Intellectual Property
Part 2

Lecture 14
GSL Peru 2014

Massachusetts Institute of Technology

GS1

movistar

Universidad Católica San Pablo

Housekeeping

- Status Presentation Friday
- Please fill out the survey that Natasha emailed out

Prior Art - Novelty and Nonobviousness

Four Basic Questions

- What is it?
- When was it?
- Where was it (for pre-AIA patents)?
- Who did it?

Prior Art - What?

- Known or used by others- 1952 Act, §102(a); not in AIA.
- In public use or on sale by anyone
- Patented by anyone
- Described in anyone's printed publication
- Described in another's earlier filed (and usually later published or patented) patent application
- "Otherwise available to the public" - AIA

Prior Art - When? - 1952 Act

- Before the Invention was made, was it
  - Known or used by others - §102(a)
  - Described in someone else's earlier filed patent or patent application - §102(g)
  - Invented by someone else - §102(g)
- More than one year before the patent application was filed, was the invention - §102(b), §119
  - In public use or on sale by anyone
  - Patented by anyone or described in any printed publication.

Prior Art - When - 1952 Act

When is an invention “made”?

- Conception
- Reduction to Practice
  - Actual
  - Constructive – a patent application
- Competing Inventors
  - The basic rule of priority
  - Diligence
  - Abandoned, Suppressed or Concealed

Prior Art - When? - AIA

- Before the “effective filing date of the claimed invention”
- “First to Invent” to a “First to File”
  - When an invention was made is no longer important.
  - When a patent application was filed is critical.
  - A person who invented first no longer has a “year of grace”

Prior Art – Where?

- Under the 1952 Act
  - Knowledge or use,
  - In public use or on sale, and
  - Prior Invention by another
  - Were prior art only if in this country
- Under the AIA
  - “Prior invention by another” is not prior art
  - “In public use or on sale,” and “otherwise available to the public” are prior art if anywhere in the world.

Patent Subject Matter

- Machine
- Manufacture
- Composition
- Process

Machine

“a concrete thing, consisting of parts, or of certain devices and combination of devices.”

Burr v. Duryee, 68 U.S. (1 Wall.) 531, 570 (1863)

Manufacture

"the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery."

Chakrabarty, 447 U.S. 303, 308 (1980)

Composition

“all compositions of two or more substances and . . . all composite articles, whether they be the results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids.”

Process

- “[A]n invention or discovery . . . involving mechanical operations, and producing a new and useful result . . . .”
- “[A]ny artificial operation performed by physical agents and producing physical effects.”

Subject Matter Exclusions

- “Laws of nature, physical phenomena and abstract ideas” are “excluded from . . . patent protection.”
- “A patent cannot “wholly preempt” an idea or “in practical effect be a patent on the idea.”
- A mathematical formula

Problem Areas

- Software
- Discoveries of “nature’s secrets”

Exclusions in other countries

- **China** – scientific discoveries, methods for mental activities, methods for the diagnosis and treatment of disease, animal and plant varieties
- **Europe** – discoveries, scientific theories, mathematical methods, aesthetic creations, schemes, rules and methods for performing mental acts, playing games or doing business, programs for computers and presentations of information
- **Japan, Korea** – medical treatment of humans

Software

- US patent law exclude “abstract ideas” - some software patents denied
- EU patent law exclude “computer program as such” - need “further technical effect”

Debate

- Whether software should be allowed
- Whether non-obvious is too loosely applied for software
- Whether software patent discourage innovation

Nature's Secrets

Living things, isolated genes and medical treatment were generally patentable subject matter.

Recent Court Decisions

- *Mayo v. Prometheus* (2012) - Administering the proper dose of a drug
- *Association of Molecular Pathology v. Myriad* (2013) - isolated gene, DNA, cDNA for breast cancer

Patent - Summary

- Protects against development
- Requires disclosure
- Limited time
- Expensive to obtain and enforce
- Difficult to prove infringement

Specification and Claims

Specification - Section 112

- The specification shall contain a written description of the invention… and of the manner and process of making and using it … and shall set forth the best mode contemplated by the inventor….
- The specification shall conclude with one or more claims….

Specification

- "A written description of the invention"
  - Did the inventor "possess" what is now said to be the invention at the time the application was filed?
- Enablement – "the manner and process of making and using it"
  - Given the patent teaching, could one skilled in the art practice the invention without "unreasonable experimentation?"
- "The best mode contemplated by the inventor"
  - AIA: Best mode no longer a defense in litigation

Claims

- Why Do We Have Claims?
  - Define the patentee's right to exclude.
  - Provide the public notice of what it can or cannot do.
- Claim Requirements
  - "Particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention." § 112, Par. 2.
  - A claim may be narrower than the invention, but it may not be broader.
- How clear the claim must be is an on-going question, now before the Supreme Court.
  - The Federal Circuit only requires a claim not to be "insolubly ambiguous."

Types of Claim

- Product
  - A bicycle comprising [or “consisting of”] two wheels and a seat
- Process or Method
  - The process of making a tire comprising the steps of …
  - The process of treating cancer by applying X to a mammal
- Product-By-Process
  - A tire made by the process of …

Types of Claim

- Beauregard - no longer “printed matter”
  - A memory having stored thereon instructions to do X
  - floppy disk, CD-ROM
- Markush
  - A claim or structure is a claim with multiple "functionally equivalent" chemical entities allowed in one or more parts of the compound
- Jepson
  - A method or product claim where one or more limitations are specifically identified as a point of novelty, distinguishable over at least the contents of the preamble

Types of Claim

- Means Plus Function
  - “An element in a claim for a combination may be expressed as a means or step for performing a specified function…, and such a claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”
  - means for… - converting analog signals to digital signals
  - steps for… - storing digital signals in...

CHAPTER I: MR. LOGMAN INVENTS THE SITTING DEVICE

It is the Year 10 in the history of the world. Nobody in the valley where Mr. LogMan lives has figured out how to sit down. One day, Mr. LogMan has the idea of taking a section of tree trunk, flattening it on each end, and sitting down on it as shown in the diagram below. He then applies for the first patent. In the specification part of the patent application he describes how to cut the log and how to use it to sit on, and provides the diagram.

CHAPTER I: MR. LOGMAN INVENTS THE SITTING DEVICE

His patent application also includes two claims. The first one is broad, and the second one is narrow. The claims are:

Claim 1: A device which provides a firm surface a fixed distance from the ground for a person to sit on.

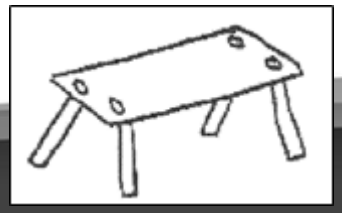
Claim 2: A log (section of tree trunk) flattened at each end, for a person to sit on, as shown in the diagram.

The patent office grants him a patent with both claims.

CHAPTER II: MRS. BENCHLADY IMPROVES THE INVENTION

Mrs. BenchLady notices that the log sitting device is heavy and tips from side to side. She invents the bench as shown in the diagram below. She applies for a patent on the bench. The application includes a specification on how to make and use her bench, and the following claim.

Claim: A device consisting of a flat piece of wood with four legs, for a person to sit on, as shown in the diagram.



CHAPTER II: MRS. BENCHLADY IMPROVES THE INVENTION

Should the patent office grant Mrs. BenchLady a patent?

Yes, because the bench is useful, new, and a non-obvious improvement over the log sitting device.

CHAPTER II: MRS. BENCHLADY IMPROVES THE INVENTION

However, her invention is within the broad claim in Mr. LogMan's patent. ("A device which provides a firm surface a fixed distance from the ground for a person to sit on" and that definition seems to include a bench.")

Let us assume that Ms. Benchlady gets her patent. Can she manufacture and sell the bench?

CHAPTER II: MRS. BENCHLADY IMPROVES THE INVENTION

Remember that a patent is a right to exclude others from making, selling or using an invention. (See section B). Ms. BenchLady has a patent on the bench and can exclude Mr. LogMan from selling benches. But Mr. LogMan also has a broad claim in his patent, which includes benches, and so he can exclude Mrs. BenchLady from selling benches. The result is that nobody has a right to sell benches. Patent lawyers say that Mr. LogMan's broad claim "dominates" Mrs. Benchlady's more specific claim.

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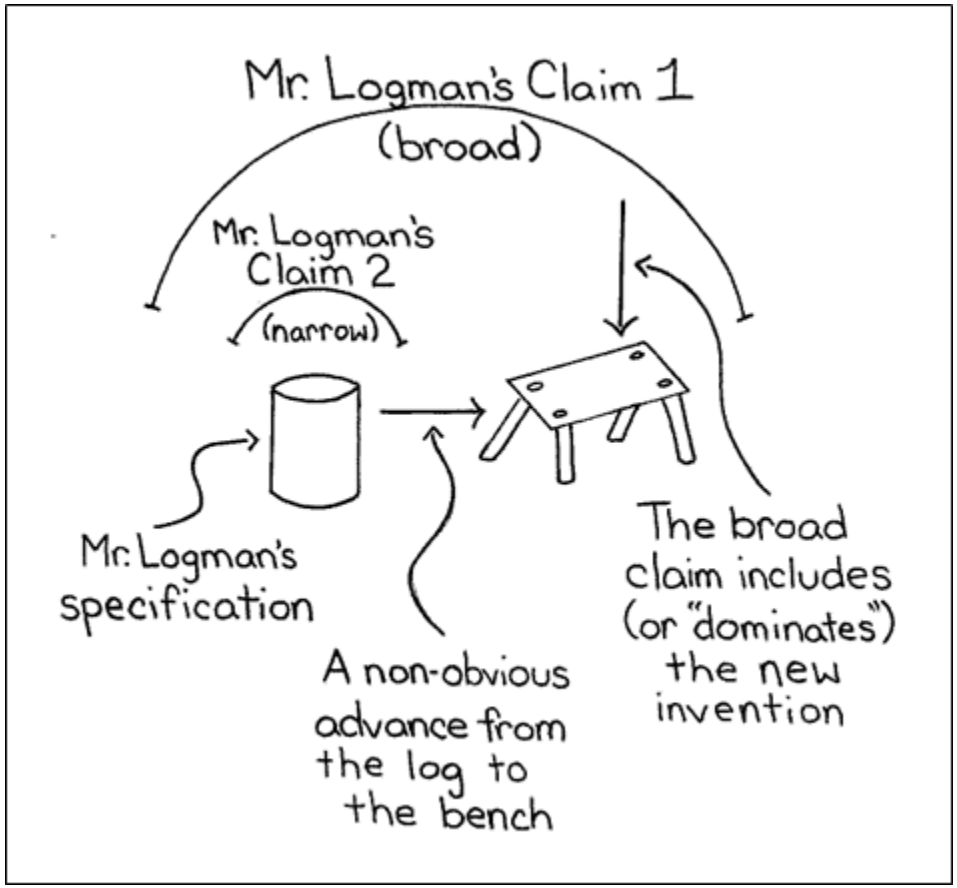

Mr. Logman's Claim 1
(broad)
Mr. Logman's Claim 2
(narrow)
Mr. Logman's specification
A non-obvious advance from the log to the bench
The broad claim includes (or "dominates") the new invention

THE EXCITING STORY OF THE SITTING DEVICE CONTINUES...

FINDING "PRIOR ART" WHICH THE PATENT OFFICE DIDN'T FIND

CHAPTER III: MRS. BENCHLADY GOES INTO BUSINESS. Mrs. BenchLady starts manufacturing and selling benches, even though Mr. LogMan's patent "dominates" her invention.

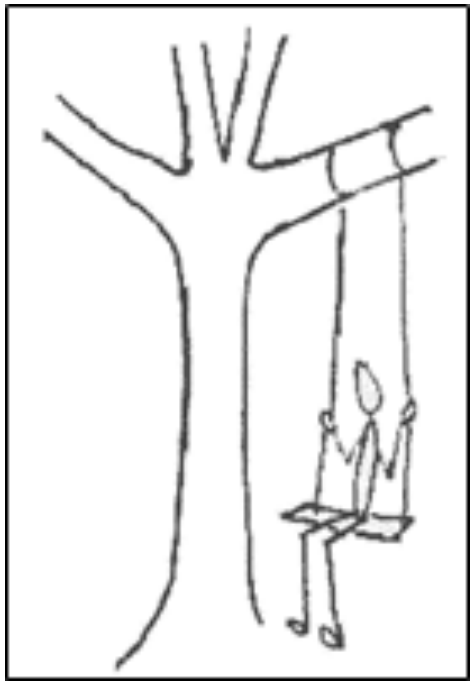
THE EXCITING STORY OF THE SITTING DEVICE CONTINUES...

CHAPTER IV: MR. LOGMAN SUES MRS. BENCHLADY FOR PATENT INFRINGEMENT. Mr. LogMan demands that Mrs. Benchlady stop selling benches. She refuses. Mr. LogMan hires a lawyer, Mr. TroubleMaker, and brings a lawsuit against Mrs. Benchlady for infringing his patent.

THE EXCITING STORY OF THE SITTING DEVICE CONTINUES...

CHAPTER V: MRS. BENCHLADY FIGHTS BACK. Mrs. Benchlady hires a lawyer, Mr. ToughGuy. Mr. ToughGuy advises her to attack Mr. LogMan's patent in the lawsuit. Mr. ToughGuy starts a wide investigation into "prior art." He goes over some high mountains to another valley, and there he finds Mr. SwingMan sitting on the device shown in the diagram below. Mr. SwingMan says that he put the device up in Year 8.

THE EXCITING STORY OF THE SITTING DEVICE CONTINUES...



THE EXCITING STORY OF THE SITTING DEVICE CONTINUES...

Result:

Mr. LogMan's Claim 1 is invalid because of "prior art." Mr. LogMan still has a patent, but only with Claim 2, and Claim 2 covers just his log device. So, Mrs. Benchlady can manufacture and sell her benches.

Infringement

- Claims are infringed and not patents
- A claim is infringed by something includes everything in the claim.
  - To infringe a product claim, the accused device must contain every element of the claimed product.
  - To infringe a process claim, every step set forth in the claimed process must be practiced.
- If any element/step is missing, there normally is no infringement.

Claim Construction

- Claim construction is critical.
- In deciding infringement, many cases are decided on the basis of claim construction; others are settled.
  - Claim construction is an issue for the court.
  - The usual test is how would the claim language be understood by one of ordinary skill based on the patent and its PTO prosecution.
- In the PTO (and in appeals from it), the meaning of the claim is critical to distinguishing prior art and providing necessary clarity.
  - Claims are given the broadest reasonable interpretation consistent with the specification.

Types of Infringement

- Literal Infringement
- Infringement under the Doctrine of Equivalents
  - One or more elements are not literally present, but some substitute element serves essentially the same purpose.
  - Does the accused product or process contain elements identical or equivalent to each claimed element of the patented invention?

Infringement Remedies

- § 283. Injunction
  - An injunction is no longer “automatic.”
- § 284. Damages
  - Not less than a reasonable royalty
  - Lost Profits
  - Enhanced damages for willful infringement
- § 285. Attorney Fees
  - In an exceptional case
- § 154. Provisional rights
  - Pre-issue infringement of a published claim

References

- Entrepreneur’s Guide to Business Law - Constance E. Bagley and Craig E. Dauchy
- Basic Business Law for the Entrepreneur and Manager - John Akula
- Law and Cutting-Edge Technologies - John Akula and James B. Lampert