Obtaining a Patent:

Conditions for Patentability

CSE490T/590T

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Conditions for Patentability

- Several distinct inquiries:
  - Is my invention useful – does it have utility?
  - Is my invention patent eligible subject matter?
  - Is my invention actually new? (Did someone else invent or file first?)
  - Did I file my patent application on time?
  - Is my invention non-obvious?
  - Is my invention clearly defined?
  - Is my invention properly described/disclosed by the patent document
- The answer to each of these questions must be YES

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Conditions: Utility

- Utility threshold is **very** low
- Types of utility:
  - Operability
  - Beneficial use
  - **Purpose** (aka. "practical/specific utility")
- Examples
  - Perpetual motion machine
  - Juicy Whip machine
  - Chemical compounds

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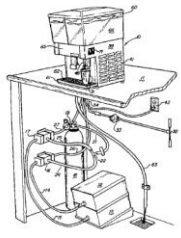
Juicy Whip v. Orange Bang

- US Patent No. 5,575,405



Court: "We find no basis in section 101 to hold that inventions can be ruled unpatentable for lack of utility simply because they have the capacity to fool some members of the public. "

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Conditions: Subject Matter

- Invention must be directed to exactly one class of patentable subject matter:
  - Process
  - Machine
  - Articles of manufacture
  - Composition of matter
- Judicially created exceptions
  - Laws of nature
  - Abstract ideas
  - Natural phenomena

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Subject Matter

- Patent eligible? If so, what category applies:
  - A solar powered lawn mower
  - A waterproof breathable membrane
  - A recipe for cooking beans
  - The formula for Coca Cola
  - Chocolate milk
  - The quicksort algorithm
  - A program implementing above algorithm
  - A computer configured to perform quicksort
  - A binary tree data structure
  - A binary tree data structure encoded in a memory

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Conditions: Novelty

- Invention must be new
- An invention (as defined by a claim) is not new if each and every element of the claim is contained in a single prior art reference
- Remember the verb: "reading on"
  - If a claim "reads on" a prior art reference it is not novel
  - If a claim "reads on" some device (or process, etc.), then that device infringes the claim

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Confusion Alert

- Historically, the U.S. had a "first to invent" patent regime
  - The first inventor is entitled to a patent
  - What is prior art depends on the invention date
- Under the America Invents Act of 2011, the U.S. is now a "first inventor to file or publish" patent regime
  - The first inventor who files is entitled to a patent
  - What is prior art depends on the filing date
- *Unfortunately, we need to understand both regimes*

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First to invent: Novelty

- Under "first to invent," the first inventor gets the patent:
  - A person shall be entitled to a patent unless (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent. 35 USC 102(a)
- *Lesson: Record keeping is critical to prove invention date: emails, inventor notebooks, source code, etc.*

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First to invent: Novelty

Invention: 3/1/2011

Util. App 4/15/2011

Describes A, B, C, D

Claims A, B, C

What can the applicant do?

Ref. Dated 1/1/2011

Describes A, B, C

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First to Invent

Invention: 1/1/2011

Util. App 4/15/2011

Describes A, B, C, D

Claims A, B, C

What can the applicant do?

Ref. Dated 4/1/2011

Describes A, B, C

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First to invent: Not too late

- Under first to invent, you have one year from ***any*** public disclosure to file a patent:
  - A person shall be entitled to a patent unless (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States
- *Even if you were the first to invent, you will lose your rights if you wait too long after the invention goes public*

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First to invent: One-Year Grace Period

Invention: 1/1/2010

Util. App 4/15/2011

Describes A, B, C, D

Claims A, B, C

Can the applicant claim A, B, C?

Ref. Dated 4/1/2010

Describes A, B, C

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Printed Publications as Prior Art

- What is a printed publication? When a document becomes generally accessible:
  - Mailing date of journal
  - Indexing date of dissertation
  - Publication date of patent application
  - Electronic documents are printed publications (when they are generally accessible)!

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Public Use

- What is a public use in this country?
  - Experimental use exception
  - A public use of a hidden invention (e.g., software) is still public use...

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On Sale

- What is a sale or offer for sale in this country?
  - Invention must be "ready for patenting ... and be subject of a commercial offer for sale"
  - Offer/Sale need not be public!
  - Offer to license patent rights is not "on sale"
- *Lesson: Don't offer for sale without filing first!*

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AIA: First to File

- Basic idea: the first inventor to file is entitled to the patent
  - If inventor files after another's patent filing or a public disclosure by another (who did not obtain the information from you), inventor is not entitled to a patent
- Grace period: inventor's ***own*** public disclosure provides a one year grace period that "insulates" against another's public disclosure or filing

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AIA: Novelty Statute

- A person shall be entitled to a patent unless—

  (1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention; or

  (2) the claimed invention was described in a patent … or in [a published] application [that] names another inventor and was effectively filed before the effective filing date of the claimed invention.

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First to file in pictures

Invention: 1/1/2011

Util. App
4/15/2011

Describes
A, B, C, D

Claims
A, B, C

What can the applicant do?

Ref. Dated
4/1/2011

Describes
A, B, C

Lesson: First to file could care less about the invention date!

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First to file: One-Year Grace Period

Applicant publishes
4/15/2010

Describes
A, B, C

Util. App
4/1/2011

Describes
A, B, C, D

Claims
A, B, C

Can the applicant claim
A, B, C?

Ref. Dated
6/1/2010

Describes
A, B, C

This is why some call the system "first to file OR publish"

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AIA: Prior Art

- The AIA has modified somewhat the categories of prior art.
- AIA adds to the body of available art:
  - "public use" anywhere in the world qualifies as prior art
  - "on sale" anywhere in the world qualifies as prior art
- AIA subtracts from the body of available art:
  - Secret "on sale" activity may not qualify as prior art
  - Secret commercial use may not be prior art

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Living under the AIA

- Under the new regime, filing (or publishing) early is more important than ever.
- BUT, a sketchy filing isn't going to be much help
- Beware of relying on early publication
  - Publication will result in a loss of foreign rights (as it always has)
  - It can be difficult to prove your date years after the fact
  - Better to file a provisional application

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Conditions: Non-obviousness

- Invention must be non-obvious to a PHOSITA (person having ordinary skill in the art) at the time of the invention
- Example claim: An apparatus comprising A, B, and C.
- Reference 1 describes a machine comprising A and B.
- Reference 2 describes C.
- Novel?
- Obvious?

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Obviousness Analysis

- Obviousness analysis is typically framed as the following question:
  - would it have been obvious to modify the prior art (in some way) to reach the claimed invention?
- Manner of modification:
  - Combining known elements to yield predictable results
  - Substituting elements to yield predictable results
  - Modifying one prior art reference with teachings from another
- Cannot use hindsight…

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Obviousness Rebuttal

- When the PTO finds that an invention is obviousness, the applicant can rebut the finding.
- Techniques (from weak to strong)
  - The references were from disparate technology fields
  - The references when combined would not be operative for their intended purpose
  - One reference explicitly teaches away from the other
  - Evidence of non-obviousness (next slide)

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Non-obviousness Factors/Evidence

- Evidence of non-obviousness, in decreasing order of "effectiveness/weight"
  - Level of ordinary skill in the art: the higher the skill level, the more combinations/variations are obvious (everything was obvious to Einstein)
  - Skepticism of others
  - Long felt need
  - Prior failures
  - Unexpected results
  - Copying by others
  - Commercial success

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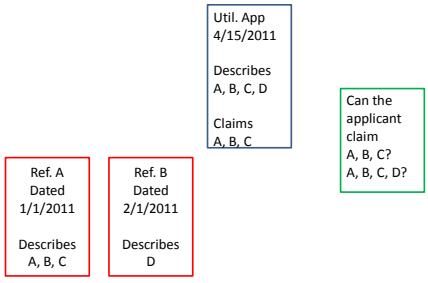
Obviousness



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Sources of Law

- Title 35 of the USC specifies the conditions, in the following sections:
  - 101: subject matter eligibility
  - 101: utility
  - 102: novelty
  - 103: non-obviousness
  - 112: claim definiteness
  - 112: enablement, written description, best mode

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