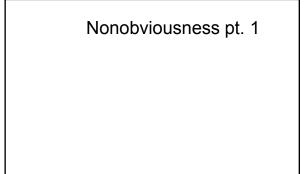
# PATENT LAW

**Tim Clise** 

# CLASS 5

# Nonobviousness pt. 1; Eligibility pt. 2; ST: Attorney Client Privilege



### Nonobviousness

"[A]n invention must also **sufficiently advance the useful arts** in order to warrant the award of an exclusive right. ... In terms of obviousness, the new combination does not warrant a patent if, from the vantage point of one of ordinary skill in the art at the time of the invention, this new combination would have been obvious."

#### Nonobviousness

- · Less tangible than novelty
- "Nonobviousness thus creates a 'patent-free' zone around the state of the art, allowing skilled technicians to complete routine work such as the straightforward substitution of materials, the ordinary streamlining of parts and technological processes, and the usually marginal improvements which occur as a technology matures."
- Relevant time for assessment "before the effective filing date of the claimed invention"

# Historical Underpinnings

"[F]or unless more ingenuity and skill in applying the old method of fastening the shank and the knob were required in the application of it to the clay or porcelain knob than were possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention. In other words, the improvement is the work of the skillful (sp) mechanic, not that of the inventor."

#### §103 - Conditions for patentability; non-obvious subject matter

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Pre-AIA

#### §103 - Conditions for patentability; non-obvious subject matter

(b)(1)Notwithstanding subsection (a), and upon timely election by the applicant for patent to proceed under this subsection, a biotechnological process using or resulting in a composition of matter that is novel under section 102 and nonobvious under subsection (a) of this section shall be considered nonobvious if--

- (A) claims to the process and the composition of matter are contained in either the same application for patent or in separate applications having the same effective filing date; and
- (B) the composition of matter, and the process at the time it was invented, were owned by the same person or subject to an obligation of assignment to the same person.

<sup>•</sup> Hotchkiss v. Greenwood (1850)

#### §103 - Conditions for patentability; non-obvious subject matter

- (2) A patent issued on a process under paragraph (1) (A) shall also contain the claims to the composition of matter used in or made by that process, or
  - (B) shall, if such composition of matter is claimed in another patent, be set to expire on the same date as such other patent, notwithstanding section 154.
- (3) For purposes of paragraph (1), the term "biotechnological process"
  - (A) a process of genetically altering or otherwise inducing a single- or multi-celled organism to
    - (i) express an exogenous nucleotide sequence,
       (ii) inhibit, eliminate, augment, or alter expression of an endogenous nucleotide sequence,
       (iii) express a specific physiological characteristic not naturally associated with said organism,

  - (B) cell fusion procedures yielding a cell line that expresses a specific protein, such as a monoclonal antibody; and
  - (C) a method of using a product produced by a process defined by subparagraph (A) or (B), or a combination of subparagraphs (A) and (B).

#### §103 - Conditions for patentability; non-obvious subject matter

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of **section 102** of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

# Standard

• "PTO examiners and judges decide whether an inventor's work product constitutes a sufficient technical advance over the state of the art to receive a patent."

# Graham v. John Deere Co.

- Issue:
  - What is the test for nonobviousness after the 1952 Patent Act?
- Case History
  - 5th Circuit patent valid
  - 8th Circuit patent invalid
  - Supreme Court patent invalid

# Graham v. John Deere Co.

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 "The patent monopoly was not designed to secure to the inventor his natural right in his discoveries. Rather, it was a reward, an inducement, to bring forth new knowledge."

# Graham v. John Deere Co.

"[Section 103] was [upon introduction] a statutory expression of an additional requirement for patentability, originally expressed in Hotchkiss. It also seems apparent that Congress intended by the last sentence of §103 to abolish the test it believed this Court announced in the controversial phrase "flash of creative genius," used in Cuno Engineering Corp. v. Automatic Devices Corp., 314 U.S. 84, 62 S.Ct. 37, 86 L.Ed. 58 (1941)."

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## Graham v. John Deere Co.

 "An invention which has been made, and which is new in the sense that the same thing has not been made before, may still not be patentable if the difference between the new things and what was known before is not considered sufficiently great to warrant a patent."

## Graham v. John Deere Co.

 "Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the art resolved. ... Such secondary considerations as commercial success, long felt but unresolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented."

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#### Level of Ordinary Skill in the Art

Factors:

- 1) The educational level of the inventor;
- 2) Type of problems encountered in the art;
- 3) Prior art solutions to those problems;
- 4) Rapidity with which inventions are made;
- 5) Sophistication of the technology; and
- 6) Education level of active workers in the field.

# **Claim Construction**

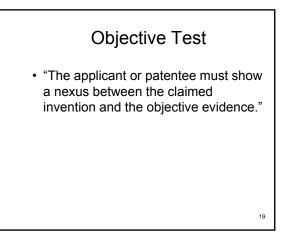
- "It is ... well settled that an invention is construed not only in the light of the claims, but also with reference to the file wrapper or prosecution history in the Patent Office.
- "Claims as allowed must be read and interpreted with reference to rejected ones and to the state of the prior art; and claims that have been narrowed in order to obtain the issuance of a patent by distinguishing the prior art cannot be sustained to cover that which was previously by limitation eliminated from the patent."

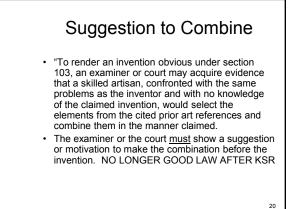
# Objective Evidence of Nonobviousness

- Commercial Success
- Copying
- Prior Failures
- Licenses
- Long-felt need
- · Unexpected results
- Skepticism

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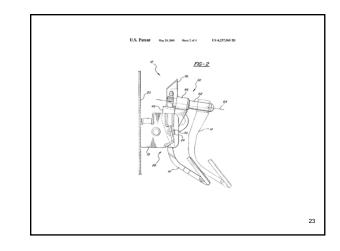
# KSR v. Teleflex

- Invention
  - adjustable pedal assembly for use with automobiles controlled by an electronic throttle control

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- Case History
  - 2005 Federal Circuit Decision
  - 2007 Supreme Court Decision

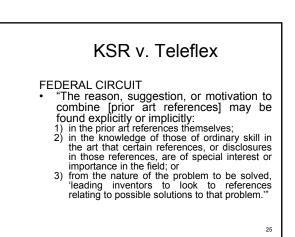
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## KSR v. Teleflex

Case History

- Teleflex sues KSR in E.D. MI for infringing claim 4
- District Court Claim 4 invalid by reason of obviousness
- Fed Circuit Vacate and Remand



#### KSR v. Teleflex

#### FEDERAL CIRCUIT

"Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."... This is because "[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight."...

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### KSR v. Teleflex

FEDERAL CIRCUIT

 Therefore, we have consistently held that a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but some motivation to combine the prior art teachings in the particular manner claimed. ...

#### KSR v. Teleflex

# FEDERAL CIRCUIT Decision:

with this opinion.

 We agree with Teleflex that the district court did not apply the correct teachingsuggestion-motivation test. We also agree that, under that test, genuine issues of material fact exist, so as to render summary judgment of obviousness improper. For these reasons, we vacate the decision of the district court and remand for further proceedings consistent

# KSR v. Teleflex

#### FEDERAL CIRCUIT

"We agree with Teleflex that the district court's analysis applied an incomplete teachingsuggestion-motivation test in granting KSR summary judgment. This is because the district court invalidated claim 4 of the '565 patent on obviousness grounds without making "finding[s] as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of [the] invention to make the combination in the manner claimed." <u>Kotzab</u>, 217 F.3d at 1371.

## KSR v. Teleflex

#### FEDERAL CIRCUIT

...[T]he district court was required to make specific findings as to whether there was a suggestion or motivation to combine the teachings of Asano with an electronic control in the particular manner claimed by claim 4 of the '565 patent. See Kotzab, 217 F.3d at 1371; <u>Rouffet</u>, 149 F.3d at 1357. That is, the district court was required to make specific findings as to a suggestion or motivation to attach an electronic control to the support bracket of the Asano assembly."

# KSR v. Teleflex

#### FEDERAL CIRCUIT

 "The district court correctly noted that the nature of the problem to be solved may, under appropriate circumstances, provide a suggestion or motivation to combine prior art references. However, the test requires that the nature of the problem to be solved be such that it would have led a person of ordinary skill in the art to combine the prior art teachings in the particular manner claimed. <u>See Rouffet</u>, 149 F.3d at 1357."

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#### KSR v. Teleflex

FEDERAL CIRCUIT

"We have recognized this situation when two prior art references address the precise problem that the patentee was trying to solve. <u>See Ruiz</u>, 357 F.3d at 1276 ("This record shows that the district court did not use hindsight in its obviousness analysis, but properly found a motivation to combine because the two references address precisely the same problem of underpinning existing structural foundations."). In this case, the Asano patent does not address the same problem as the '565 patent. " KSR v. Teleflex

#### FEDERAL CIRCUIT

 "[T]he issue is not whether a person of skill in the art had a motivation to combine the electronic control with an adjustable pedal assembly, but whether a person skilled in the art had a motivation to attach the electronic control to the support bracket of the pedal assembly."

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# KSR v. Teleflex

#### FEDERAL CIRCUIT

 "We hold that, in granting summary judgment in favor of KSR, the district court erred as a matter of law by applying an incomplete teaching-suggestion-motivation test to its obviousness determination. The correct standard requires a court to make specific findings showing a teaching, suggestion, or motivation to combine prior art teachings in the particular manner claimed by the patent at issue."

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# KSR v. Teleflex

Question Presented on Appeal

 Whether the Federal Circuit has erred in holding that a claimed invention cannot be held "obvious", and thus unpatentable under 35 U.S.C. § 103(a), in the absence of some proven "teaching, suggestion, or motivation' that would have led a person of ordinary skill in the art to combine the relevant prior art teachings in the manner claimed."

## KSR v. Teleflex – Supreme Court

Objective Inquiry under Graham

- "Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented."
- "[D]efine the inquiry that controls."

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## KSR v. Teleflex – Supreme Court

- · Federal Circuit Develops TSM test
- "[To provide] more uniformity and consistency, the Court of Appeals for the Federal Circuit has employed an approach referred to by the parties as the "teaching, suggestion, or motivation" test (TSM test), under which a patent claim is only proved obvious if "some motivation or suggestion to combine the prior art teachings" can be found in the prior art, the nature of the problem, or the knowledge of a person having ordinary skill in the art."

#### KSR v. Teleflex – Supreme Court

- D.C. summary judgment in favor of KSR.
   Claim 4 obvious in light of prior art
- · Fed Cir reversed
  - "It ruled the District Court had not been strict enough in applying the [TSM] test, having failed to make". finding[s] as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of [the] invention'... To attach an electronic control to the support bracket of the Asano assembly."

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# KSR v. Teleflex – Supreme Court

Supreme Ct

- Rejects rigid approach; expansive and flexible approach
- "[T]he Court has held that a 'patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what is already known into the field of its monopoly and diminishes the resources available to skillful men.' ...
- "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

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## KSR v. Teleflex – Supreme Court

- U.S. v. Adams wet battery case
  - "The Court relied upon the corollary principle that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. Id., at 51–52. When Adams designed his battery, the prior art warned that risks were involved in using the types of electrodes he employed. The fact that the elements worked together in an unexpected and fruitful manner supported the conclusion that Adams's design was not obvious to those skilled in the art."

# KSR v. Teleflex – Supreme Court

• "[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result."

# KSR v. Teleflex – Supreme Court

• "[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious."

# KSR v. Teleflex – Supreme Court

- Obviousness situations reviewing past case law
  - Combining two preexisting elements where no new synergy was created
  - Arrangement of old elements to perform the same function they had been known to perform
- "[A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions."

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#### KSR v. Teleflex – Supreme Court

- [The test is easier to follow when it involves] the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement."
- Courts/examiners often will ordinarily need to look at "interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue."
- Analysis should be made explicit, but need not seek out "precise teachings to the specific subject matter of the challenged claim..."

## KSR v. Teleflex – Supreme Court

• "[I]dentify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does."

## KSR v. Teleflex – Supreme Court

 "In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under §103. One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims."

### KSR v. Teleflex – Supreme Court

- Courts and examiners should look beyond the problem the patentee was trying to solve.
- "The question is not whether the combination was obvious to the patentee but whether the combination was obvious to a person with ordinary skill in the art. Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed."

# KSR v. Teleflex – Supreme Court

 "Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle."

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# KSR v. Teleflex – Supreme Court

#### · Obvious to try

- "When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under §103."

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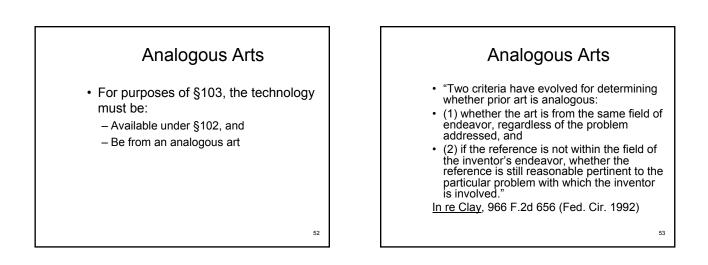
## KSR v. Teleflex – Supreme Court

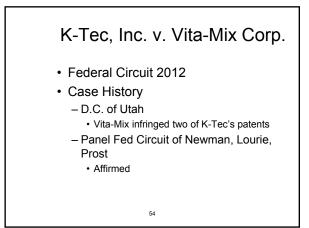
- End result in this case patent invalid
- End result for practice Examiners and courts have more ammunition to throw out certain inventions.

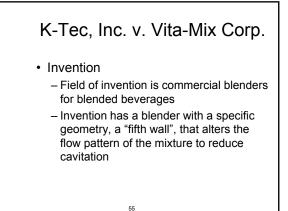
# Post-KSR

- "[A]s the Supreme Court suggests, a flexible approach to the TSM test prevents hindsight and focuses on evidence before the time of invention, without unduly constraining the breadth of knowledge available to one of ordinary skill in the art during the obviousness analysis."
- In re Translogic Technology, Inc., 504 F.3d 1249 (Fed. Cir. 2007)

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# K-Tec, Inc. v. Vita-Mix Corp.

Claim 1

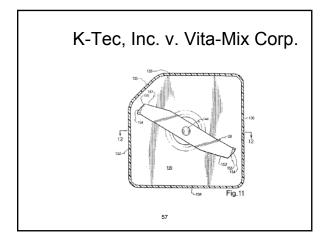
#### A blending jar apparatus, comprising:

a blending jar having a blending element which rotates on a central axis, the jar to hold at least one foodstuff to be blended, the blending jar comprising:

#### a bottom wall;

four side walls extending from the bottom wall, the four side walls defining an opening having a generally rectangular shape, the opening be-ing configured to receive the at least one food-stuff; a fifth truncated wall disposed between two of the four side walls; a handle secured to the blending jar adjacent to the fifth truncated wall; wherein the fifth truncated wall is positioned closer to the central axis than corners formed by the four side walls.

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# K-Tec, Inc. v. Vita-Mix Corp.

 "To qualify as prior art for an obviousness analysis, a reference must qualify as 'analogous art,' i.e., it must satisfy one of the following conditions: (1) the reference must be from the same field of endeavor; or (2) the reference must be reasonably pertinent to the particular problem with which the inventor is involved.

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# K-Tec, Inc. v. Vita-Mix Corp. • "A reference is reasonably pertinent if it, as a result of its subject matter, 'logically would have commended itself to an inventor's attention in considering his problem.'"

# K-Tec, Inc. v. Vita-Mix Corp.

 "Ultimately, the district court rightly concluded that the [expert's report on invalidity] did not 'explain any rational underpinning for [the inventor] to have consulted non-blending containers or food mixers in order to solve the problems he encountered in designing a new blending container,' and properly concluded that the report failed to raise a genuine issue of material fact."

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# In Re Winslow

• "[A]ppellant make[s] his claimed invention by applying knowledge clearly present in the prior art.

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 "Section 103 requires us to presume full knowledge by the inventor of the prior art in the field of his endeavor."

## "Superperson" in the Art

 "The image of an inventor at work in her workshop, prior art spread out around the walls, has proved to be a compelling one. There are, however, two important caveats about the presumption in Winslow. First, the law does not presume knowledge of all prior art, only knowledge of all pertinent prior art — i.e., the prior art in the field of the invention. Second, the presumption is not really about the knowledge of the inventor, but about the knowledge of the hypothetical person skilled in the art."

# Joint Research Efforts

- Under 103(c), when the prior art and the claimed invention are, at the time of the invention, owned by a single entity, then they may not be considered under a nonobviousness inquiry.
- Exempts 102(e), (f) and (g)

# Changes Under the AIA

- §103(AIA)
- A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

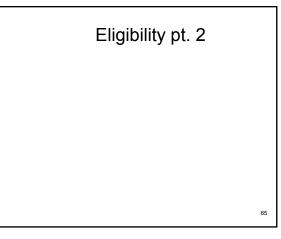
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# Software

- · What is software?
  - "a set of machine-readable instructions capable of performing a particular task."
- · Is software patent eligible?
  - Gottschalk v. Benson 1972
  - Diamond v. Diehr 1981
  - State Street Bank -1998
  - Bilski v. Kappos 2010
  - Alice Corp. v. CLS Bank 2014

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# Gottschalk v. Benson

#### 1972 Supreme Court Decision

- Invention
  - Method for converting a binary-coded decimal (BCD) numerals into pure binary numerals
  - Claims not limited to art or technology
  - Claims cover any use of the method in a general purpose computer

# Gottschalk v. Benson

#### Claim 8 reads:

- The method of converting signals from binary coded decimal form into binary which comprises the steps of-
- (1) storing the binary coded decimal signals in a reentrant shift register,
- (2) shifting the signals to the right by at least three places, until there is a binary '1' in the second position of said register,
- (3) masking out said binary '1' in said second position of said register,
- (4) adding a binary '1' to the first position of said register,
- (5) shifting the signals to the left by two positions,
- (6) adding a '1' to said first position, and
- (7) shifting the signals to the right by at least three positions in preparation for a succeeding binary '1' in the second position of said register.

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## Gottschalk v. Benson

 "Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines."

# Gottschalk v. Benson

 "It is argued that a process patent must either be tied to a particular machine or apparatus or must operate to change articles or materials to a 'different state or thing.' We do not hold that no process patent could ever qualify if it did not meet the requirements of our prior precedents."

# Gottschalk v. Benson

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• "The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself."

## Diamond v. Diehr

- 1981 Supreme Court Decision
- Invention
  - Method of operating molding presses during the production of rubber articles
  - "The process uses a mold for precisely shaping the uncured material under heat and pressure and then curing the synthetic rubber in the mold so that the product will retain its shape and be functionally operative after the molding is completed"

#### Diamond v. Diehr 1. A method of operating a rubber-molding press for precision molded compounds with the aid of a digital computer, comprising: providing said computer with a data base for said press including at least, natural logarithm conversion data (in), the activation energy constant (C) unique to each batch of said compound being molded, and a constant (x) dependent upon the geometry of the particular mold of the press, initiating an interval timer in said computer upon the closure of the press for monitoring the elapsed time of said closure. constantly determining the temperature (2) of the mold at a location closely adjacent to the mold cavity in the press during molding. constantly roviding the computer with the temperature (2). repetitively calculating in the computer, at frequent intervals during each cure, the Arrhenius equation for reaction time during the cure, which is In v=CZ+x where v is the total required cure time.

cure each said calculation of the total required cure time calculated with the Arrhenius equation and said elapsed time, and opening the press automatically when a said comparison indicates equivalence. 73

## Diamond v. Diehr

- · What is new?
  - "the continuous measuring of the temperature inside the mold cavity, the feeding of this information to a digital computer which constantly recalculates the cure time, and the signaling by the computer to open the press, are all [asserted by the Respondent to be] new in the art."

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# Diamond v. Diehr

 "[W]e think that a physical and chemical process for molding precision synthetic rubber products falls within the 101 categories of possibly patentable subject matter."

# Diamond v. Diehr

- · Mathematical Formula v. Process
  - Claim does not pre-empt all use of wellknown equation
  - Claim seeks to protect use of equation with other steps of claimed process
  - "We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."

# Diamond v. Diehr

 "[W]hen a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e. g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of 101."

#### State Street Bank & Trust Co. v. Signature Financial Group Inc.

- 1998 Federal Circuit Decision
- Invention
  - Data processing system for implementing an investment structure for use with administering mutual funds
  - "In essence, the system, identified by the proprietary name Hub and Spoke (Registered), facilitates a structure whereby mutual funds (Spokes) pool their assets in an investment portfolio (Hub) organized as a partnership. This investment configuration provides the administrator of a mutual fund with the advantageous combination of economies of scale in administering investments coupled with the tax advantages of a partnership."

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#### State Street Bank & Trust Co. v. Signature Financial Group Inc.

- A data processing system for managing a financial services configuration of a portfolio established as a partnership, each partner being one of a plurality of funds, comprising:
- (a) computer processor means [a personal computer including a CPU] for processing data;
   (b) storage means [a data disk] for storing data on a storage medium;
- (b) storage means [a data disk] for storing data on a storage medium;
  (c) first means [an arithmetic logic circuit configured to prepare the data disk to magnetically store selected data] for initializing the storage medium;
- (d) second means [an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases or decreases based on specific input, allocate the results on a percentage basis, and store the output in a separate file] for processing data regarding assets in the portfolio and each of the funds from a previous day and data regarding increases or decreases in each of the funds, [sic, funds] assets and for allocating the percentage share that each fund holds in the portfolio;

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#### State Street Bank & Trust Co. v. Signature Financial Group Inc.

- (e) third means [an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases and decreases based on specific input, allocate the results on a percentage basis and store the output in a separate file] for processing data regarding daily incremental income, expenses, and net realized gain or loss for the portfolio and for allocating such data among each fund;
- (f) fourth means [an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases and decreases based on specific input, allocate the results on a percentage basis and store the output in a separate file] for processing data regarding daily net unrealized gain or loss for the portfolio and for allocating such data among each fund; and
- and (g) fifth means [an arithmetic logic circuit configured to retrieve information from specific files, calculate that information on an aggregate basis and store the output in a separate file] for processing data regarding aggregate year-end income, expenses, and capital gain or loss for the portfolio and each of the funds.

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#### State Street Bank & Trust Co. v. Signature Financial Group Inc.

"[T]he transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces "a useful, concrete and tangible result"--a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades."

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#### State Street Bank & Trust Co. v. Signature Financial Group Inc.

- The Business Method Exception

   "We take this opportunity to lay this illconceived exception to rest."
  - "Whether the claims are directed to subject matter within Section 101 should not turn on whether the claimed subject matter does 'business' instead of something else."

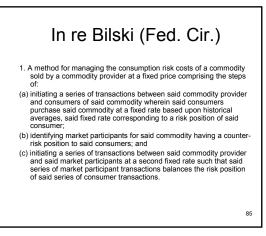
# Pre-Bilski

- Gold rush on software and so-called business method patents?
- Public anger on patent availability
   Amazon 1-click case
  - Swing on a swing patent

# In re Bilski (Fed. Cir.)

- 2008 Federal Circuit Decision (en Banc)
- Invention
  - Method for hedging risk in the field of commodities trading
  - Claim is not limited to transactions involving actual commodities and may involve options

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# In re Bilski (Fed. Cir.)

· Board of Appeals

- No technological arts test
- No requirement of a specific apparatus if there is a transformation
- No patent-eligible transformation
- No useful, concrete and tangible result

# In re Bilski (Fed. Cir.)

- 101 background
  - Threshold inquiry in determining patentability
  - Issue of law subject to de novo review
  - Process in the statute means patent eligible process

# In re Bilski (Fed. Cir.)

- · Question for the Court
  - "[W]hether Applicants' claim recites a fundamental principle and, if so, whether it would pre-empt substantially all uses of that fundamental principle if allowed"?

# In re Bilski (Fed. Cir.)

- Test identified by Federal Circuit In re Bilski
  - "A claimed process is surely patenteligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing."
  - Sole test for determining patent eligibility of a process under 101...

# In re Bilski (Fed. Cir.) Can a process become patentable through field-of-use limitations or post solution activity? No "[M]ere field-of-use limitations are generally insufficient to render an otherwise ineligible process claim patent-eligible." "[I]nsignificant postsolution activity will not transform an unpatentable principle into a patentable process."

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# In re Bilski (Fed. Cir.)

- All other identified tests are explicitly overruled by the court
  - Freeman-Walter-Abele test
  - "Useful, concrete, and tangible result" test of State Street and Alappat

  - Technological Arts test
  - Business method exception

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# In re Bilski (Fed. Cir.)

- · What is an article?
  - Doesn't have to be a physical object
  - Courts have taken a "measured approach to this question"
  - Transformation of raw data into a particular visual depiction of a physical object on a display is eligible

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# Bilski at the PTO

- In response, Examiners at the PTO required structure in the body method claims, machine readable claims, and system claims
- Guidelines for Patent Examiners were issued on August 24, 2009

#### In re Bilski at the Supreme Court

1. Whether the Federal Circuit erred by holding that a "process" must be tied to a particular machine or apparatus, or transform a particular article into a different state or thing ("machine-or-transformation" test), to be eligible for patenting under 35 U.S.C. § 101, despite this Court's precedent declining to limit the broad statutory grant of patent eligibility for "any" new and useful process beyond excluding patents for "laws of nature, physical phenomena, and abstract ideas."

#### In re Bilski at the Supreme Court

2. Whether the Federal Circuit's "machineor-transformation" test for patent eligibility, which effectively forecloses meaningful patent protection to many business methods, contradicts the clear Congressional intent that patents protect "method[s] of doing or conducting business." 35 U.S.C. § 273.

#### In re Bilski – Supreme Court Decision

Who delivered the opinion of the court?
 Konnedy

- Kennedy

#### In re Bilski – Supreme Court Decision

Section §101

- Four independent categories of inventions or discoveries that are eligible for protection
- Processes, machines, manufactures, and compositions of matter
- Permissive approach to patent eligibility
- Ingenuity should receive a liberal encouragement

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- Definition of a Process from Section §100(b)
- "process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material."

## In re Bilski – Supreme Court Decision

- Potential Categorical Limitations considered by Supreme Court
  - Machine-or-transformation test
  - Categorical exclusion of business method patents.

# In re Bilski – Supreme Court Decision

- Analysis
  - words interpreted with their ordinary, contemporary, common meaning
  - Past interpretations of 101 consistent with ordinary meaning
  - "Concerns about attempts to call any form of human activity a "process" can be met by making sure the claim meets the requirements of §101."
  - Machine or transformation test violates statutory principles

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# In re Bilski – Supreme Court Decision

- Machine-or-transformation test
   not endorsed as the exclusive test
  - was not intended to be an exhaustive or exclusive test
  - provides "a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under §101"
  - is not the sole test

## In re Bilski – Supreme Court Decision

- Business method patents are not categorically excluded
- At least some business methods may be allowed
- Court gave some deference to enacting of §273 that provided a defense to methods of doing business
   No suggestion of broad patentability

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## In re Bilski – Supreme Court Decision

- Decision in this case
  - Attempting to patent an abstract idea
  - "[I]t is clear that petitioners' application is not a patentable 'process.'"
  - "Allowing petitioners to patent risk hedging would preempt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea."

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- No such limitations on §101
- Rejected under abstract ideas
- No further definition of process
- Federal Circuit may further developing limiting criteria

# In re Bilski – Supreme Court Decision

- 4 Justices Majority Part II–B–2 (w/o Scalia)
- §101 is dynamic and should adjust to new technology
- The machine-or-transformation test may not be good for the information age
- "[T]he machine-or-transformation test would create uncertainty as to the patentability of software, advanced diagnostic medicine techniques, and inventions based on linear programming, data compression, and the manipulation of digital signals."
- Court takes no position on patentability of these types of technology

#### In re Bilski – Supreme Court Decision

- 4 Justices Majority Opinion Part II–C-2 (w/o Scalia)
  - "If a high enough bar is not set when considering patent applications of [the Information Age], patent examiners and courts could be flooded with claims that would put a chill on creative endeavor and dynamic change."
  - "[P]recedents on the unpatentability of abstract ideas provide useful tools."

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# In re Bilski – Supreme Court Decision

- 4 Justice Concurrence by Stevens
- The entire court agrees that the machine-or-transformation test is not the exclusive test
- Restore §101 to its historical and constitutional moorings

## In re Bilski – Supreme Court Decision

- 4 Justice Concurrence by Stevens
- Machine-or-transformation test is a "critical clue"
- "[A]Ithough a process is not patentineligible simply because it is useful for conducting business, a claim that merely describes a method of doing business does not qualify as a 'process' under §101."

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## In re Bilski – Supreme Court Decision

- 4 Justice Concurrence by Stevens
- Points on Majority Opinion
  - Don't take the ordinary meaning portion of the interpretation of the word "method" literally
  - "[T]he machine-or-transformation test remains an important test for patentability [and] [f]ew, if any, processes cannot effectively be evaluated using these criteria."
  - The majority does not explain what is an unpatentable abstract idea

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- · 4 Justice Concurrence by Stevens
- · What does process mean?
  - "was neither intended nor understood to encompass *any* series of steps or any *way* to do any *thing*."
  - Statutory definition is ambiguous
  - Process does not have ordinary meaning in 101
  - History shows that a method of doing business is not a process under 101

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## In re Bilski – Supreme Court Decision

- 4 Justice Concurrence by Stevens
- Provides some guidance on what is a business method
  - a method for organizing human activity
  - Described examples include business organization, business models, management techniques, and novel solutions to the challenges of operating global firms in which subordinate managers could be reached only by a long sea voyage.
  - Business methods are not useful arts

In re Bilski – Supreme Court Decision

- 4 Justice Concurrence by Stevens
- Congress passed 273 to limit the effect of business method patents and not to validate their existence
- Serious doubt whether business method patents are needed to encourage innovation
- Patents on business methods may prohibit a wide swath of legitimate competition and innovation

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## In re Bilski – Supreme Court Decision

- 4 Justice Concurrence by Stevens
- Comment regarding patent holding companies/trolls
  - "[P]atent laws are not intended to 'creat[e] a class of speculative schemers who make it their business to watch the advancing wave of improvement, and gather its foam in the form of patented monopolies, which enable them to lay a heavy tax upon the industry of the country, without contributing anything to the real advancement of the arts."

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#### In re Bilski – Supreme Court Decision

- 2 Justice Concurrence with Breyer
- A method of engaging in business transactions is not a patentable process – 1 of the 2 justices only
- 101 is not without limit
- Machine-or-transformation test has never been the sole test
- 101 is an important example for determining patentable but is not the exclusive test
- Anything which passes the useful, concrete, and tangible results test is not necessarily patentable.

In re Bilski – Supreme Court Decision

In summary

- Majority some business methods may be patentable
- Concurrence business methods are not patentable

- Result
  - Computer software is still patentable
  - Business methods that don't involve technology have a limited chance of being patentable

# Strategy After Bilski

- Explain to clients the risk of seeking a pure business method patent
- Include claims that can satisfy machine-ortransformation test
  - Can the claims be performed in the mind or on a piece of paper?

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- Indicate the transformation in the claims
   Doing XXXXX to create YYYYY
- Include support in the specification for hardware
- Machine-readable medium should be nontransitory to avoid signal claim problems per Kappos on 1/26/10

#### CLS Bank International v. Alice Corporation Pty. Ltd.

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- Fed. Cir. Panel Decision
- Invention
  - 3 patents
  - "a computerized trading platform for exchanging obligations in which a trusted third party settles obligations between a first and second party so as to eliminate 'settlement risk."

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#### CLS Bank International v. Alice Corporation Pty. Ltd.

#### laim 33 of the '479 patent

- 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;
- 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 [sic] 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 one 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 permits dramactions, the credits and debits being irrevocable, time invariant obligations placed on the exchange institutions.

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CLS Bank International v. Alice Corporation Pty. Ltd.

#### Claim 1 of the '720 patent

A data processing system to enable the exchange of an obligation between parties, the system comprising:

- a data storage unit having stored therein information about a shadow credit record and shadow debit record for a party, independent from a credit record and debit record maintained by an exchange institution; and
- a computer, coupled to said data storage unit, that is configured to (a) receive a transaction; (b) electronically adjust said shadow credit record and/or said shadow debit record in order to effect an exchange obligation arising from said transaction, allowing only those transactions that do not result in a value of said shadow debit record being less than a value of said shadow debit record being less than a value of said shadow credit record; and (c) generate an instruction to said exchange institution at the end of a period of time to adjust said credit record and/or said debit record being and uncertain the end of a shadow credit record and/or said debit record in accordance with the adjustment of said shadow credit record and/or said shadow debit record, wherein said instruction being an irrevocable, time invariant obligation placed on said exchange institution.

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#### CLS Bank International v. Alice Corporation Pty. Ltd.

• D.C.

- post Bilski found that Alice's 4 patents were invalid due to 101 patent ineligibility
- first analyzed the method claims under the machine-or-transformation test
- also analyzed the method claims under the abstract idea exception.

#### CLS Bank International v. Alice Corporation Pty. Ltd.

- "[T]he district court found the methods to be invalid under § 101 as directed to the 'fundamental idea of employing a neutral intermediary to ensure that parties to an exchange can honor a proposed transaction, to consummate the exchange simultaneously to minimize the risk that one party does not gain the fruits of the exchange, and then irrevocably to direct the parties, or their value holders, to adjust their accounts or records to reflect the concluded transaction."
- Found system and machine readable claims directed to the same abstract concept

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#### CLS Bank International v. Alice Corporation Pty. Ltd.

 "Section 101 is a general statement of the type of subject matter that is eligible for patent protection 'subject to the conditions and requirements of this title.' Specific conditions for patentability follow . . . . The question therefore of whether an invention is novel 'is wholly apart from whether the invention falls into a category of statutory subject matter."

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#### CLS Bank International v. Alice Corporation Pty. Ltd.

- D.C. has discretion in what order to take up the issues of 101, 102, 103, and 112
- "[T]he dividing line between inventions that are directed to patent ineligible abstract ideas and those that are not remains elusive."

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#### CLS Bank International v. Alice Corporation Pty. Ltd.

 "While every inventor is granted the right to exclude, or 'pre-empt,' others from practicing his or her claimed invention, no one is entitled to claim an exclusive right to a fundamental truth or disembodied concept that would foreclose every future innovation in that art."

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## CLS Bank International v. Alice Corporation Pty. Ltd.

- "The mere implementation on a computer of an otherwise ineligible abstract idea will not render the asserted 'invention' patent eligible."
- "On the other hand, where the 'addition of a machine impose[s] a meaningful limit on the scope of a claim,' and 'play[s] a significant part in permitting the claimed method to be performed, rather than function[ing] solely as an obvious mechanism for permitting a solution to be achieved more quickly, i.e., through the utilization of a computer for performing calculations,' that machine limitation renders the method patent eligible."

#### CLS Bank International v. Alice Corporation Pty. Ltd.

 "It can, thus, be appreciated that a claim that is drawn to a specific way of doing something with a computer is likely to be patent eligible whereas a claim to nothing more than the idea of doing that thing on a computer may not."

#### CLS Bank International v. Alice Corporation Pty. Ltd.

 "[T]his court holds that when—after taking all of the claim recitations into consideration—it is not manifestly evident that a claim is directed to a patent ineligible abstract idea, that claim must not be deemed for that reason to be inadequate under § 101."

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#### CLS Bank International v. Alice Corporation Pty. Ltd.

- "[T]he form of the claim in this case does not change the patent eligibility analysis under §101."
- Regardless of what statutory category claim's language is crafted to literally invoke, we look to the underlying invention for patent eligibility purposes.

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#### CLS Bank International v. Alice Corporation Pty. Ltd.

 "Because mere computer implementation cannot render an otherwise abstract idea patent eligible, ... the analysis here must consider whether the asserted claims (method, system, and media) are substantively directed to nothing more than a fundamental truth or disembodied concept without any limitation in the claims tying that idea to a specific application"

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#### CLS Bank International v. Alice Corporation Pty. Ltd.

- "[1]t is difficult to conclude that the computer limitations here do not play a significant part in the performance of the invention or that the claims are not limited to a very specific application of the concept of using an intermediary to help consummate exchanges between parties."
- "The asserted claims appear to cover the practical application of a business concept in a specific way, which requires computer implemented steps..."

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# CLS Bank International v. Alice Corporation Pty. Ltd.

- Fed. Cir. En Banc Decision
- Lots of opinions
- Majority RADER, NEWMAN, LOURIE, LINN, DYK, PROST, MOORE, O'MALLEY, REYNA, and WALLACH
- Method and machine readable claims are not directed to patent eligible subject matter; system claim evenly split

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#### CLS Bank International v. Alice Corporation Pty. Ltd.

- LOURIE, DYK, PROST, REYNA, and WALLACH
- "We must first ask whether the claimed invention is a process, machine, manufacture, or composition of matter. If not, the claim is ineligible under § 101. If the invention falls within one of the statutory categories, we must then determine whether any of the three judicial exceptions nonetheless bars such a claim—is the claim drawn to a patent ineligible law of nature, natural phenomenon, or abstract idea? If so, the claim is not patent eligible. Only claims that pass both inquiries satisfy § 101."

# CLS Bank International v. Alice Corporation Pty. Ltd.

 "[A] patent-eligible claim must include one or more substantive limitations that, in the words of the Supreme Court, add "significantly more" to the basic principle, with the result that the claim covers significantly *less*. [] Thus, broad claims do not necessarily raise § 101 preemption concerns, and seemingly narrower claims are not necessarily exempt. What matters is whether a claim threatens to subsume the full scope of a fundamental concept, and when those concerns arise, we must look for meaningful limitations that prevent the claim as a whole from covering the concept's every practical application."

# CLS Bank International v. Alice Corporation Pty. Ltd.

- 1) Does the claimed invention fit within one of the four statutory classes set out in § 101?
- 2) Preemption Analysis

# CLS Bank International v. Alice Corporation Pty. Ltd.

- RADER, LINN, MOORE, and O'MALLEY
- "Any claim can be stripped down, simplified, generalized, or paraphrased to remove all of its concrete limitations, until at its core, something that could be characterized as an abstract idea is revealed. Such an approach would "if carried to its extreme, make all inventions unpatentable because all inventions can be reduced to underlying principles of nature which, once known, make their implementation obvious." [] A court cannot go hunting for abstractions by ignoring the concrete, palpable, tangible limitations of the invention the patentee actually claims."

# CLS Bank International v. Alice Corporation Pty. Ltd.

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• "The relevant inquiry must be whether a claim includes meaningful limitations restricting it to an application, rather than merely an abstract idea."

# CLS Bank International v. Alice Corporation Pty. Ltd.

Supreme Court
 – Unanimous decision

# CLS Bank International v. Alice Corporation Pty. Ltd.

• "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."

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# CLS Bank International v. Alice Corporation Pty. Ltd.

 "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."

# CLS Bank International v. Alice Corporation Pty. Ltd.

 "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... We have interpreted §101and its predecessors in light of this exception for more than 150 years. ..."

# CLS Bank International v. Alice Corporation Pty. Ltd.

 "We have described the concern that drives this exclusionary principle as one of pre-emption.... 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.... At the same time, we tread carefully in construing this exclusionary principle lest it swallow all of patent law."

# CLS Bank International v. Alice Corporation Pty. Ltd.

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 "Thus, an invention is not rendered ineligible for patent simply because it involves an abstract concept. ... '[A]pplication[s]' of such concepts "to a new and useful end," we have said, remain eligible for patent protection. ... 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, ... thereby "transform[ing]" them into a patenteligible invention, *id.*, at \_\_\_\_ (slip op., at 3)."

# CLS Bank International v. Alice Corporation Pty. Ltd.

- 2 steps
- 1 determine whether the claims at issue are directed to one of those patent-ineligible concepts.
- · 2 inventive concept

# CLS Bank International v. Alice Corporation Pty. Ltd.

 "The 'abstract ideas' category embodies "the longstanding rule that '[a]n idea of itself is not patentable.""

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# CLS Bank International v. Alice Corporation Pty. Ltd.

- "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."
- ... Thus, intermediated settlement, like hedging, is an "abstract idea" beyond the scope of §101."

# CLS Bank International v. Alice Corporation Pty. Ltd.

• "[W]e 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."

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# CLS Bank International v. Alice Corporation Pty. Ltd.

- · Second step
- "We conclude that the method claims, which merely require generic computer implementation, fail to transform that abstract idea into a patent eligible invention."

# CLS Bank International v. Alice Corporation Pty. Ltd.

 "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].' ... Mayo made clear that transformation into a patenteligible application requires "more than simply stat[ing] the [abstract idea] while adding the words 'apply it." ..."

# CLS Bank International v. Alice Corporation Pty. Ltd.

• "Taking the claim elements separately, the function performed by the computer at each step of the process is '[p]urely conventional."" Attorney Client Privilege

Special Topic

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# What is the Privilege?

- Attorney/Client Privilege protection that applicable law provides for confidential attorneyclient communications
- Work Product Doctrine protection that applicable law provides for tangible material (or its intangible equivalent) prepared in anticipation of litigation or for trial.

# Attorney/Client Privilege Elements

- 1) A communication
- 2) Made between an attorney and his/her client
- 3) In confidence
- 4) For the purpose of seeking, obtaining, or providing legal assistance

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 Privilege does not protect underlying facts; just the communications with counsel

# What Is Covered?

- Are e-mails among inventors covered?
- Are e-mails between an inventor an attorney covered?
- Are e-mails between inventors when an attorney is copied covered?

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# What Is Covered?

- Internal communications made among technical employees regarding third-party infringement analysis?
- Technical analysis prepared by technical employees on behalf of legal counsel and provided to legal counsel?
- Technical analysis prepared by technical employees on behalf of legal counsel and forwarded to other internal company personnel?

 Program

 Completed

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