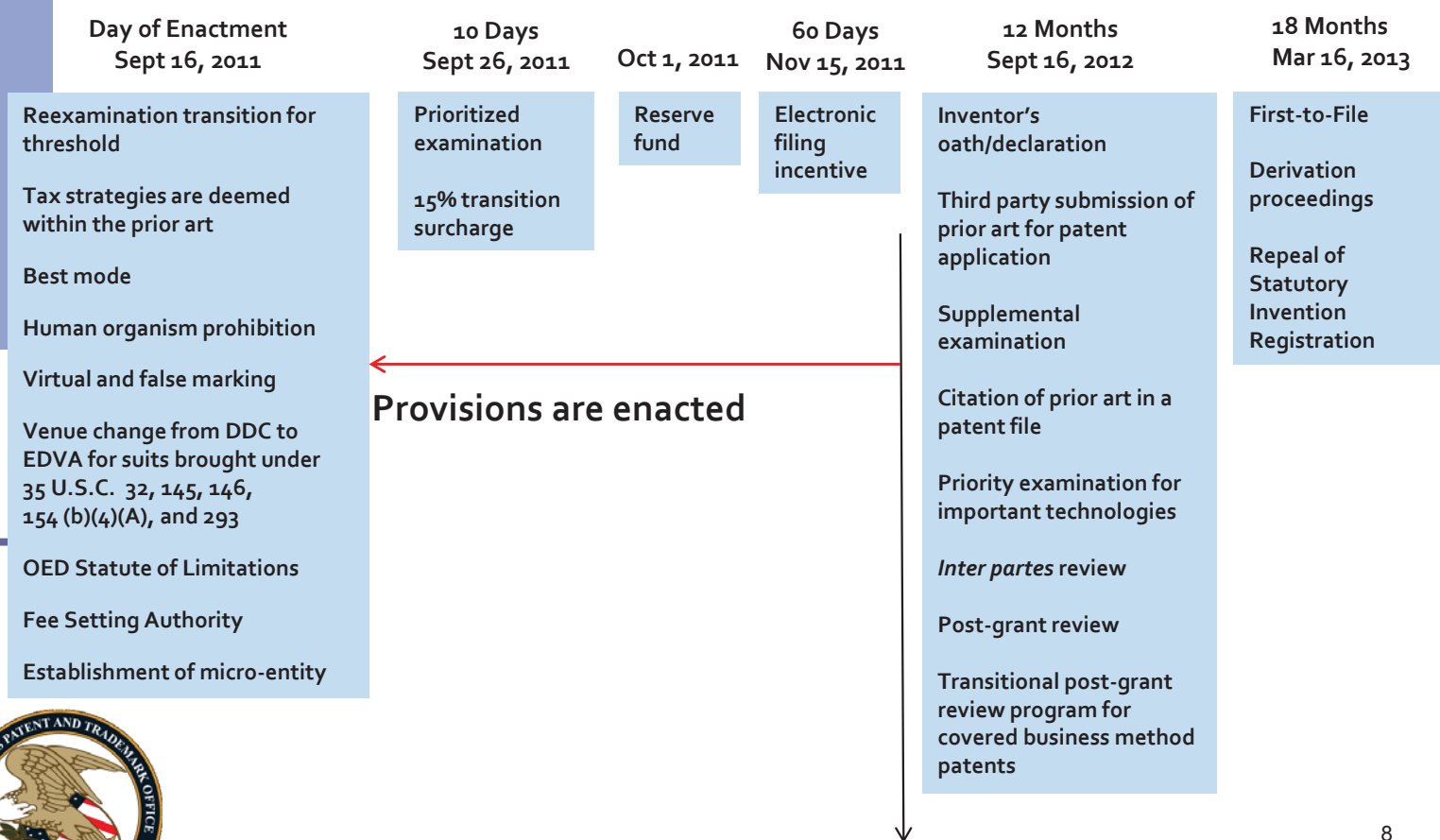
Leahy-Smith America Invents Act

On September 16, 2011, President Barack Obama signed into law the Leahy-Smith America Invents Act. The Act provides four major alternatives to litigation.

- Supplemental Examination
- Post-Grant Review
- *Inter Partes* Review
- Derivation Proceedings



Enactment Timeline



Supplemental Examination

- The patent owner may request supplemental examination of a patent to “*consider, reconsider, or correct*” information believed to be relevant to the patent.
- Two-Step Process
- Deviations from *ex parte* procedure
- Inoculation from IC charge
- Fraud on the PTO
- 10 items of information each
- \$5,180 plus \$16,116 (refund)
- Must be filed by all owners
- Supplemental Examination v. *Ex Parte* Reexamination



Inter Partes Review

- 9/16/12--*inter partes* reexamination will be replaced by “*inter partes* review” and adjudicated by the Patent Trial and Appeal Board
- Applies to any petition filed on or after 9/16/12 – both first-to-invent and first-to-file patents
- Petitioner may only raise grounds under 35 U.S.C. 102 and 103 and only on the basis of prior art consisting of patents and printed publications.
- Any third party may petition—if they have not previously filed a civil action challenging the validity of a claim of the patent
- Timing after the later of: 9 months from issuance of the patent or termination of a post-grant review of the patent
- Standard for Institution – reasonable likelihood of prevailing
- One motion to amend after institution
- Completed within 1 year from institution
- The Director may limit the number of petitions to institute IP review during the first 4 years



Post-Grant Review

- Applies to first-inventor-to-file patents (filed on or after 3/16/2013).
- PGR allows challenges based on §§ 101, 102, 103 and 112, except best mode.
- Must be filed within 9 months of grant or issuance of a reissue patent.
- More likely than not (*i.e.*, a higher threshold than IPR) that at least one of the claims challenged in the petition is unpatentable.
- Fee up to 20 claims - \$35,800



Similarities of PGR and IPR

- Most aspects of PGR and IPR are effectively the same.
 - Petition – the requirements for a petition are essentially the same.
 - Preliminary Patent Owner Response – requirements are essentially the same. Due 2 months from petition docketing date.
 - Institution – within 3 months of Preliminary Patent Owner Response.
 - Patent Owner Response (after institution) - requirements are essentially the same.
 - Amendments – requirements are essentially the same.
 - Estoppel—claim by claim basis.



Derivation

- Only an applicant for patent may file a petition to institute a derivation proceeding.
- Two applicants claim to be the true inventor.
- The petition must set forth with particularity the basis for finding that an inventor named in an earlier application or patent derived the claimed invention from the inventor in the later filed application.
- The petition must be filed within 1 year of the date of the first publication of a claim to an invention.
- Ensures that first person to file is the true inventor.





Inter Partes Disputes

The Post-Issuance Matters area features information about AIA provisions pertaining to proceedings to be conducted by the Patent Trial and Appeal Board (formerly the Board of Patent Appeals and Interferences), including inter partes review, post-grant review, the transitional post-grant review for covered business method patents, and derivations. The provided information will cover, inter alia, guidance documents, Notices of Proposed Rulemakings (NPRMs), Final Rulemakings (FRs), and links to Public Comments received in response to NPRMs.

- › [Inter Partes Review](#)
- › [Post Grant Review](#)
- › [Transitional Program for Covered Business Method Patents](#)
- › [Derivation Proceeding](#)

Inter Partes Review

Inter partes review is a new trial proceeding conducted at the Board to review the patentability of one or more claims in a patent only on a ground that could be raised under §§ 102 or 103, and only on the basis of prior art consisting of patents or printed publications. Inter partes review process begins with a third party (a person who is not the owner of the patent) filing a petition after the later of either: (1) 9 months after the grant of the patent or issuance of a reissue patent; or (2) if a post grant review is instituted, the termination of the post grant review. The patent owner may file a preliminary response to the petition. An inter partes review may be instituted upon a showing that there is a reasonable likelihood that the petitioner would prevail with respect to at least one claim challenged. If the proceeding is instituted and not dismissed, a final determination by the Board will be issued within 1 year (extendable for good cause by 6 months). The procedure for conducting inter partes review will take effect on September 16, 2012, and applies to any patent issued before, on, or after September 16, 2012.

- › [Inter Partes Review Technical Correction Final Rule \(78 Fed. Reg. 17871, March 25, 2013\)](#)
[/sites/default/files/aia_implementation/Final Inter Partес Review Technical Correction 3-25-2013.pdf](/sites/default/files/aia_implementation/Final_Inter_Partес_Review_Technical_Correction_3-25-2013.pdf)
- › [General Administrative Trial Final Rules \(77 Fed. Reg. 48612, August 14, 2012\)](#)
/sites/default/files/aia_implementation/fr_general_trial.pdf
- › [Trial Practice Guide \(77 Fed. Reg. 48756, August 14, 2012\)](#)
/sites/default/files/aia_implementation/trial_practice_guide_48756.pdf

- [Inter Partes, Post Grant, and Covered Business Method Review Final Rules \(77 Fed. Reg. 48680, August 14, 2012\) \(/sites/default/files/aia_implementation/fr_specific_trial.pdf\)](#)
- [Proposed Rule of Practice for Trials before the PTAB \(77 Fed. Reg. 6879, Feb. 9, 2012\) \(/sites/default/files/aia_implementation/rin-0651-ac70.pdf\)](#)
- [Proposed Trial Practice Guide \(77 Fed. Reg. 6868, Feb. 9, 2012\) \(/sites/default/files/aia_implementation/practice-guide_for_ptr.pdf\)](#)
- [Proposed Rules for Inter Partes Review \(77 Fed. Reg. 7041, February 10, 2012\) \(/sites/default/files/aia_implementation/77fr7041nprm.pdf\)](#)
- [12 Month Implementation Timeline \(/patent/laws-and-regulations/america-invents-act-aia/implementation-status\)](#)
- [Inter Partes Review FAQs \(/aia_implementation/fag.jsp#heading-7\)](#)

Post Grant Review

Post grant review is a new trial proceeding conducted at the Board to review the patentability of one or more claims in a patent on any ground that could be raised under § 282(b)(2) or (3). Post grant review process begins with a third party filing a petition on or prior to the date that is 9 months after the grant of the patent or issuance of a reissue patent. The patent owner may file a preliminary response to the petition. A post grant review may be instituted upon a showing that, it is more likely than not that at least one claim challenged is unpatentable. If the proceeding is instituted and not dismissed, a final determination by the Board will be issued within 1 year (extendable for good cause by 6 months). The procedure for conducting post grant review will take effect on September 16, 2012, and generally applies to patents issuing from applications subject to first-inventor-to-file provisions of the AIA.

- [General Administrative Trial Final Rules \(77 Fed. Reg. 48612, August 14, 2012\) \(/sites/default/files/aia_implementation/fr_general_trial.pdf\)](#)
- [Trial Practice Guide \(77 Fed. Reg. 48756, August 14, 2012\) \(/sites/default/files/aia_implementation/trial_practice_guide_48756.pdf\)](#)
- [Inter Partes, Post Grant, and Covered Business Method Review Final Rules \(77 Fed. Reg. 48680, August 14, 2012\) \(/sites/default/files/aia_implementation/fr_specific_trial.pdf\)](#)
- [Proposed Rule of Practice for Trials before the PTAB \(77 Fed. Reg. 6879, Feb. 9, 2012\) \(/sites/default/files/aia_implementation/rin-0651-ac70.pdf\)](#)
- [Proposed Trial Practice Guide \(77 Fed. Reg. 6868, Feb. 9, 2012\) \(/sites/default/files/aia_implementation/practice-guide_for_ptr.pdf\)](#)
- [Proposed Rules for Post Grant Review \(77 Fed. Reg. 7060, February 10, 2012\) \(/sites/default/files/aia_implementation/77fr7060nprm.pdf\)](#)
- [12 Month Implementation Timeline \(/patent/laws-and-regulations/america-invents-act-aia/implementation-status\)](#)

- [Post Grant Review FAQs \(/aia_implementation/faq.jsp#heading-8\)](/aia_implementation/faq.jsp#heading-8)

Transitional Program for Covered Business Method Patents

The transitional program for covered business method patents (TPCBM) is a new trial proceeding conducted at the Board to review the patentability of one or more claims in a covered business method patent. TPCBM proceedings employ the standards and procedures of a post grant review, with certain exceptions. For example, for first to invent patents only a subset of prior art is available to support the petition. Further, a person may not file a petition for a TPCBM proceeding unless the person or the person's real party in interest or privy has been sued for infringement of the patent or charged with infringement under the patent. The procedure for conducting TPCBM review will take effect on September 16, 2012, but only applies to covered business method patents. The program will sunset for new TPCBM petitions on September 16, 2020.

- [General Administrative Trial Final Rules \(77 Fed. Reg. 48612, August 14, 2012\)](#)
(/sites/default/files/aia_implementation/fr_general_trial.pdf)
- [Trial Practice Guide \(77 Fed. Reg. 48756, August 14, 2012\)](#)
(/sites/default/files/aia_implementation/trial_practice_guide_48756.pdf)
- [Inter Partes, Post Grant, and Covered Business Method Review Final Rules \(77 Fed. Reg. 48680, August 14, 2012\)](#) (/sites/default/files/aia_implementation/fr_specific_trial.pdf)
- [Covered Business Method and Technological Invention Definitions Final Rules \(77 Fed. Reg. 48734, August 14, 2012\)](#) (/sites/default/files/aia_implementation/fr_covered_business_method_definition.pdf)
- [Proposed Rule of Practice for Trials before the PTAB \(77 Fed. Reg. 6879, Feb. 9, 2012\)](#)
(/sites/default/files/aia_implementation/rin-0651-ac70.pdf)
- [Proposed Trial Practice Guide \(77 Fed. Reg. 6868, Feb. 9, 2012\)](#)
(/sites/default/files/aia_implementation/practice-guide_for_ptr.pdf)
- [Proposed Rules for the Transitional Program for Covered Business Methods \(77 Fed. Reg. 7080, February 10, 2012\)](#) (/sites/default/files/aia_implementation/77fr7080nprm.pdf)
- [Proposed Rule for the Technological Invention Definition \(77 Fed. Reg. 7095, February 10, 2012\)](#) (/sites/default/files/aia_implementation/77fr7095nprm.pdf)
- [12 Month Implementation Timeline \(/patent/laws-and-regulations/america-invents-act-aia/implementation-status\)](#)
- [Transitional Program for Covered Business Method Patents FAQs](#)
(/aia_implementation/faq.jsp#heading-11)

Derivation Proceeding

A derivation proceeding is a new trial proceeding conducted at the Board to determine whether (i) an inventor named in an earlier application derived the claimed invention from an inventor named in the petitioner's application, and (ii) the earlier application claiming such invention was filed without authorization. An applicant subject to the first-inventor-to-file provisions may file a petition to institute a derivation proceeding only within 1 year of the first publication of a claim to an invention that is the same or substantially the same as the earlier application's claim to the invention. The petition must be supported by substantial evidence that the claimed invention was derived from an inventor named in the petitioner's application. The procedure for derivation will take effect on March 16, 2013.

- [Change to Implement Derivation Proceedings \(77 Fed. Reg. 56068, Sept. 11, 2012\)](#)
[\(/sites/default/files/aia_implementation/2012-22204-derivation-proceedings.pdf\)](#)
- [Proposed Rule of Practice for Trials before the PTAB \(77 Fed. Reg. 6879, Feb. 9, 2012\)](#)
[\(/sites/default/files/aia_implementation/rin-0651-ac70.pdf\)](#)
- [Proposed Trial Practice Guide \(77 Fed. Reg. 6868, Feb. 9, 2012\)](#)
[\(/sites/default/files/aia_implementation/practice-guide_for_ptr.pdf\)](#)
- [Proposed Rule for Derivation Proceedings \(77 Fed. Reg. 7028, February 10, 2012\)](#)
[\(/sites/default/files/aia_implementation/77fr7028nprm.pdf\)](#)
- [Derivation Proceeding FAQs \(/aia_implementation/faq.jsp#heading-3\)](#)

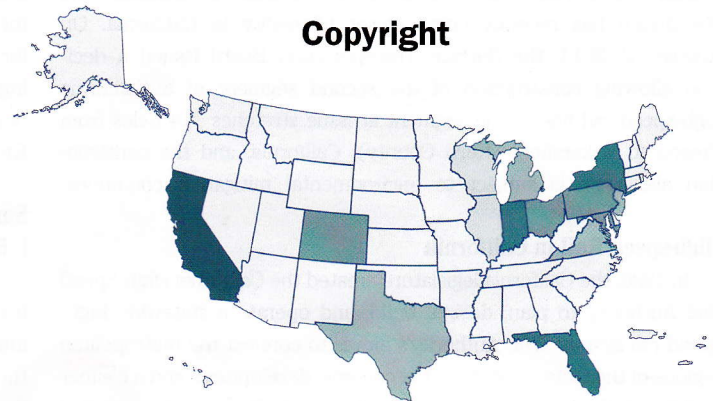
JUDICIAL HEAT MAP

Number of cases filed between
November 2013 and October 2014

Trademark



Copyright



0-50

51-100

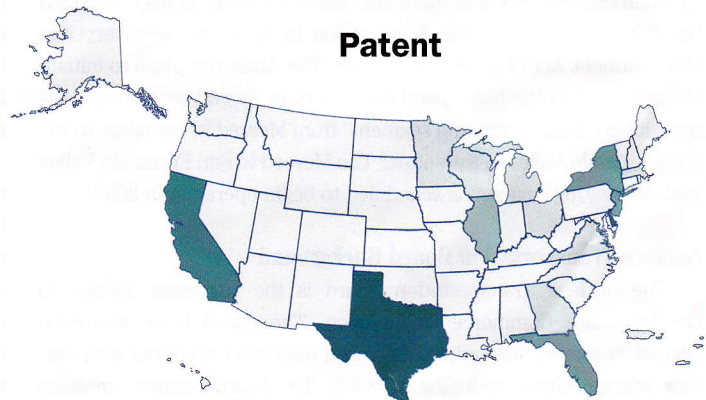
101-200

201-300

301-400

401-700

Patent



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51-100

101-200

201-300

301-800

801-1700

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LIMITATION ON ISSUANCE OF PATENTS

Pub. L. 112-29, §33, Sept. 16, 2011, 125 Stat. 340, provided that:

“(a) LIMITATION.—Notwithstanding any other provision of law, no patent may issue on a claim directed to or encompassing a human organism.

“(b) EFFECTIVE DATE.—

“(1) IN GENERAL.—Subsection (a) shall apply to any application for patent that is pending on, or filed on or after, the date of the enactment of this Act [Sept. 16, 2011].

“(2) PRIOR APPLICATIONS.—Subsection (a) shall not affect the validity of any patent issued on an application to which paragraph (1) does not apply.”

§ 101. Inventions patentable

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.

(July 19, 1952, ch. 950, 66 Stat. 797.)

HISTORICAL AND REVISION NOTES

Based on Title 35, U.S.C., 1946 ed., §31 (R.S. 4886, amended (1) Mar. 3, 1897, ch. 391, §1, 29 Stat. 692, (2) May 23, 1930, ch. 312, §1, 46 Stat. 376, (3) Aug. 5, 1939, ch. 450, §1, 53 Stat. 1212).

The corresponding section of existing statute is split into two sections, section 101 relating to the subject matter for which patents may be obtained, and section 102 defining statutory novelty and stating other conditions for patentability.

Section 101 follows the wording of the existing statute as to the subject matter for patents, except that reference to plant patents has been omitted for incorporation in section 301 and the word “art” has been replaced by “process”, which is defined in section 100. The word “art” in the corresponding section of the existing statute has a different meaning than the same word as used in other places in the statute; it has been interpreted by the courts as being practically synonymous with process or method. “Process” has been used as its meaning is more readily grasped than “art” as interpreted, and the definition in section 100(b) makes it clear that “process or method” is meant. The remainder of the definition clarifies the status of processes or methods which involve merely the new use of a known process, machine, manufacture, composition of matter, or material; they are processes or methods under the statute and may be patented provided the conditions for patentability are satisfied.

Syllabus

NOTE: Where it is feasible, a syllabus (headnote) will be released, as is being done in connection with this case, at the time the opinion is issued. The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States v. Detroit Timber & Lumber Co.*, 200 U. S. 321, 337.

SUPREME COURT OF THE UNITED STATES

Syllabus

ALICE CORPORATION PTY. LTD. *v.* CLS BANK
INTERNATIONAL ET AL.CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

No. 13–298. Argued March 31, 2014—Decided June 19, 2014

Petitioner Alice Corporation is the assignee of several patents that disclose a scheme for mitigating “settlement risk,” *i.e.*, the risk that only one party to an agreed-upon financial exchange will satisfy its obligation. In particular, the patent claims are designed to facilitate the exchange of financial obligations between two parties by using a computer system as a third-party intermediary. The patents in suit claim (1) a method for exchanging financial obligations, (2) a computer system configured to carry out the method for exchanging obligations, and (3) a computer-readable medium containing program code for performing the method of exchanging obligations.

Respondents (together, CLS Bank), who operate a global network that facilitates currency transactions, filed suit against petitioner, arguing that the patent claims at issue are invalid, unenforceable, or not infringed. Petitioner counterclaimed, alleging infringement. After *Bilski v. Kappos*, 561 U. S. 593, was decided, the District Court held that all of the claims were ineligible for patent protection under 35 U. S. C. §101 because they are directed to an abstract idea. The en banc Federal Circuit affirmed.

Held: Because the claims are drawn to a patent-ineligible abstract idea, they are not patent eligible under §101. Pp. 5–17.

(a) The Court has long held that §101, which defines the subject matter eligible for patent protection, contains an implicit exception for “[l]aws of nature, natural phenomena, and abstract ideas.” *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U. S. ___, ___. In applying the §101 exception, this Court must distinguish patents that claim the “buildin[g] block[s]” of human ingenuity, which are ineligible for patent protection, from those that integrate

Syllabus

the building blocks into something more, see *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U. S. ___, ___, thereby “transform[ing]” them into a patent-eligible invention, *id.*, at ___. Pp. 5–6.

(b) Using this framework, the Court must first determine whether the claims at issue are directed to a patent-ineligible concept. 566 U. S., at ___. If so, the Court then asks whether the claim’s elements, considered both individually and “as an ordered combination,” “transform the nature of the claim” into a patent-eligible application. *Id.*, at ___. Pp. 7–17.

(1) The claims at issue are directed to a patent-ineligible concept: the abstract idea of intermediated settlement. Under “the longstanding rule that ‘[a]n idea of itself is not patentable,’” *Gottschalk v. Benson*, 409 U. S. 63, 67, this Court has found ineligible patent claims involving an algorithm for converting binary-coded decimal numerals into pure binary form, *id.*, at 71–72; a mathematical formula for computing “alarm limits” in a catalytic conversion process, *Parker v. Flook*, 437 U. S. 584, 594–595; and, most recently, a method for hedging against the financial risk of price fluctuations, *Bilski*, 561 U. S. at 599. It follows from these cases, and *Bilski* in particular, that the claims at issue are directed to an abstract idea. On their face, they are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk. Like the risk hedging in *Bilski*, the concept of intermediated settlement is “‘a fundamental economic practice long prevalent in our system of commerce,’” *ibid.*, and the use of a third-party intermediary (or “clearing house”) is a building block of the modern economy. Thus, intermediated settlement, like hedging, is an “abstract idea” beyond §101’s scope. Pp. 7–10.

(2) Turning to the second step of *Mayo*’s framework: The method claims, which merely require generic computer implementation, fail to transform that abstract idea into a patent-eligible invention. Pp. 10–16.

(i) “Simply appending conventional steps, specified at a high level of generality,” to a method already “well known in the art” is not “enough” to supply the “‘inventive concept’” needed to make this transformation. *Mayo, supra*, at ___, ___. The introduction of a computer into the claims does not alter the analysis. Neither stating an abstract idea “while adding the words ‘apply it,’” *Mayo, supra*, at ___, nor limiting the use of an abstract idea “‘to a particular technological environment,’” *Bilski, supra*, at 610–611, is enough for patent eligibility. Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Wholly generic computer implementation is not generally the

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sort of “additional featur[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.” *Mayo, supra*, at ____ . Pp. 11–14.

(ii) Here, the representative method claim does no more than simply instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer. Taking the claim elements separately, the function performed by the computer at each step—creating and maintaining “shadow” accounts, obtaining data, adjusting account balances, and issuing automated instructions—is “[p]urely ‘conventional.’ ” *Mayo*, 566 U. S., at ____ . Considered “as an ordered combination,” these computer components “ad[d] nothing . . . that is not already present when the steps are considered separately.” *Id.*, at ____ . Viewed as a whole, these method claims simply recite the concept of intermediated settlement as performed by a generic computer. They do not, for example, purport to improve the functioning of the computer itself or effect an improvement in any other technology or technical field. An instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer is not “*enough*” to transform the abstract idea into a patent-eligible invention. *Id.*, at ____ . Pp. 14–16.

(3) Because petitioner’s system and media claims add nothing of substance to the underlying abstract idea, they too are patent ineligible under §101. Petitioner conceded below that its media claims rise or fall with its method claims. And the system claims are no different in substance from the method claims. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea. This Court has long “warn[ed] . . . against” interpreting §101 “in ways that make patent eligibility ‘depend simply on the draftsman’s art.’ ” *Mayo, supra*, at ____ . Holding that the system claims are patent eligible would have exactly that result. Pp. 16–17.

717 F. 3d 1269, affirmed.

THOMAS, J., delivered the opinion for a unanimous Court. SOTOMAYOR, J., filed a concurring opinion, in which GINSBURG and BREYER, JJ., joined.

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SUPREME COURT OF THE UNITED STATES

No. 13–298

ALICE CORPORATION PTY. LTD, PETITIONER *v.* CLS
BANK INTERNATIONAL ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF
APPEALS FOR THE FEDERAL CIRCUIT

[June 19, 2014]

JUSTICE THOMAS delivered the opinion of the Court.

The patents at issue in this case disclose a computer-implemented scheme for mitigating “settlement risk” (*i.e.*, the risk that only one party to a financial transaction will pay what it owes) by using a third-party intermediary. The question presented is whether these claims are patent eligible under 35 U. S. C. §101, or are instead drawn to a patent-ineligible abstract idea. We hold that the claims at issue are drawn to the abstract idea of intermediated settlement, and that merely requiring generic computer implementation fails to transform that abstract idea into a patent-eligible invention. We therefore affirm the judgment of the United States Court of Appeals for the Federal Circuit.

I A

Petitioner Alice Corporation is the assignee of several patents that disclose schemes to manage certain forms of financial risk.¹ According to the specification largely

¹The patents at issue are United States Patent Nos. 5,970,479 (the

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shared by the patents, the invention “enabl[es] the management of risk relating to specified, yet unknown, future events.” App. 248. The specification further explains that the “invention relates to methods and apparatus, including electrical computers and data processing systems applied to financial matters and risk management.” *Id.*, at 243.

The claims at issue relate to a computerized scheme for mitigating “settlement risk”—*i.e.*, the risk that only one party to an agreed-upon financial exchange will satisfy its obligation. In particular, the claims are designed to facilitate the exchange of financial obligations between two parties by using a computer system as a third-party intermediary. *Id.*, at 383–384.² The intermediary creates “shadow” credit and debit records (*i.e.*, account ledgers)

¹’479 patent), 6,912,510, 7,149,720, and 7,725,375.

²The parties agree that claim 33 of the ’479 patent is representative of the method claims. Claim 33 recites:

“A method of exchanging obligations as between parties, each party holding a credit record and a debit record with an exchange institution, the credit records and debit records for exchange of predetermined obligations, the method comprising the steps of:

“(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 on[e] 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.” App. 383–384.

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that mirror the balances in the parties’ real-world accounts at “exchange institutions” (*e.g.*, banks). The intermediary updates the shadow records in real time as transactions are entered, allowing “only those transactions for which the parties’ updated shadow records indicate sufficient resources to satisfy their mutual obligations.” 717 F. 3d 1269, 1285 (CA Fed. 2013) (Lourie, J., concurring). At the end of the day, the intermediary instructs the relevant financial institutions to carry out the “permitted” transactions in accordance with the updated shadow records, *ibid.*, thus mitigating the risk that only one party will perform the agreed-upon exchange.

In sum, the patents in suit claim (1) the foregoing method for exchanging obligations (the method claims), (2) a computer system configured to carry out the method for exchanging obligations (the system claims), and (3) a computer-readable medium containing program code for performing the method of exchanging obligations (the media claims). All of the claims are implemented using a computer; the system and media claims expressly recite a computer, and the parties have stipulated that the method claims require a computer as well.

B

Respondents CLS Bank International and CLS Services Ltd. (together, CLS Bank) operate a global network that facilitates currency transactions. In 2007, CLS Bank filed suit against petitioner, seeking a declaratory judgment that the claims at issue are invalid, unenforceable, or not infringed. Petitioner counterclaimed, alleging infringement. Following this Court’s decision in *Bilski v. Kappos*, 561 U. S. 593 (2010), the parties filed cross-motions for summary judgment on whether the asserted claims are eligible for patent protection under 35 U. S. C. §101. The District Court held that all of the claims are patent ineligible because they are directed to the abstract idea of

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“employing a neutral intermediary to facilitate simultaneous exchange of obligations in order to minimize risk.” 768 F. Supp. 2d 221, 252 (DC 2011).

A divided panel of the United States Court of Appeals for the Federal Circuit reversed, holding that it was not “manifestly evident” that petitioner’s claims are directed to an abstract idea. 685 F. 3d 1341, 1352, 1356 (2012). The Federal Circuit granted rehearing en banc, vacated the panel opinion, and affirmed the judgment of the District Court in a one-paragraph *per curiam* opinion. 717 F. 3d, at 1273. Seven of the ten participating judges agreed that petitioner’s method and media claims are patent ineligible. See *id.*, at 1274 (Lourie, J., concurring); *id.*, at 1312–1313 (Rader, C. J., concurring in part and dissenting in part). With respect to petitioner’s system claims, the en banc Federal Circuit affirmed the District Court’s judgment by an equally divided vote. *Id.*, at 1273.

Writing for a five-member plurality, Judge Lourie concluded that all of the claims at issue are patent ineligible. In the plurality’s view, under this Court’s decision in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U. S. ____ (2012), a court must first “identif[y] the abstract idea represented in the claim,” and then determine “whether the balance of the claim adds ‘significantly more.’” 717 F. 3d, at 1286. The plurality concluded that petitioner’s claims “draw on the abstract idea of reducing settlement risk by effecting trades through a third-party intermediary,” and that the use of a computer to maintain, adjust, and reconcile shadow accounts added nothing of substance to that abstract idea. *Ibid.*

Chief Judge Rader concurred in part and dissented in part. In a part of the opinion joined only by Judge Moore, Chief Judge Rader agreed with the plurality that petitioner’s method and media claims are drawn to an abstract idea. *Id.*, at 1312–1313. In a part of the opinion joined by Judges Linn, Moore, and O’Malley, Chief Judge Rader

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would have held that the system claims are patent eligible because they involve computer “hardware” that is “specifically programmed to solve a complex problem.” *Id.*, at 1307. Judge Moore wrote a separate opinion dissenting in part, arguing that the system claims are patent eligible. *Id.*, at 1313–1314. Judge Newman filed an opinion concurring in part and dissenting in part, arguing that all of petitioner’s claims are patent eligible. *Id.*, at 1327. Judges Linn and O’Malley filed a separate dissenting opinion reaching that same conclusion. *Ibid.*

We granted certiorari, 571 U. S. ____ (2013), and now affirm.

II

Section 101 of the Patent Act defines the subject matter eligible for patent protection. It provides:

“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.

“We have long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U. S. ___, ____ (2013) (slip op., at 11) (internal quotation marks and brackets omitted). We have interpreted §101 and its predecessors in light of this exception for more than 150 years. *Bilski*, *supra*, at 601–602; see also *O’Reilly v. Morse*, 15 How. 62, 112–120 (1854); *Le Roy v. Tatham*, 14 How. 156, 174–175 (1853).

We have described the concern that drives this exclusionary principle as one of pre-emption. See, *e.g.*, *Bilski*, *supra*, at 611–612 (upholding the patent “would pre-empt use of this approach in all fields, and would effectively

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grant a monopoly over an abstract idea”). Laws of nature, natural phenomena, and abstract ideas are ““the basic tools of scientific and technological work.”” *Myriad, supra*, at ____ (slip op., at 11). “[M]onopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it,” thereby thwarting the primary object of the patent laws. *Mayo, supra*, at ____ (slip op., at 2); see U. S. Const., Art. I, §8, cl. 8 (Congress “shall have Power . . . To promote the Progress of Science and useful Arts”). We have “repeatedly emphasized this . . . concern that patent law not inhibit further discovery by improperly tying up the future use of” these building blocks of human ingenuity. *Mayo, supra*, at ____ (slip op., at 16) (citing *Morse, supra*, at 113).

At the same time, we tread carefully in construing this exclusionary principle lest it swallow all of patent law. *Mayo*, 566 U. S., at ____ (slip op., at 2). At some level, “all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Id.*, at ____ (slip op., at 2). Thus, an invention is not rendered ineligible for patent simply because it involves an abstract concept. See *Diamond v. Diehr*, 450 U. S. 175, 187 (1981). “[A]pplication[s]” of such concepts “to a new and useful end,” we have said, remain eligible for patent protection. *Gottschalk v. Benson*, 409 U. S. 63, 67 (1972).

Accordingly, in applying the §101 exception, we must distinguish between patents that claim the “buildin[g] block[s]” of human ingenuity and those that integrate the building blocks into something more, *Mayo*, 566 U. S., at ____ (slip op., at 20), thereby “transform[ing]” them into a patent-eligible invention, *id.*, at ____ (slip op., at 3). The former “would risk disproportionately tying up the use of the underlying” ideas, *id.*, at ____ (slip op., at 4), and are therefore ineligible for patent protection. The latter pose no comparable risk of pre-emption, and therefore remain eligible for the monopoly granted under our patent laws.

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III

In *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U. S. ____ (2012), we set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. *Id.*, at ____ (slip op., at 8). If so, we then ask, “[w]hat else is there in the claims before us?” *Id.*, at ____ (slip op., at 9). To answer that question, we 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. *Id.*, at ____ (slip op., at 10, 9). We have described step two of this analysis as a search for an “inventive concept”—*i.e.*, an element or combination of elements that is “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.” *Id.*, at ____ (slip op., at 3).³

A

We must first determine whether the claims at issue are directed to a patent-ineligible concept. We conclude that they are: These claims are drawn to the abstract idea of intermediated settlement.

The “abstract ideas” category embodies “the longstanding rule that ‘[a]n idea of itself is not patentable.’” *Benson, supra*, at 67 (quoting *Rubber-Tip Pencil Co. v. Howard*, 20 Wall. 498, 507 (1874)); see also *Le Roy, supra*, at

³Because the approach we made explicit in *Mayo* considers all claim elements, both individually and in combination, it is consistent with the general rule that patent claims “must be considered as a whole.” *Diamond v. Diehr*, 450 U. S. 175, 188 (1981); see *Parker v. Flook*, 437 U. S. 584, 594 (1978) (“Our approach . . . is . . . not at all inconsistent with the view that a patent claim must be considered as a whole”).

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175 (“A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right”). In *Benson*, for example, this Court rejected as ineligible patent claims involving an algorithm for converting binary-coded decimal numerals into pure binary form, holding that the claimed patent was “in practical effect . . . a patent on the algorithm itself.” 409 U. S., at 71–72. And in *Parker v. Flook*, 437 U. S. 584, 594–595 (1978), we held that a mathematical formula for computing “alarm limits” in a catalytic conversion process was also a patent-ineligible abstract idea.

We most recently addressed the category of abstract ideas in *Bilski v. Kappos*, 561 U. S. 593 (2010). The claims at issue in *Bilski* described a method for hedging against the financial risk of price fluctuations. Claim 1 recited a series of steps for hedging risk, including: (1) initiating a series of financial transactions between providers and consumers of a commodity; (2) identifying market participants that have a counterrisk for the same commodity; and (3) initiating a series of transactions between those market participants and the commodity provider to balance the risk position of the first series of consumer transactions. *Id.*, at 599. Claim 4 “pu[t] the concept articulated in claim 1 into a simple mathematical formula.” *Ibid.* The remaining claims were drawn to examples of hedging in commodities and energy markets.

“[A]ll members of the Court agree[d]” that the patent at issue in *Bilski* claimed an “abstract idea.” *Id.*, at 609; see also *id.*, at 619 (Stevens, J., concurring in judgment). Specifically, the claims described “the basic concept of hedging, or protecting against risk.” *Id.*, at 611. The Court explained that “[h]edging is a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class.” *Ibid.* “The concept of hedging” as recited by the claims in suit was

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therefore a patent-ineligible “abstract idea, just like the algorithms at issue in *Benson* and *Flook*.” *Ibid.*

It follows from our prior cases, and *Bilski* in particular, that the claims at issue here are directed to an abstract idea. Petitioner’s claims involve a method of exchanging financial obligations between two parties using a third-party intermediary to mitigate settlement risk. The intermediary creates and updates “shadow” records to reflect the value of each party’s actual accounts held at “exchange institutions,” thereby permitting only those transactions for which the parties have sufficient resources. At the end of each day, the intermediary issues irrevocable instructions to the exchange institutions to carry out the permitted transactions.

On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk. Like the risk hedging in *Bilski*, the concept of intermediated settlement is “a fundamental economic practice long prevalent in our system of commerce.” *Ibid.*; see, *e.g.*, Emery, Speculation on the Stock and Produce Exchanges of the United States, in 7 Studies in History, Economics and Public Law 283, 346–356 (1896) (discussing the use of a “clearing-house” as an intermediary to reduce settlement risk). The use of a third-party intermediary (or “clearing house”) is also a building block of the modern economy. See, *e.g.*, Yadav, The Problematic Case of Clearinghouses in Complex Markets, 101 Geo. L. J. 387, 406–412 (2013); J. Hull, Risk Management and Financial Institutions 103–104 (3d ed. 2012). Thus, intermediated settlement, like hedging, is an “abstract idea” beyond the scope of §101.

Petitioner acknowledges that its claims describe intermediated settlement, see Brief for Petitioner 4, but rejects the conclusion that its claims recite an “abstract idea.” Drawing on the presence of mathematical formulas in some of our abstract-ideas precedents, petitioner contends

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that the abstract-ideas category is confined to “preexisting, fundamental truth[s]” that “‘exis[t] in principle apart from any human action.’” *Id.*, at 23, 26 (quoting *Mayo*, 566 U. S., at ___ (slip op., at 8)).

Bilski belies petitioner’s assertion. The concept of risk hedging we identified as an abstract idea in that case cannot be described as a “preexisting, fundamental truth.” The patent in *Bilski* simply involved a “series of steps instructing how to hedge risk.” 561 U. S., at 599. Although hedging is a longstanding commercial practice, *id.*, at 599, it is a method of organizing human activity, not a “truth” about the natural world “‘that has always existed,’” Brief for Petitioner 22 (quoting *Flook*, *supra*, at 593, n. 15). One of the claims in *Bilski* reduced hedging to a mathematical formula, but the Court did not assign any special significance to that fact, much less the sort of talismanic significance petitioner claims. Instead, the Court grounded its conclusion that all of the claims at issue were abstract ideas in the understanding that risk hedging was a “‘fundamental economic practice.’” 561 U. S., at 611.

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

B

Because the claims at issue are directed to the abstract idea of intermediated settlement, we turn to the second step in *Mayo*’s framework. We conclude that the method claims, which merely require generic computer implementation, fail to transform that abstract idea into a patent-eligible invention.

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1

At *Mayo* step two, we must examine the elements of the claim to determine whether it contains an “inventive concept” sufficient to “transform” the claimed abstract idea into a patent-eligible application. 566 U. S., at ___, ___ (slip op., at 3, 11). A claim that recites an abstract idea must include “additional features” to ensure “that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].” *Id.*, at ___ (slip op., at 8–9). *Mayo* made clear that transformation into a patent-eligible application requires “more than simply stat[ing] the [abstract idea] while adding the words ‘apply it.’” *Id.*, at ___ (slip op., at 3).

Mayo itself is instructive. The patents at issue in *Mayo* claimed a method for measuring metabolites in the bloodstream in order to calibrate the appropriate dosage of thiopurine drugs in the treatment of autoimmune diseases. *Id.*, at ___ (slip op., at 4–6). The respondent in that case contended that the claimed method was a patent-eligible application of natural laws that describe the relationship between the concentration of certain metabolites and the likelihood that the drug dosage will be harmful or ineffective. But methods for determining metabolite levels were already “well known in the art,” and the process at issue amounted to “nothing significantly more than an instruction to doctors to apply the applicable laws when treating their patients.” *Id.*, at ___ (slip op., at 10). “Simply appending conventional steps, specified at a high level of generality,” was not “*enough*” to supply an “inventive concept.” *Id.*, at ___, ___, ___ (slip op., at 14, 8, 3).

The introduction of a computer into the claims does not alter the analysis at *Mayo* step two. In *Benson*, for example, we considered a patent that claimed an algorithm implemented on “a general-purpose digital computer.” 409 U. S., at 64. Because the algorithm was an abstract idea, see *supra*, at 8, the claim had to supply a “new and use-

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ful” application of the idea in order to be patent eligible. 409 U. S., at 67. But the computer implementation did not supply the necessary inventive concept; the process could be “carried out in existing computers long in use.” *Ibid.* We accordingly “held that simply implementing a mathematical principle on a physical machine, namely a computer, [i]s not a patentable application of that principle.” *Mayo, supra*, at ____ (slip op., at 16) (citing *Benson, supra*, at 64).

Flook is to the same effect. There, we examined a computerized method for using a mathematical formula to adjust alarm limits for certain operating conditions (*e.g.*, temperature and pressure) that could signal inefficiency or danger in a catalytic conversion process. 437 U. S., at 585–586. Once again, the formula itself was an abstract idea, see *supra*, at 8, and the computer implementation was purely conventional. 437 U. S., at 594 (noting that the “use of computers for ‘automatic monitoring-alarming’” was “well known”). In holding that the process was patent ineligible, we rejected the argument that “implement[ing] a principle in some specific fashion” will “automatically fal[l] within the patentable subject matter of §101.” *Id.*, at 593. Thus, “*Flook* stands for the proposition that the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment.” *Bilski*, 561 U. S., at 610–611 (internal quotation marks omitted).

In *Diehr*, 450 U. S. 175, by contrast, we held that a computer-implemented process for curing rubber was patent eligible, but not because it involved a computer. The claim employed a “well-known” mathematical equation, but it used that equation in a process designed to solve a technological problem in “conventional industry practice.” *Id.*, at 177, 178. The invention in *Diehr* used a “thermocouple” to record constant temperature measure-

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ments inside the rubber mold—something “the industry ha[d] not been able to obtain.” *Id.*, at 178, and n. 3. The temperature measurements were then fed into a computer, which repeatedly recalculated the remaining cure time by using the mathematical equation. *Id.*, at 178–179. These additional steps, we recently explained, “transformed the process into an inventive application of the formula.” *Mayo, supra*, at ____ (slip op., at 12). In other words, the claims in *Diehr* were patent eligible because they improved an existing technological process, not because they were implemented on a computer.

These cases demonstrate that the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. *Mayo, supra*, at ____ (slip op., at 3). Nor is limiting the use of an abstract idea “‘to a particular technological environment.’” *Bilski, supra*, at 610–611. Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implemen[t]” an abstract idea “on . . . a computer,” *Mayo, supra*, at ____ (slip op., at 16), that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our §101 jurisprudence. Given the ubiquity of computers, see 717 F. 3d, at 1286 (Lourie, J., concurring), wholly generic computer implementation is not generally the sort of “additional featur[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.” *Mayo*, 566 U. S., at ____ (slip op., at 8–9).

The fact that a computer “necessarily exist[s] in the physical, rather than purely conceptual, realm,” Brief for Petitioner 39, is beside the point. There is no dispute that

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a computer is a tangible system (in §101 terms, a “machine”), or that many computer-implemented claims are formally addressed to patent-eligible subject matter. But if that were the end of the §101 inquiry, an applicant could claim any principle of the physical or social sciences by reciting a computer system configured to implement the relevant concept. Such a result would make the determination of patent eligibility “depend simply on the draftsman’s art,” *Flook, supra*, at 593, thereby eviscerating the rule that “[l]aws of nature, natural phenomena, and abstract ideas are not patentable,” *Myriad*, 569 U. S., at ___ (slip op., at 11).

2

The representative method claim in this case recites the following steps: (1) “creating” shadow records for each counterparty to a transaction; (2) “obtaining” start-of-day balances based on the parties’ real-world accounts at exchange institutions; (3) “adjusting” the shadow records as transactions are entered, allowing only those transactions for which the parties have sufficient resources; and (4) issuing irrevocable end-of-day instructions to the exchange institutions to carry out the permitted transactions. See n.2, *supra*. Petitioner principally contends that the claims are patent eligible because these steps “require a substantial and meaningful role for the computer.” Brief for Petitioner 48. As stipulated, the claimed method requires the use of a computer to create electronic records, track multiple transactions, and issue simultaneous instructions; in other words, “[t]he computer is itself the intermediary.” *Ibid.* (emphasis deleted).

In light of the foregoing, see *supra*, at 11–14, the relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer. They do not.

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Taking the claim elements separately, the function performed by the computer at each step of the process is “[p]urely conventional.” *Mayo, supra*, at ____ (slip op., at 10) (internal quotation marks omitted). Using a computer to create and maintain “shadow” accounts amounts to electronic recordkeeping—one of the most basic functions of a computer. See, e.g., *Benson*, 409 U. S., at 65 (noting that a computer “operates . . . upon both new and previously stored data”). The same is true with respect to the use of a computer to obtain data, adjust account balances, and issue automated instructions; all of these computer functions are “well-understood, routine, conventional activit[ies]” previously known to the industry. *Mayo*, 566 U. S., at ____ (slip op., at 4). In short, each step does no more than require a generic computer to perform generic computer functions.

Considered “as an ordered combination,” the computer components of petitioner’s method “ad[d] nothing . . . that is not already present when the steps are considered separately.” *Id.*, at ____ (slip op., at 10). Viewed as a whole, petitioner’s method claims simply recite the concept of intermediated settlement as performed by a generic computer. See 717 F. 3d, at 1286 (Lourie, J., concurring) (noting that the representative method claim “lacks *any* express language to define the computer’s participation”). The method claims do not, for example, purport to improve the functioning of the computer itself. See *ibid.* (“There is no specific or limiting recitation of . . . improved computer technology . . .”); Brief for United States as *Amicus Curiae* 28–30. Nor do they effect an improvement in any other technology or technical field. See, e.g., *Diehr*, 450 U. S., at 177–178. Instead, the claims at issue amount to “nothing significantly more” than an instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer. *Mayo*, 566 U. S., at ____ (slip op., at 10). Under our precedents, that is not “*enough*” to

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transform an abstract idea into a patent-eligible invention. *Id.*, at ____ (slip op., at 8).

C

Petitioner's claims to a computer system and a computer-readable medium fail for substantially the same reasons. Petitioner conceded below that its media claims rise or fall with its method claims. En Banc Response Brief for Defendant-Appellant in No. 11–1301 (CA Fed.) p. 50, n. 3. As to its system claims, petitioner emphasizes that those claims recite “specific hardware” configured to perform “specific computerized functions.” Brief for Petitioner 53. But what petitioner characterizes as specific hardware—a “data processing system” with a “communications controller” and “data storage unit,” for example, see App. 954, 958, 1257—is purely functional and generic. Nearly every computer will include a “communications controller” and “data storage unit” capable of performing the basic calculation, storage, and transmission functions required by the method claims. See 717 F. 3d, at 1290 (Lourie, J., concurring). As a result, none of the hardware recited by the system claims “offers a meaningful limitation beyond generally linking ‘the use of the [method] to a particular technological environment,’ that is, implementation via computers.” *Id.*, at 1291 (quoting *Bilski*, 561 U. S., at 610–611).

Put another way, the system claims are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea. This Court has long “warn[ed] . . . against” interpreting §101 “in ways that make patent eligibility ‘depend simply on the draftsman’s art.’” *Mayo, supra*, at ____ (slip op., at 3) (quoting *Flook*, 437 U. S., at 593); see *id.*, at 590 (“The concept of patentable subject matter under §101 is not

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‘like a nose of wax which may be turned and twisted in any direction . . .’”). Holding that the system claims are patent eligible would have exactly that result.

Because petitioner’s system and media claims add nothing of substance to the underlying abstract idea, we hold that they too are patent ineligible under §101.

* * *

For the foregoing reasons, the judgment of the Court of Appeals for the Federal Circuit is affirmed.

It is so ordered.

SOTOMAYOR, J., concurring

SUPREME COURT OF THE UNITED STATES

No. 13–298

ALICE CORPORATION PTY. LTD, PETITIONER *v.* CLS
BANK INTERNATIONAL ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF
APPEALS FOR THE FEDERAL CIRCUIT

[June 19, 2014]

JUSTICE SOTOMAYOR, with whom JUSTICE GINSBURG
and JUSTICE BREYER join, concurring.

I adhere to the view that any “claim that merely describes a method of doing business does not qualify as a ‘process’ under §101.” *Bilski v. Kappos*, 561 U. S. 593, 614 (2010) (Stevens, J., concurring in judgment); see also *In re Bilski*, 545 F. 3d 943, 972 (CA Fed. 2008) (Dyk, J., concurring) (“There is no suggestion in any of th[e] early [English] consideration of process patents that processes for organizing human activity were or ever had been patentable”). As in *Bilski*, however, I further believe that the method claims at issue are drawn to an abstract idea. Cf. 561 U. S., at 619 (opinion of Stevens, J.). I therefore join the opinion of the Court.

Lex Machina PTAB Report

The Patent Trial and Appeal Board (PTAB) was created under the Americans Invent Act (AIA) as a partial replacement to the Patent Board of Appeals and Interferences (BPAI). The PTAB offers several new procedures: inter partes review (IPR), covered business method review (CBM), post-grant review, and derivation proceedings.

CBM and IPR reviews provide a faster (and usually cheaper) path to invalidate patents on particular grounds, compared to district court litigation. IPR and CBM petitions comprise the vast majority of PTAB's business since its opening. Because post grant review is only available on patents issued after March 16, 2013, its effect has not yet been felt. Derivation proceedings, which adjudicate priority claims between filed applications, have also been few in number as well are excluded from the following figures.

Except where otherwise stated, all figures are through December 31, 2014.

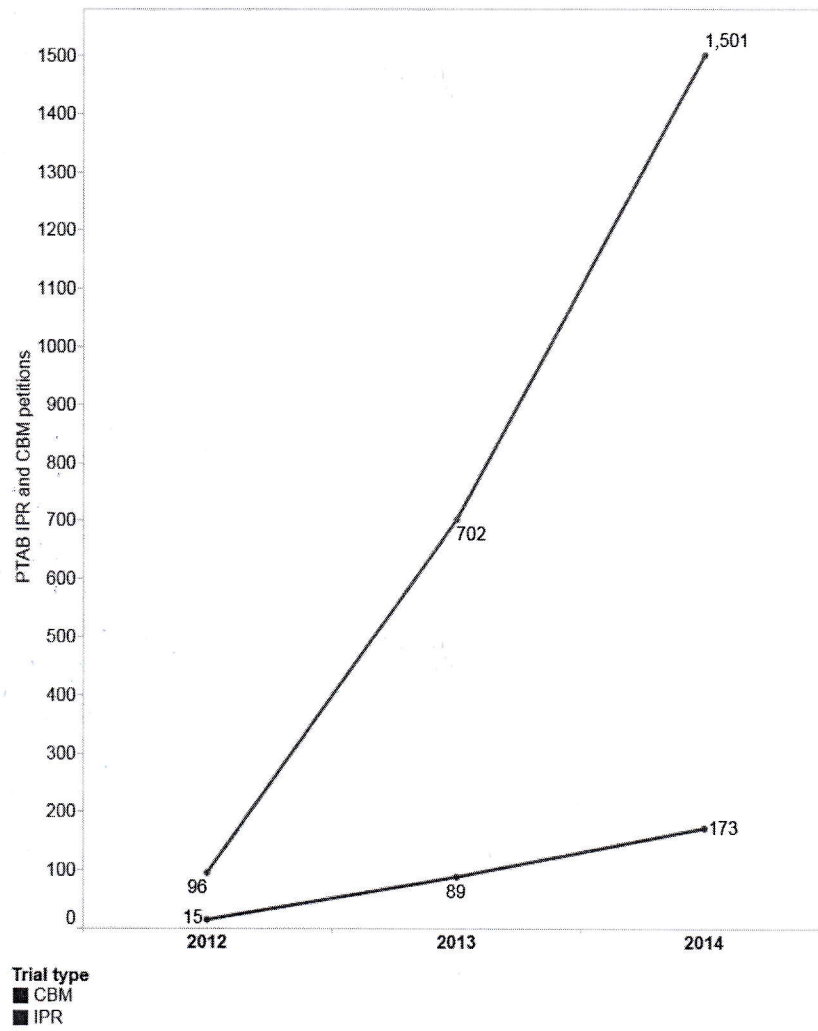


Fig. 1: IPR and CBM petitions, 2012-2014

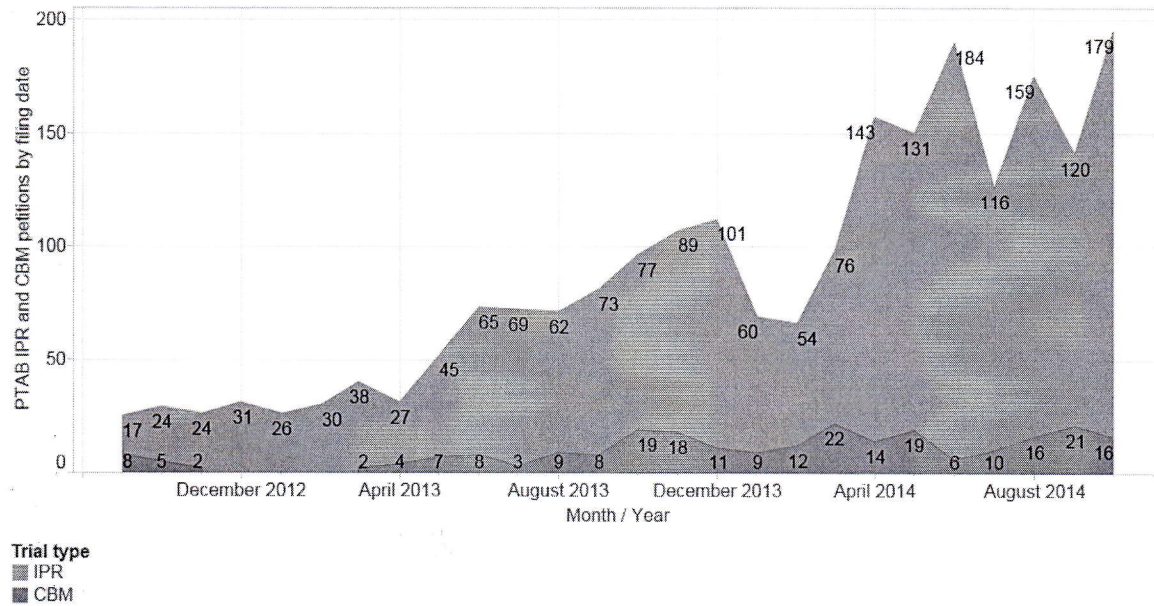


Fig. 2: IPR and CBM petitions, 2012-2014, by month

The PTAB has grown in popularity tremendously since its opening in 2012, although not evenly. IPR reviews are far more popular than CBM reviews, though the number of CBM petitions filed is more consistent month-to-month.

Unsurprisingly for a venue whose main business is patent invalidation, the entities against whom the most petitions have been filed are mostly patent monetization entities:

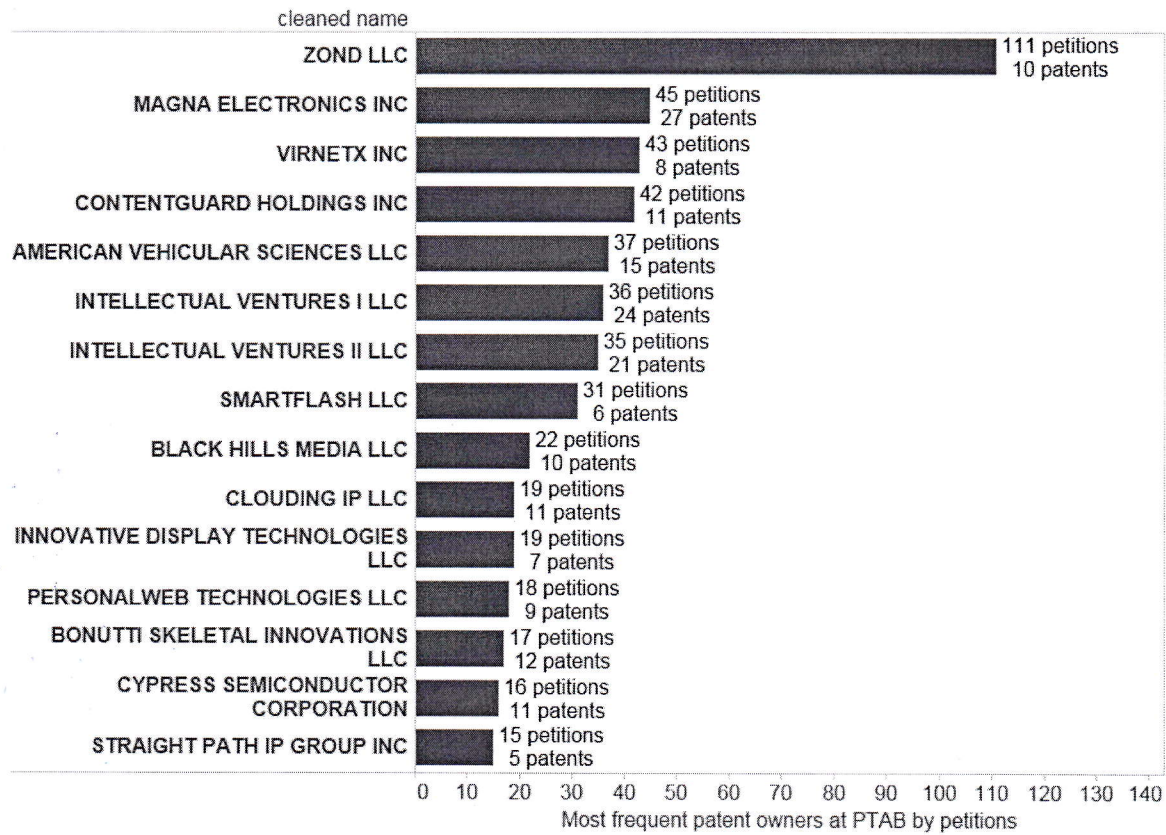


Fig. 3: Top 15 patent owners at PTAB by petitions

Of the all the PTAB petitions filed through January 31, 2015, the majority are still open (62%), either pending institution (35%), or having been instituted (27%). (“Institution” is a procedural step in which the PTAB decides whether to proceed with a trial on the merits, depending on the likelihood of a petitioner prevailing with respect to at least one of the challenged claims.) Of those terminated, most terminated petitions have ended without being instituted (20%), followed by those reaching a merits decision (10%). Few cases (8%) have settled.

Trial Status

Open: Pending Institution Decision	943	35%
Open: Instituted	717	27%
Terminated: Not Instituted	548	20%
Terminated: Final Decision	260	10%
Terminated: Settled	222	8%

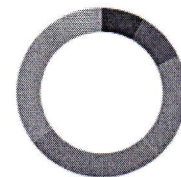


Fig. 4: Status of IPR and CBM reviews filed through January 31, 2015.

The median time to institution for PTAB petitions is nearly half a year - 179 days for CBM and 172 days for IPR.