What is a Patent?

The Standards for Patentability
Agenda

The Architecture of the Patent System

Patent Theory

Patent Prosecution

Enablement

Written Description
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The Architecture of the Patent System
Administrative Agency

Evaluates applications for compliance with standards of patentability
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The Patent Document

Establishes boundaries of protection (claims), disclosure required.
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Private Enforcement (Litigation)

Market determines the reward; full review of PTO grant of rights.
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Evaluates applications for compliance with standards of patentability

The Patent Document
Establishes boundaries of protection (claims), disclosure required.

Private Enforcement (Litigation)
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Title & Serial Number

Dates: Filing, Priority, Issue

Inventor/Assignee

Technology Fields (Classes)

References Cited

Abstract

Drawings

Specification

Claims
In Patents, “The Name of the Game is the Claims”

- Claims must “particularly point out and distinctly claim the invention.”
- Claims need not explain how to make/use the invention.
- Consider the goals of claim language for:
  - patentees’
  - public’s
The Life of a Patent

Prosecution

- Ex parte administrative process
- Private/secret (for 18 months in most cases)
- Procedures allow for “continuing” applications
  - We think around 75% of all applications eventually result in a patent (‘grant rate’ is much lower)
- Internal procedural incentives to issue patents
- Two-stage appeals
  - Board Patent Appeals and Interferences (Board)
  - Federal Circuit (also: District DC + Fed. Cir.)
- Reexamination (ex parte, inter-partes)

But patents enjoy a statutory “presumption of validity”

Declaratory judgment actions are not uncommon. 
(Why?)
## The Life of a Patent

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### Enforcement
- A judicial / litigation process; jurisdiction in Federal Courts
- Courts are empowered to review the validity of patents.
  - But patents enjoy a statutory “presumption of validity”
- Declaratory judgment actions are not uncommon. (Why?)
The Patent System: Key Facts and Figures

• Less than 1% of all patents are litigated

• Most estimates that less than 5% of all patents are licensed

• Typical cost of litigation: at least $4.5M per side for cases with more than $25M at stake; $2M per side for smaller cases.

• By most calculations, the average expected value of patents is less than zero.
  ◦ The distribution of patent value is heavily skewed: a few patents are enormously valuable, most have no value.
Patenting Activity, 1994-2014

Source: USPTO Annual Reports
Patent Intensity, 1994-2011

[ Patent applications filed per $M non-federal R&D (constant 2005 dollars) ]

[ Source: USPTO Annual Reports, NSF Science and Engineering Indicators 2014 ]
Patent Theory

Incentives to Invent

Incentives to Disclose

Incentives to Commercialize

Incentives to Design-Around

Incentives to Invest in R&D

... which of these is most important?

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... which of these is most important?
The Mechanism

or, How does the Patent Law Work?

Grant of a Property Right

- a right to exclude others (from the scope of the patent) –
- under private control –
- can be bought/sold/licensed/traded/divided –
The Utilitarian Basis of the Patent Law

The Mechanism

Note that (in most cases) patents ≠ monopolies. The quantity of the reward will depend on competitive substitutes, other factors.

Consider other possible mechanisms?
Costs of the Patent System
(Can these be avoided? How?)

- Monopolization Costs
- Rent-Seeking Behavior
- Restriction of Future Innovation
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Other Options

Why not simply subsidize invention/innovation directly?

Government-sponsorship of research
Cash rewards for inventive activity

Won’t these schemes create the same incentives, with less of the costs?
Patent Prosecution
The Standards for Patentability

A valid patent must be . . .

- Fully and appropriately described (§ 112)
- In compliance with statutory bars (§ 102)*
- Novel (§ 102)
- Nonobvious (§ 103)
- The work of the inventors (§ 116)
- Useful (§ 101)
- Within the appropriate subject matter (§ 101)
Patent Validity Analysis

During prosecution phase
During enforcement phase
Patent Validity Analysis

During prosecution phase

Review by USPTO Examiners assigned to case.

All aspects of validity to be reviewed.
Patent Validity Analysis

During enforcement phase

Review by court / jury.

Can revisit any / all validity issues.

A “presumption of validity” (‘clear & convincing evidence’).

An invalidity determination is final; a ‘no invalidity’ ruling is not.
Patent Prosecution

An ex parte process.
Applications kept private / secret for 18 months.
Continuation Applications
Internal Incentives of the PTO Examiners
Patent Prosecution

Appeal Process

Stage 1: USPTO Board of Patent Appeals & Interferences (BPAI)
Stage 2: Federal Circuit or US District Court
Patent Prosecution

Reexamination & Reissue

Reexamination: A reevaluation of validity, based on new prior art (discretionary, ex parte or inter-partes)

Reissue: Party seeks cure for defect in patent
Enablement
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The Enablement Requirement


The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. . . .
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The Incandescent Lamp Patent
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The following claims.

We claim as our joint invention—

1. An incandescent conductor for an electric lamp, of carbonized fibrous or textile material and of an arch or horseshoe shape, substantially as hereinbefore set forth.

2. The combination, substantially as hereinbefore set forth, of an electric circuit and an incandescent conductor of carbonized fibrous material, included in and forming part of said circuit, and a transparent hermetically-sealed chamber in which the conductor is inclosed.

3. The incandescent conductor for an electric lamp, formed of carbonized paper, substantially as described.

4. An incandescent electric lamp consisting...
Sawyer & Mann did not provide a "common principle" to allow a person of skill in the art to find the correct materials.

In the practice of our invention, we have made use of carbonized paper, and also wood carbon. We have also used such conductors or burners of various shapes, such as pieces with their lower ends secured to their respective supports and having their upper ends united so as to form an inverted V-shaped burner. We have also used conductors of varying contours—that is, with rectangular bends instead of curvilinear ones; but we prefer the arch shape.

No especial description of making the illuminating carbon conductors, described in this specification and making the subject-matter of this improvement, is thought necessary, as any of the ordinary methods of forming the material to be carbonized to the desired shape and size, and carbonizing it while confined in retorts in powdered carbon, substantially according to the methods in practice before the date of this improvement, may be adopted in the practice thereof by any one skilled in the arts appertaining to the making of carbons for electric lighting or for other use in the arts.

An important practical advantage which is...
The Policy of the Enablement Requirement

• How might Enablement be said to be at the “core” of the ‘patent bargain’?
• How might there be said to be two purposes of the enablement requirement?
• By what standard do we evaluate the scope of the disclosure?
  ○ PHOSITA (Who is this?)
  ○ Do you have to describe everything about your invention?
  ○ How do you prove your case?
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Is this different from enablement?
Gentry Gallery v Berkline (Fed. Cir. 1998)
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Claims
recliner sofa, controls anywhere

Disclosure
recliner sofa, controls on the console
In this case, the original disclosure clearly identifies the console as the only possible location for the controls. It provides for only the most minor variation in the location of the controls, noting that the control “may be mounted on top or side surfaces of the console rather than on the front wall . . . without departing from this invention.” ‘244 patent, specification, col. 1, ll. 41-45.

Accordingly, when viewed in its entirety, the disclosure is limited to sofas in which the recliner control is located on the console.
Gentry Gallery v Berkline (Fed. Cir. 1998)

Why is the Gentry Gallery patent not invalid on Enablement grounds?

Does Gentry Gallery offer some suggestions about strategic patent drafting?
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Enablement vs Written Description

- What is the difference between Written Description & Enablement? (or ... What is the purpose of Written Description?)
  - Doctrine: W/D requires “description of the invention” or proof of “possession of the invention”

- Is this meaningfully distinct from Enablement?

- In what cases would this be useful?

- Written description might apply differently to different technologies. (Is this a good thing?)
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Introduction to Intellectual Property Law & Policy
Professor Wagner