Indigo Patent & Njal Brochure

- Could the Njal brochure present a problem for the claims of the Indigo patent?
- What additional information would you like to obtain from Patricia?
- From Cornelius?
- About the Njal brochure?
- About the Indigo patent?
- Would your answers differ if post-AIA law on novelty applied?

A Note on Reduction to Practice

Charles Goodyear on the nature of the inventive process:
“It is a mistaken idea with many, that the invention of an improvement consists in the first vague idea of it. It takes far more than that to entice one to the merit of an invention, for between the bare conception of an idea, and the demonstration of the practicability and utility of the thing conceived, there is almost always a vast amount of labor to be performed, time and money to be spent, and innumerable difficulties and prejudices to be encountered, before the work is accomplished.”

A Review of Key Concepts

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  - @DrSinhaEsq
  - #PatentLaw
- Optional additional tags: @USPTO, #Patent, #IP, #NUSLPatentLaw, #IPLaw, #LawTwitter
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Standards for Patentability

- Within the appropriate subject matter (§ 101)
- Fully and appropriately described (§ 112)
- Useful (§ 101 and §112)
- Novel (§ 102)
- Nonobvious (§ 103)
### Biological Patents

- **Parke-Davis v. Mulford (1912, J.L. Hand):** a glandular extractive product that has been purified is patentable
  - Its level of purity made it “for every practical purpose a new thing”
- **Diamond v. Chakrabarty (1980):** a bacterium that has been genetically engineered to break down oil is patentable
  - “anything under the sun … made by man”
- **Mayo v. Prometheus (2012):** invention consisting of measuring a blood level and correlating with a therapeutic index is not patentable
  - “Simply appending conventional steps… to laws of nature, natural phenomena, and abstract ideas cannot make [them] patentable.”
- **AMP v. Myriad (2013):** DNA sequence for human BRCA gene is not patentable as a product of nature, but cDNA is patentable
  - “the lab technician unquestionably creates something new when cDNA is made”

### Computer/Algorithm Patents

- **Gottschalk v. Benson (1972):** a process claim directed to a mathematical algorithm was not patentable
  - “the patent would wholly preempt the mathematical formula and in practical effect would be a patent on the algorithm itself”
- **Parker v. Flook (1978):** an invention that departs from the prior art only in its use of a mathematical algorithm was not patentable
  - Requires some other “inventive concept in its application”
  - “insignificant extra-solution activity” is not enough (adjusting an alarm limit according to a mathematical formula)
- **Diamond v. Diehr (1981):** process for curing synthetic rubber using a machine controlled by a computer program was patentable
  - Inclusion of mathematical formulas does not render the patent invalid – the claims must be “considered as a whole”
- **Bilski v. Kappos (2010):** a method for managing consumption risk costs of a commodity is an unpatentable abstract idea
  - No algorithm or process described
- **Alice v. CLS Bank (2014):** business method for “settlement risk” mitigation via intermediary is unpatentable as an abstract idea (no “inventive concept”)

### Recap: Patentable Subject Matter

- **4 Statutory Categories:** “process, machine, manufacture, or composition of matter” (cover most inventions)
- The Court’s statement in *Chakrabarty* that “Congress intended statutory subject matter to include ‘anything under the sun made by man’” isn’t accurate
  - “Laws of nature, physical phenomena, and abstract ideas” are “excluded from patent protection” (*Diehr*)
  - “A patent cannot ‘wholly preempt’ an idea or ‘in practical effect be a patent on the idea.’” (*Benson*)
- Since 2010, 4 major Supreme Court cases:
  - *Bilski* and *Alice* have held computer implemented method claims invalid because they were directed to an abstract idea
  - *Mayo* and *Myriad* have held patents invalid because they were directed to a law of nature or physical phenomena
  - *Bilski* and *Alice* have held computer implemented method claims invalid because they were directed to an abstract idea
  - *Mayo* and *Myriad* have held patents invalid because they were directed to a law of nature or physical phenomena
Recap: Patentable Subject Matter

- Fit with statutory category? (cf. Bilski)
- If “Yes,” does exception to subject matter eligibility nonetheless apply? (Alice; Mayo)
  - If so, does claim significantly directed to ineligible subject matter?
    - Specific physical apparatus/change as “clue”
    - Not just “generic computer implementation”
    - Not preempting all substantial applications
    - Not just “insignificant extra-solution activity”
    - Not mere limitation to technological field
    - Probably not mere isolation of natural substance
    - Perhaps not total coverage of basic “building block”

Impact of Alice/Mayo

MedDx: Medical Diagnostics
TC3600: Transportation, Construction, Electronic Commerce, Agriculture, National Security and License and Review

Avoid the Patent Pit of Despair: Drafting Claims Away from TC 3600

"The way you draft an application greatly influences which Art Unit the application will be funneled into, and which Art Unit is assigned the application can in many cases be nearly dispositive of whether a patent issues—ever."

Criticism of Alice/Mayo

- What are some of the criticisms of Alice/Mayo?
- What are some of the defenses to Alice/Mayo?
- What are some proposed §101 reforms?


35 U.S.C. § 112

(a) Written description, enablement, & best mode requirements
(b) Claims & claim definiteness
(c)-(e) Independent, dependent, & multiple dependent claims
(f) Means-plus-function & step-plus-function limitations

Disclosure: § 112(a)

Specification Requirements of 112(a)
- Written Description
- Enablement
  - Ordinary Artisan (PHOSITA)
  - “Undue Experimentation Test”
- Best Mode
Patent Claims: Often the FOCUS of the Dispute

“To use a colloquial term coined by Judge Rich, ‘the name of the game is the claim.’”


Rules of Claim Construction

35 U.S.C. § 112(f)

“An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”

Utility: § 101 and § 112

35 U.S.C. § 101

“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 ….”

35 U.S.C. § 112(a)

“The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such … terms as to enable any person skilled in the art … to make and use the same ….”

Utility: § 101 and § 112

• Fairly low bar – most patent applications are processed without PTO raising a question as to utility, and utility is rarely litigated
  • Requirement is basic operability, not whether a product is ready for commercial use, better than comparable prior art, or superior in terms of qualities/features
  • Self-enforcing – a truly useless invention should be worthless, so who would go through the expense to patent it?
• Three major issues:
  • Beneficial utility
  • Substantial or practical utility
  • Credible evidence of operability

Novelty and Prior Art

• Determining what is “new” and “old” is a complex problem to solve
• Formal process for identifying prior art and for determining the “critical date” for testing novelty
• Pre-AIA: novelty is tested as of the date of invention
• AIA: novelty is tested as of the date the patent application is filed
• The vast bulk of references that qualify as prior art under the AIA would also qualify under pre-AIA law

Merges & Duffy, p.383
AIA §102 Exercise #1

Lancaster publishes an article in a scientific journal on May 1, 2014, describing an IP over Avian Carriers (IPoAC) technology. He then files a patent application at the USPTO on February 1, 2015, claiming the IPoAC invention.

May Lancaster obtain a US patent on the IPoAC invention?

AIA §102 Exercise #2

York publishes an article in a scientific journal on May 1, 2014, describing a self-driving automobile. Warwick files a patent application at the USPTO on June 1, 2014, claiming the identical invention.

May Warwick obtain a US patent on the self-driving automobile?

AIA §102 Exercise #3

Topaz publishes an article in a scientific journal on May 1, 2014, describing a universal translation device. Axel develops the identical device and publishes his results on September 1, 2014. Axel then files a patent application at the USPTO on October 1, 2014. Topaz follows by filing a patent application at the USPTO on May 1, 2015, claiming the universal translation device.

May Topaz obtain a US patent on the universal translation device?

AIA §102 Exercise #4

Cosentino publishes an article about new driverless automobile technology on June 1, 2014. She files an application at the USPTO fully describing and definitely claiming the invention on September 1, 2014. Toole publishes an article describing the identical invention on July 1, 2014. He files an application at the USPTO fully describing and definitely claiming the invention on August 1, 2014.

Which party may obtain a US patent on the driverless automobile technology?

AIA §102 Exercise #5

Laetitia publishes an article about new high-speed rail technology on September 1, 2014. She files an application at the USPTO fully describing and definitely claiming the invention on September 1, 2015. Renaud files an application at the French Patent Office fully describing and definitely claiming the identical high-speed rail technology on August 1, 2014. He then files an application at the USPTO fully describing and definitely claiming the invention on August 1, 2015. The USPTO publishes Renaud’s application on February 1, 2016.

Which party may obtain a US patent on the high-speed rail technology?

AIA §102 Exercise #6

Kilmer publishes an article about new mobile broadband technology on March 1, 2014. He files an application at the USPTO fully describing and definitely claiming the invention on April 1, 2015. Harper files an application at the USPTO fully describing and definitely claiming the identical invention on June 1, 2014.

Which party may obtain a US patent on the mobile broadband technology?
Nonobviousness: § 103

35 U.S.C. §103

The claimed invention cannot, “as a whole,” have been “obvious” to ordinary artisan at time of invention (pre-AIA) or before the effective filing date (post-AIA)

- Burden to Show Obviousness
  - Clear & Convincing Evidence in Court
  - Preponderance of the Evidence at USPTO
- 4 Graham Factors
- Reason-to-Combine Analysis (KSR)

Nonobviousness under § 103

- Question of law but significant, underlying facts
- Invention evaluated “as a whole”
  - Attempt to measure technical accomplishment
  - Triviality: a technically trivial development may still be extremely valuable
- Timing of Relevant Nonobviousness:
  - Pre-AIA: Invention date
  - Post-AIA: Before effective filing date
- Perspective: person having ordinary skill in the art (PHOSITA)
- “the ultimate condition of patentability”

Patent Infringement

Direct Infringement
- “makes, uses, offers to sell, or sells” in US, or “imports” into US (§271(a))

Indirect Infringement (w/ direct infringement)
- active inducement (§271(b))
- contributory infringement (§271(c))

“Extraterritorial Infringement”
- supply for combination abroad (§271(f))
- product from patented process (§271(g))

Patent Exhaustion (1st-Sale Doctrine)

Patent Infringement: Remedies

Injunctions
- 4-factor tests for injunctions

“Ongoing Royalties”

Damages
- Lost Profits
- Reasonable Royalty
- Potential enhancement for willfulness

Attorney Fees

Provisional Rights

Any questions?