

PATENT LAW OUTLINE

PROF. DREYFUSS, FALL 2008

PATENTS AND TRADE SECRETS

- Both patents and trade secrets grant legal exclusivity
- Tragedy of the commons, too many owners: property, exclusive rights
- First mover gets brand loyalty, licensing opportunities
- Trade secrets: monopoly w/o costs of secrecy (Arrow's paradox)
 - + No time limit, e.g., CocaCola recipe
 - + Less costly than patent application
 - + Protected by Fed Econ Espionage Act
 - Risk of reverse engineering, independent invention
 - State tort law (whereas Patent Law is federal)
 - Requires reasonable efforts to keep secret
 - Lose human capital when employees aren't mobile
 - saved by confidentiality agreements (courts like)
 - employees can use knowledge to bargain, use vesting instead

Dionne v. SE Foam (Va 1990, handout): misappropriation of trade secrets

Trade secret: 1) economic value from not being disclosed
2) reasonable efforts to maintain secrecy

Here, known only by family and attorney = trade secret

Accidental discovery, adapting known technology: Secrecy, not novelty, is key.

- Patent incentives: new ideas, but monopoly: higher price w/o competition
- Attract new business, signaling business acumen
- Tragedy of the anticommons, products require so many patents
- 20 years (17 prior to TRIPS), those in application at time of TRIPS (June 8, 1985) get longer of the two
- Utility (useful creations), Design (original decorative), Plants (living plants)
- Prosecution: right to 2 examinations before final rejection.
 - Interference: mini trial determines first to invent
 - Appeal to Patent appeals board, or file continuation or continuation in part (pay more and get first filing date if no changes are made to claims, only disclosure)
 - Appeal to Fed Cir (used to be CCPA), or civil action against PTO director in district.
 - Appeal to SCOTUS, PTO decisions reviewed for C&C error

DRAFTING

- Disclosure, specification, enablement (person of ordinary skill in the art)
- Claims: distinguish subject matter regarded as invention, drafted with infringement in mind

- Limits: designing around (though doctrine of equivalents, not just literal, infringement): every element of claim must be in designed device
 - Preamble: basic nature
 - Transition:
 1. Comprising (open, broad scope better for first inventor)
 2. Consisting of (closed, narrow, avoids prior art)
 3. Consisting essentially of (only infringes if new element does not make it essentially different from claimed invention)
 - Body: elements, special and functional relations between elements
- Dependent claims: qualify the independent claim, so even if independent claim fails, modest dependent claim might still stand
- Jepson format for improvements: Wherein the improvement consists of...
 - Blocking patent: need license on original patent to produce the improvement

TRIPS &C

- Paris Convention, 1880s, no preference for citizens in granting patents, one year period of priority in Convention countries after domestic patent
- Patent Cooperation Treaty, 1970s, international and national phases
- European Convention, 1970s, centralized office, 20 countries
- TRIPs: minimum standards of protection
 - uniform testing for nonobviousness/inventive step and utility/industrial application
 - no compulsory licenses
 - 18months publication of application as per domestic law
 - provisional rights (if patent issues, get past royalty rates)
 - provisional application: priority date of first to file, so early application of just specifications and drawings (one year to file claims)

PATENTABLE SUBJECT MATTER, §§ 100-101, § 273(b), § 287(c)

Natural Substances

- Manifestations of nature and natural laws cannot be patented, “nature’s library”
 - Can’t patent animals/plant varieties (except 1930 Plant Patent Act)
- Product vs process patents: product = more likely to collect from infringer
- Test for extracting from nature:
 1. Was human intervention required?
 2. Are there characteristic that differ in kind from the natural product?
 - Advantage must be product of invention, not discovery of nature
 - Changes in Kind, not in Degree, go to patentability
- Nonobviousness: once discovery of nature found, simple obvious step to use

- But Locke/Nozick: public would remain w/o discovery, discovery confers property rights (not realistic given contemporaneous nature of scientific discovery, and the race to the patent office)
- discourage research on nature
- problems with patenting medicines that would benefit public good
- + allowing monopolies on nature makes others worse off
- + research exemptions (but only research, not if treating patients)

Diamond v. Chakrabarty (1980, p68): broad definition of utility patent subject matter.

**If NOT naturally occurring, then patentable.*

Patent: oil eating plasmids—process of producing, inoculum, and bacteria themselves

Patent examiners excluded bacteria: living things are not patentable

Plant patents: different description requirement, non-infringing use of seeds

If higher standards of inventiveness are met, then utility patents are available.

LabCorp v. Metabolite (2006, p98): patentability not granted merely b/c of useful result.

Look for changes in kind: purification of naturally occurring material does not necessarily defeat patentability.

Patent: test elevated amino acid levels to detect B12 deficiency.

Funk Bros. (1948, p113): Douglas, J., generally anti-patent

Patent: N-fixing bacteria, discovery of natural principle

Use in special combination does not improve their natural function. NOT patentable.

Parke-Davis v. Mulford, (SDNY 1911 L.Hand, p105): changing nature with human activity

Isolation of adrenaline, patentable b/c purified form is different from naturally occurring form.

Principles

- Nonobviousness problem prevents a lot of principle patents: there must be an inventive step. (Not in original patent act)
- Monopoly on upstream technology chills downstream research

Nielsen: making furnaces hotter using a new receptacle: went beyond principle of nature

Pre-obviousness requirement

Morse (1854, p79): can't patent abstract ideas (claim 8: generic manipulation of EM current)

Substantial improvement likely, blocking patent

Bell: patent on process, more limited

- Compare *Bell* and *Morse*: breadth, enablement
- How to tell principle from process: rules of thumb
 - Mere printed matter: can't just codify knowledge (*see LabCorp*, Breyer's dissent, this is what he thought they were doing)
 - Ex, *Cincinnati v. Pope*, bus transfer not printed matter, but functional machine.
 - Function of machine: can't invent machine and get patent on machine's result (*see Morse*)

- (Old test) Mental steps doctrine: can't patent thought process (ex, finding obstructions in wells by echo rates). Dies with *LabCorp*.
- Doctors and contributory infringement: can't sue doctors, but can get manufacturers for inducing infringement by getting them to use product.
 - Medical procedures: US permits patents, TRIPs does not.

Software

- Historically not patentable subject matter (1950s and 60s)
- Courts defer to Congress, more investigative powers, whereas courts only hear from parties.

Gottschalk v. Benson (1972, p131): Douglass, J.: mathematical expressions are not patentable.
 Funk applies to products and processes (can't patent discovery of nature)
 Patent: binary code algorithm. Claim 1 = machine, claim 2 = steps, but not how it would be done with mental steps.
 Conversion method is NOT patentable subject matter, too broad.

Parker v. Fluke (1978): using computer to monitor chemical reaction: not patentable.

Diamond v Diehr (1981, p141): algorithm patentable subject matter if not merely the algorithm
 Imbedded computer program in industrial process of curing rubber.
 Patent sought is not just the algorithm, but the algorithm as part of the large process.
 Dissent: leaves no directions for lawyers to know what is patentable subject matter.

State Street Bank v. Signature Financial Group (Fed Cir 1998, p156):
 Calculation for mutual fund system: concrete and tangible output is result of calculation.
 Means + Function claims and Method claims. Patent Act: §101 "any invention," not restrictive.
 Don't have to tie invention to process or machine (old test), just turns on essential characteristics of subject matter

- What's left of *Gottschalk*: software generally patentable, (unless the only thing it does is increase efficiency of computer), but most software has some useful output.
- League for Programming Freedom: software patents hurt the programming industry: new companies can't enter market, PTO has little expertise

Field Restrictions

- Business Methods:

State Street, again: Not patentable b/c of business method: monopoly where should be competitive.
 Fed Cir rejects business method exception to statutory subject matter, business methods have same legal requirements for patentability

- Congress responds with §273(b), prior user right. If you reduce invention to practice > 1 year before application, and used it, can't be sued for infringement.

- MPEP edited to remove proscription against business method.

In re Comiskey (Fed Cir 2007, supplement): unpatentable: method for mandatory arbitration
Threshold question of subject matter: may be new/nonobvious, but FIRST question to ask is patentable subject matter.

Court will not defer to PTO's determination of subject matter.

In re Nuijten (Fed Cir 2007, supplement): watermarks on digital files.

Question: is it merely numerical? Needs physical form to work, but any form will do.

Holding: transitory embodiments are not statutory subject matter...intangible, embedded in physical principle. No patent.

In re Bilski (Fed Cir 2007, supplement): PTO rejected claim for method of managing commodity risk

Process must be tied to a physical phenomenon, machine, thing

Bilski brief argues: State Street was right, 4 categories of statutory subject matter (process, machine, manufacture, or composition of matter) are not the proper test, but rather, the essential character of the subject matter. Anything under the sun that is made by man.

- Think of other doctrines of patent law through the lens of this problem.
 - Enablement...*Bell and Morse*, technological insight
 - Nonobviousness...Bell figured out how to make it work, contribution not obvious
 - *State Street* holds this too: many business methods patents can get knocked out by nonobviousness

Semiconductor Chip Act, 17 U.S.C. §901 et seq.

- Protection begins on day of registry or first commercial exploitation
- Exclusive rights to produce, induce production, or import
- Exceptions for educational/academic purposes
- Downstream purchasers not liable, except for reasonable royalties after notification of protection
- Term of protection is only 10 years.
- Originality replaces nonobviousness.
- Reciprocal arrangements if other countries provide Americans the same protection.

UTILITY, §101

- Written description of useful process, how to make and use it.
- Useless inventions unlikely to seek patents, as no loss from infringement.
- Can't be deceitful/illegal: ex, *Rickard v. Du Bon*, putting spots on tobacco leaves to make them look Cuban. Patent as US gov'ts seal of approval.
- EPO/TRIPS: Public morality exception, health, environmental concerns.

Lowell v. Lewis (Mass 1817, p212): Useful new pump? Reject stringent utility requirements.

Juicy Whip v. Orange Bang (Fed Cir 1999, p214): Deceptive, create illusion of more beverage.
Making something more commercially appealing via deception is not enough to render unpatentable.

- Specific utility: must do something specific, and Operability: actually does what it claims.
- Timing: must be useful/operable at the time of filing. Also, must have utility first to be first inventor.
- PTO assumes operability, PTO has burden of showing inoperability (even for fantastic claims, like perpetual motions machines). §114, PTO can request a model in questionable cases.

Brenner v. Mason (1966, p222): *utility in process claim-if no use, leave "hunt" for use in public domain*
Process for making steroid that might have a future use. If steroid has no use, than process for making it has no use. PTO: didn't show utility for specific compound, need this before granting monopoly.
If there is no use described, there are no boundaries to the claim. Fortas' concern, windfall to inventor when someone else discovers the use.

In re BRANA (Fed Cir 1995, p230):

Antitumor testing on mice...No one wants to cure mice. Not an end-use utility.
Human test means you can't get a patent w/o testing, catch 22, expensive.
Tumor models were sufficiently specific, PTO did not meet burden to disprove presumption of utility.

- Post-*Branan*, PTO biotech guidelines more receptive to utility evidence. Clarify specific utility: substantial (real world use, known application, no further research necessary to confirm context of use)
- Utility requirements narrow the claims, effectively.
- Requires technological proficiency, not just looking for fundamental principles. Social utility.
- Court does not defer to PTO on this issue...no *Chevron* deference (precedes APA, less expertise, appointments are generally political, incentives to approve patents to get them off your desk).

In re Fisher (Fed Cir 2005, p240):

DNA sequences for corn proteins. Speculative. only useful in further research.
Requirement for immediate benefit. Not like a microscope (patentable) because only used on specific genetic material. Must have specific, not general, utility.
Dissent: research tools are useful, even if limited.

Federally funded research, §§ 200-203

- Bayh-Dole Act, §200 (1980): gov't supporting fundamental research, universities, &c, with no known use. Patent rights can be exerted over downstream discoveries. Push patents upstream, especially in university research.
 - March-in rights, §203: if refuse to license, government can intervene, but this has never been utilized.

DISCLOSURE

- Disclosure is the price of getting the patent: contract metaphor.
- Enablement, Written description, definiteness of claims, best mode thereof.

Enablement, § 112, ¶ 1

- Enable someone else skilled in the art, discern boundaries of claims, most effective mode (subjective).
- Undue Experimentation: patent should be primary teacher of invention
 - Court does not narrow at trial stage: that would encourage broad drafting with knowledge that, if litigated, it can be narrowed later.

Incandescent Lightbulb (1895, p261): enablement relates to state of art at time of invention
Patentee using fibrous material in incandescent light bulb, but did not discover common element so as to warrant a broad patent. Description vague, further experimentation needed to find best material.

In re Wands (Fed Cir 1988, p275): test for Undue Experimentation
Immunoassay using monoclonal antibodies, but need the antibodies for the process. Tested 9 of 143 antibodies, 4 worked. 4/143—would require undue experimentation, but 4/9 better ratio.
Deposit of organisms to use in experiments. Method of making starting materials not known in the art is also required for process patent.

Atlas Powder v. DuPont (Fed Cir 1984): affirmed finding that infringer did not enable, gave no quantities on list of ingredients.

- Depository can solve enablement problem, but allowed to keep it secret until patent issues. *In re Argoudelis* (CCPA 1970).
 - Plant patents' enablement can be met with seeds placed in public depository.
- If field is more predictable, then less disclosure is necessary to enable. *Spectra-Physics v. Coherent* (Fed Cir 1987).
- Most disclosure problems are with respect to the lawyer's drafting activities: what could lawyer have done to avoid the problems. i.e., longer list of things to claim, generalizable element among all the options? (as in *Incandescent*).
 - Lawyer can recommend more testing.

Amgen v. Chugai Pharma (Fed Cir 1991, p273): Scope of enablement must be same as scope of claims
Some experimentation to replicate, however, is acceptable.
Here, many ways for DNA to express the same protein, or proteins with similar effects. Can't claim all possible genetic sequences that share this quality.

- Claims' scope matches disclosure's scope. Enablement standards strict to limit subsequent R&D investment.
- Must enable on the date of invention. Later discoveries should be improvements, b/c at the time of invention they were unknown to persons in the art.

- Prophetic examples are insufficient. *Rasmusson*, prophesy of future success inadequate. *Purdue v. Endo*, misled PTO regarding results (future, not past)
- Need not contain a working example if replicated without undue experimentation, don't have to recite every embodiment. *In re Borkowski* (CCPA 1970)
- PTO has burden of explaining why it's not enabled, applicant can contest. *In re Wright* (Fed Cir 1993).
- Enablement if of other in the field, those in the art can have years of experience, *Gould v. Mossinghoff*.

Written Description, § 112, ¶ 1; §§ 120, 132

- Filing date: as originally filed, written description can't change (must satisfy written description requirement by the filing date to get advantage of date)
 - Ex, *Vas-Cath v. Mahurkar* (Fed Cir 1991), could change from design to utility and retain effective filing date as long as original description to provide support...lax enforcement has since been reined in
- Reexamination: can't introduce new materials into disclosure
- Description can narrow the claims. Especially where art is unpredictable, can not presume that patentee has all the variants.
- Notice of scope (economically related to length of patent term).

Gentry Gallery v. Berkline Corp (Fed Cir 1998, p303): Claim is not limited to preferred embodiment, but can be limited if disclosure is narrow.
Reclining seats in sectional sofa. Location of recliner controls are not on same console was not explicitly covered in written description. This was essential element of invention, so description narrowed the claim.

- No Omitted Element: invalid if omits an essential element originally disclosed in the specification, *Reiffin v. Microsoft* (Fed Cir 2000). If missing limitation is a critical feature, then reject for written description.
 - *Markman*, construction is matter of law, but *Union Oil v. Atlantic Richfield*, disclosure is a matter of fact.

Regents of Univ. California v. Eli Lilly (Fed Cir 1997, p310): Can not include genus in claim if description only covers species. This enables, but does not disclose.
cDNA for insulin; disclosed rat, but claimed human. Example must prove more than general method (here, nucleotide sequencing)

Univ. of Rochester v. Searle (Fed Cir 2003, p314): reach through claim: reach through process to get to the patent in the claim. Written description of process, not product. (product more lucrative)
Disclosing how to make compounds: can't satisfy description without disclosing identity of the compound with the asserted biological effect.
Bayh-Dole Act does not relax statutory requirements of patentability

- Reach throughs outside of biotech also have written description of product required, see *Lizardtech*

- Written description requirement is separate and distinct from enablement
Carnegie Mellon, Lizardtech.

Definiteness, § 112, ¶ 2

- Distinctly indicated claims, indefinite claims give no clear notice of scope of patentee's property rights. Inform public of limits of monopoly. Metes and bounds.

Orthokinetics v. Safety Travel Chairs (Fed Cir 1986, p328): *concise/exact not required of claims*
TEST: would those skilled in the art understand what is claimed when the claim is read in light of the specification?

All cars are different, claim didn't have to describe how apparatus would fit in every car.

Standard Oil v. American Cyanamid (EDLa 1984, p332): *vagueness in claim will invalidate*
What "partially soluble" meant, no standard definition. More specificity was possible.

- Look to specification to fill in meaning. In *Orthokinetics*, spec gave more information, but in *Standard Oil*, it left you more confused. Can't say one thing in the claim and seek something broader in the specification.
- Functional language in claims: initially prohibited, post-1952, use of means + function language allowed. Violation of ends and means required to find infringement.

Best Mode, § 112, ¶ 1

Randomex Inc. v. Scopus Corp. (Fed Cir 1988, p340): *no requirement to point out preferred embodiment, but disclosure must include a best mode. Not concealing if one skilled in the art could determine best mode from the specification.*

Portable cleaner for magnetic disks, needs cleaning solution that was not claimed in the patent. Not an attempt to conceal the cleaning formula, just to describe the type of formula needed ("a cleaner such as...")

Dissent, this is advertising gimmick for the cleaner, get them to purchase, this requires public to hunt for best mode.

Chemcast v. Arco (Fed Cir 1990, p328): *two part test*

1. *inventor knew of mode for best practice*
2. *compare what inventor knew to the disclosure, is it adequate to enable one skilled in the art to practice the best mode, or has inventor concealed the best mode?*

- Two part test
 1. Subjective: does applicant reveal what he considers the best way to practice invention at time of application? (look for evidence of activities undertaken at the time)
 2. Objective: does the patent enable someone to practice (look to see if undue experimentation necessary)
- Material added at continuation-in-part must have updated best mode

- TRIPs: doesn't require best mode, so if first to file is foreign, then don't get benefit of earlier date unless it includes a best mode.
- Problems: inventors might disagree as to best mode, don't want to reveal trade secret, bury best mode in list of modes that are terrible.
 - Dreyfuss says, this is a dumb requirement. Finding subjective knowledge of inventor is costly, making litigation even more expensive.

INVENTORSHIP, §§ 111, 116, 256, 261, 262

- True inventor gets name on patent.
- Must be clearly defined in inventor's mind that only ordinary skill is necessary to reduce to practice without extensive research or experimentation. Ex, cat lady doesn't get inventorship for HIV research for suggesting her cats have AIDS.

Burroughs Wellcome v. Barr Laboratories (Fed Cir 1994, p1142):

HIV antiviral drugs. NIH researches who studied application of AZT in patients want to be inventors: if co-inventors, then patentees could license on their own terms.

Test: completion of the mental part of invention: conception is complete only when idea is so clearly defined in inventor's mind that only ordinary skill would be necessary to reduce the invention to practice without extensive research or experimentation. Downstream work to make sure it actually works does not make you an inventor. Here, NIH just verified operability of what application disclosed.

- §116: correct nonjoinder or misjoinder during prosecution (as long as there is no deceptive intent)
 - Deceptive intent to leave off an inventor: inventors can license independently, keeping a best mode secret (deal breaker in non-joinder situation)
 - Can amend if the person who was harmed by the deceptive intent raises the joinder problem
- §256: after issuance, either PTO or court can amend

Stark v. Advanced Magnetics (Fed Cir 1997, p1149): judicial correction of inventorship

Correction requires inquiry into the intent of the nonjoined inventor only

- Joint inventorship: co-inventors need not work together physically or temporally, but they must not be ignorant of each other's work. *Kimberly-Clark v. Procter & Gamble*. Have to understand that you are collaborating.
- §262: Joint ownership: co-inventors each have property right in entire patent, regardless of their relative contributions to each claim. Any inventor may license the invention without the consent of the others.

Eli Lilly v. Aradigm (Fed Cir 1997, p1158): adding joint inventors

Proof of contribution to conception can't rely on timing of conception, must show an element of joint behavior.

Ethicon v. United States Surgical Corp. (Fed Cir 1998, p1163):

Surgical trocars: co-inventor granted a retroactive license, thus no infringement.

Inventorship is matter of law, review without deference. Co-inventors need not contribute to every claim on the patent, but need to show collaboration: clear and convincing evidence: contemporaneous documents, circumstantial evidence.

All inventors have to join as plaintiffs in an infringement suit; but grant of license by one can't deprive the other of the right to sue for past infringement.

NOVELTY, § 102(a), (e)

- Originality, §102(a)
- Criteria for novelty, §102(a),(e), and first sentence of (g)(2)
- Statutory bars, delay in filing, §102(b), (c), (d)
- Set priorities between original inventors, §102(g)

Prior Art References

- Prior art reference must disclose every element of the claimed invention in order to prove invalidity for lack of novelty
- Critical date for novelty purposes is date of invention.
- Anticipation analysis is similar to infringement analysis: elements in claims/description.

In re Robertson (Fed Cir 1999, p361): *each and every element of claim must be present to anticipate*
Reference may still anticipate if the element is inherent and not expressly set forth.

Nothing requires patentee to list what the elements are (person of ordinary skill in the art would know).

In re Schreiber (Fed Cir 1997): *anticipatory reference can be in any field, not restricted to same use*
Tapered top of oil can, anticipated conical top of popcorn dispenser

- Accidental or unknown anticipation.

In re Seaborg (CCPA 1964, p370): *Accidental Anticipation*

New element, isotope must be produced in same manner as a patented (Fermi) reactor.

Lack of novelty if a comparable process for making the product already exists.

If teaching of reference will sometimes succeed and sometimes fail, then it does not anticipate.

Here, amount produced by reference's method is too small.

NOTE: nuclear patents: government can keep any patent application confidential forever, use this power frequently in nuclear context.

Tilghman v. Proctor (1880): *if anticipated and not understood in a previous invention, then reference does NOT defeat novelty (here, differential solubility of fats)*

Edison v. Novelty Incandescent Lamp (3d Cir 1909): *accidental occurrence doesn't matter if not understood or appreciated.*

- There is anticipation if the natural consequence is the same as the consequence of the invention (can't patent nutrient rich broccoli sprouts b/c they're healthy anyway).
- Economics of search: Library versus Lab. Don't waste time in lab where there is anticipation in the library.
- Enablement standard for anticipation:
 - Anticipation must have enabling disclosure (but not necessarily actual creation).
 - Reference must enable, but vague and general references do not count (incomplete symmetry between anticipation and enablement).
- Can't get patent on old products merely because a new use is discovered.
 - Eg, public policy in India, with lots of generic pharma: incentive to prevent evergreen patents.

Seymour v. Osborne (US 1870): vague and general representation insufficient...patentee can't take back into private domain something that was public.

Schering Corp. v. Geneva Pharma (Fed Cir 2003, p374):

First patent disclosed but did not claim second patent: attempt to extend patent term.

Distinguish from Seaborg, because amounts are readily detectable. Anticipation requires an enabling disclosure, not actual creation.

In re Hafner (CCPA 1969, p381): don't need recognition of a use to defeat patent

Here, prior art was a previous patent (in Germany, inventor's own) that did not disclose use.

You can establish date of invention by reference to foreign patent application, but only if it satisfies disclosure requirements of §112. But, anticipatory references do not require use. Hafner loses.

Titanium Metal v. Banner (p383): entire genus can be anticipated by one species

One data point in reference is within the range of the patent application. Sufficient to anticipate.

Incentive problem: no incentive to research other species that might work better.

Known/used by others in this country

- Lost arts don't anticipate.
- "Others" means public, not just one other.
- Operability: must actually work, can't anticipate with SciFi
- Not foreign: evidentiary challenge of foreign discovery
- Nonsecret = public. Known or used if a worker of ordinary skill in the art exercising reasonable diligence would have discovered reference and been able to construct the invention.

National Tractor Pullers Ass'n v. Watkins (ND Ill 1980, p394): must be public knowledge

Drawings on mom's tablecloth did not constitute prior art – destroyed before made publicly available.

Rosaire v. Baroid Sales Division (5th Cir 1955, p398): Lack of publication does not matter.

Method used in Texas, without any concealment, geographic distance immaterial.

WLGore v. Garlock (p579): nonsecret use for commercial purposes constitutes prior art

Picard v. United Aircraft: abandoned experiments can constitute prior art if they are publicly known

Coffin: reversible latch, seen by locksmiths in factory, counts as reference.

Reasonable doubts resolved against party asserting invalidity

Printed publications

- Where professional norms tend to promote confidentiality, courts are reluctant to find something to be a printed publication.
- Government grant proposals count if available via FOIA
- Registration in Statutory Invention Registration: no right to exclude, but gives defensive rights associated with patents
 - PTO will publish prior to examination
 - Now, website posts easier: indexed, searchable
- Effective date is date of publication, not submission or peer review
- Law is fairly aggressive at allowing relatively obscure material to count: encourage library research.

Jockmus v. Leviton (2d Cir 1928, p403): foreign printed publications count

French catalog, small distribution, still counted.

In re Hall: single copy in library is sufficient IF properly indexed

In re Cronyn: insufficient if NOT indexed

In re Bayer: master's thesis not a publication if not indexed by the critical date, customary research aid

In re Schlitter: manuscript sent to publication before date of application

Northern Telecom v. Datapoint: reports in private corporate library are not printed publications

In re Klopfenstein (Fed Cir 2004, p405): presentation at scientific conference (not printed)

Considered prior art b/c viewers were the same set of people who would have reliance interest in getting to use what had been put into public domain.

Conference setting as proxy for other things considered for prior art.

Patents as Prior Art

- Foreign patents
 - Claims only: likely to be overruled, especially since foreign disclosure is also a foreign publication. Fed Cir has yet to rule.

Reeves v. US Laminating (EDNY 1966, p413): Only what's in the claims, not the disclosure

Bendix v. Balax: further qualifies: can look to foreign disclosure to understand its claims, but not add to claim's content

- Domestic patents
 - Disclosures made in earlier-filed US applications
 - Effective date = application date (even though not published until issuance). **Secret art.**

Alexander Milburn v. David-Bournonville (1926, p421): delays of PTO in publishing patent is a bar: applicant made the description public, even if the claims were not the same. Codified in 1952, 102(e).

- Continuations: §§120-121, effective date is the application date of parent IF the parent application disclosed what is claimed in the continuation.
- Provisional applications: §111(b), file provisional in US to get application date. Effective date is provisional application date.

Priority, § 102(g)

- Anticipation by 102(g) where invention was made by another prior inventor who has not abandoned, suppressed, or concealed the invention.
- Challenger of validity must establish prior invention by C&C evidence, burden shifts to patentee to show abandonment, suppression, or concealment, and challenger can rebut. *Apotex*.

Dow Chemical v. Astro-Valcour (Fed Cir 2001, p468): state of mind of prior inventor irrelevant. Inventor doesn't have to know, as long as didn't abandon or conceal invention. Reward for scientific knowledge, not knowledge of patent law (i.e., if you don't realize it's patentable).

- Concealment
 - Invent but never promote: no public benefit, not prior art
 - *Dunlop v. Ram Golf*, golf ball case: inventor distributed, so prior art.
 - Public use forecloses finding of suppression:
 - Public benefit of invention
 - Secret will likely be discovered before patent would have expired had it been patented
 - Inventor has no duty to apply for patent: can't prevent others from using, but can't be considered infringer
- Date of invention, PTO Rule 131
 - Affidavit or declaration of prior invention: party may swear to establish date of invention as prior to the effective date of the prior art reference used to reject it.
 - Must establish reduction to practice prior to effective date of reference, or conception coupled with due diligence.
 - Need original records, drawings, &c (or photocopies thereof)
 - Can't be used where anticipatory reference is a patent or application (must declare interference).
 - Can't be used if patent was rejected for statutory bar (those don't depend on date of invention)
- Does 102(g) swallow 102(a)?
 - 102(a) just has to exist, other inventor doesn't need to recognize
 - 102(g): must be reduced to practice
 - (e): disclosure as prior art, (g): compare 2 patents and look only at the claims.

Secret Prior Art

- Protect trade secret holders to have benefit of their own use even if another's patent issues.

Sears v. Stiffle: TM infringement case. State trade secrecy law is incompatible with IP law, which is fed.

Kewanee Oil Co. v. Bicron Corp. (1974, handout): trade secret law by states, (concur: despite disincentives to enter patent system). NO PRESSURE to enter patent system by making it the exclusive means of protection.

Disclosure is the quid pro quo of the right to exclude, despite availability of other protections.

Click-wrap agreements allow trade secret exploitation w/o risking public use.

Statutory Bars

- Encourage dissemination of information, §102(b)
 - Punish inventors who wait too long
 - Protect reliability interest of those who have used in public domain
- Prior art by inventor can create statutory bar, if patented or published before the critical date
- One year grace period: no patent if in public use or on sale before one year prior to application date (old rule was 2 years)
 - Gives inventor time to learn more about invention
 - Better product result, better disclosure, time to get attorney
 - Time to workshop (especially in university setting)
- §102(e): date of invention, not date of application...102(e) applies only to novelty analysis

Egbert v. Lippmann (1881, p522): publicly used more than 2 years prior to application
Corset strings case, used by inventor's girlfriend

Moleculon Research v. CBS (Fed Cir 1986, p528): 102(b) bar if relinquish control of invention
Rubik's cube: didn't sustain burden of showing that inventor had given up control of invention, had shown colleagues but hadn't given it over to another person for unrestricted use.
Sale of potential patent rights is not a sale for §102(b).
Before rubik's cube, there were 2D puzzles, ∂ built prototype for 3D: 2D not encompassing ever element
Best understood as experimentation

Beachcombers v. WildeWood: Unlike Moleculon, relinquish control, showed to 30 people.

- Can't use in years between invention and application, and then get 20 years exclusive rights.
- Can't enjoy secret use for commercial gain for more than a year

Metallizing Engineering v. Kenyon (2d Cir 1946, L.Hand, p533):

Prior use by patentee, see Pennock v. Dialogue, in years between invention and application

MacBeth Evans v. GE: kept secret for 10 years, sold w/o disclosing process

Peerless Roll Leaf v. Griffin: where machine is kept secret but output is sold, that is still public use

- On-sale bar: reduction to practice is not necessary
 - Subject to commercial offer for sale

- Ready for patenting: proof of reduction to practice before critical date, or proof that inventor could enable (drawings, descriptions)
- §102(b) triggered by *either* public use or sale, whichever comes first
 - Can't claim that invention DID exist for priority purposes, but does NOT exist for statutory bar analysis
 - Might be skepticism that it will work for intended purposes, but that is very unlikely
 - Marketing does not count as on sale, provided there is no commercial offer of sale under standard principles of contract law, *Gemmy Indus. v. Chrisha Creations*
- *Pfaff* test: 1) on sale, and 2) ready for patenting
 - *Atari*, on sale = reduction to practice, working embodiment
 - Ready for patenting: something knew, and inventor appreciates

Scenarios:

1. A—conceive of springless widget
B—offer to sell s.w. ON SALE (even if sale isn't consummated, even if no details, as purchaser expects performance)
C—deliver
2. A—conceive
B—general offer to sell widgets
C—deliver s.w. ON SALE (can't show intent to use s.w. to complete the offer)
3. A—general offer
B—conceive s.w.
C—deliver s.w. ON SALE
4. A—specific offer to sell s.w.
B—invent s.w. (cannot be deemed to be on sale before B, might not be til C)
C—deliver s.w.

Pfaff v. Wells Electronics (1998, p536): no patent on invention on sale more than a year prior to application, even though had not reduce to practice...had not made prototype before offering to sell in commercial quantities

Mahuraz v. Impra: purchase order accepted before critical date: statutory bar applies even though production problems prevented inventor from filling order until after critical date

UMC Electronics: on sale requires looking at totality of circumstances, including commercialization

- Public view is not necessary, public/private doesn't turn on how many people are using it

Hall v. MacNeale: burglar proof safe, hidden feature in the safe, still counts as use

Abbott Laboratories v. Geneva Pharma (Fed Cir 1999, p551):

Third party sells drug over a year before filing date. Doesn't matter if parties don't know what they had invented. (Not a priority debate where conception date is important.)

If the product on sale contains each of the limitations of the claims, then the invention is On Sale, whether or not the parties to the transaction recognize that the product possesses the claimed characteristics.

Don't need recognition of new invention for §102(b) analysis

Experimentation & Third Party Art, 102(b), § 102(c), (d)

- Experimental use exception
 - Bonafide efforts to bring invention to perfection, or to ascertain whether it will serve intended purpose
 - Can't occur after reduction to practice, but can involve sale
 - Experimental use cannot be done for marketing purposes (i.e., try our carpet cleaner!), this is commercial exploitation

City of Elizabeth v. American Nicholson Pavement (1877, p555): use was experimental
Pavement constructed in city to test use, durability, by inventor at his expense.

Lough v. Brunswick Corp. (Fed Cir 1996, p562): installation for free for friends didn't fit experiment
Experiment exception requires inventor's control, and evidence of experimentation. Significant that there was no pledge of confidentiality. Little home inventor loses out.

- Third party statutory bar activity
 - Can't rely on public availability of information disclosed with explicit notices of confidentiality
 - 102(b) is not inventor specific

Baxter International v. Cobe Labs (Fed Cir 1996, p570): invalidate if use is by 3rd party
In use at NIH by 3rd party: not experimental, in public use. Inventor had lack of control over this use. Third party experiment doesn't get experimental use defense, as experiment is of no use to inventor.

WLGore v. Garlock (Fed Cir 1983, p579): 3rd party developed similar process to create goretex
Confidentiality agreement for purchaser: sold product, but process kept secret.

Winwood Trust v. Flowertree: distinguish Baxter. Labs are not necessarily public, don't steal from colleagues research.

Lockwood v. American Airlines: prior art status of airline reservation system in use, public use even though some critical aspects were not available to the public, but public is benefiting from use

- Abandonment, §102(c)
 - Abandoned within a year of application if the inventor expressly and publicly renounces intention to apply for patent, under circumstances such that others would reasonably be led to rely upon that renunciation
 - Secret commercial exploitation less than a year before filing
 - Abandonment w/o publication, public use, or sale
 - No attempt to exploit, no public use under 102(b)
 - Abandonment by implication in a lapsed application or unclaimed material in a patent application
 - If application is published, then 102(b) kicks in after a year
 - Disclosures in patent do not bar claims in subsequent patent unless published more than a year prior
 - Abandonment in 102(g) is abandoning the invention itself, in 102(c), it's abandoning the intention to get patent.

Macbeth-Evans Glass Co. v. GE (6th Cir 1917, p593): Effort to preserve secret is inconsistent with abandonment. Can't get both benefit of exclusivity and patent rights, when one encounters difficulty enforcing a secret, can't use patent system.

Mendenhall: no abandonment if file within a year of the activity giving rise to the alleged abandonment.

- Prior foreign filing, §102(d)
 - Clock starts ticking upon issuance of foreign patent or publication of foreign application
 - Foreign patent must issue before patent in US is filed in order to prevent patent...incentive to file early. Does NOT elide patents and printed publications, only patents.

In re Katawala (Fed Cir 1993, p603): must file in US w/in a year of applying for patent elsewhere Claims directed to the same invention (filed CIP with broader claims, couldn't get earlier filing date, so the foreign claims filed in between parent and CIP.

Bayer AF v. Barr Labs: filins is US filing, not priority date achieved by filing first in another country within a year before

Derivation, § 102(f)

- Elements:
 - Evidence of conception by another
 - Communication to the inventor (or evidence from which it can be inferred)
 - Communication is complete enough to allow one skilled in the art to complete the invention
- Global inquiry, overseas actions may be used to establish derivation
- Fed Cir requires corroboration of witness testimony to invalidate
 - If patent has not yet issued, then still need testimony but no presumption of validity (preponderance standard)
- Assistance to inventor must "embrace the plan of the improvement...would have enabled an ordinary mechanic to construct," *Agawam*.
 - Suggestions not encompassing the entire invention may still be used as prior art for obviousness under §103
- Shop rule may allow employer to claim employee's invention.
 - Misjoinder, however, if assign employer as co-inventor
 - Shop rules only apply if invention is within scope of employment

Campbell v. Spectrum Automation (6th Cir 1975, p431): can't get patent if not true inventor ∂ was in charge of preparing manufacturing information, and conceived the product while working for π (flexible fed track)... π did not instruct ∂ on how to build, came up with himself (father's belt buckle as evidence)

Priority, Timing issues: §102(g) and interferences

- 102(g)(1) requires inventors to overcome non-suppressed inventions in all WTO countries
- 102(g)(2) requires all inventor to overcome non-suppressed inventions made in US by any other inventor
- Consider conception and reduction to practice, and reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.
 - If the second to reduce to practice was first to conceive, he is still the inventor if he exercised diligence from a time prior to the first conception to his own reduction to practice (can't be first to conceive but then slack off)
 - Filing a valid claim constitutes reduction to practice
 - Reduction to practice that is suppressed is disregarded
- Reduction to practice = embodiment, appreciation of intended purpose
 - All elements, recognition that it will work, commercially viable
- Conception = definite and permanent idea of complete and operative invention
 - Complete blueprint not required, but can't require more extensive research/experimentation
- Diligence = critical period, from before another's conception to your own reduction to practice
 - Behavior of second to conceive is irrelevant, not a diligence contest
 - Where there is no evidence for conception date, it is folded into date of reduction to practice
 - Excuses for inactivity:
 - Small gaps do not preclude
 - Large gaps excused by poverty, illness, employment, vacations
 - Poverty is no excuse if you simply can't afford commercial benefits, *Sebold*.
 - Commercialization attempts, doubts of feasibility, work on other inventions, and seeking funding grants do NOT excuse inactivity
 - Time scale is more forgiving for delay for suppression than it is for diligence.
 - Resumed activities can be evidence of priority, *Paulik*. But hiatus must fall *before* the second inventor enters the field.
 - Patent application, but not other written documents, constitutes reduction to practice
 - Abandoned application can't be used to establish constructive reduction to practice (but can be evidence of conception if refiled)
 - Provisional patent application, easier to achieve constructive reduction to practice.

Brown v. Barbacid (Fed Cir 2002, p441): junior party has to show priority by preponderance of evidence. First to reduce to practice can be authenticated by experimental lab notebooks. Inventor's own documentation can't single-handedly corroborate testimony (unwitnessed docs).

Peeler v. Miller (CCPA 1976, p456): reduction to practice, but inference of suppression created by excessive delay is not justified.

Gillman v. Stern: completed invention is abandoned if no steps are taken to make it publicly known within a reasonable time.

In re Moore (Fed Cir 1987, p483): can't file chemical compound w/o utility, but prior art can anticipate without utility. Win if you have the compound but not utility before the reference, if the reference also does not have utility.

In order to overcome reference that disclosed chemical compound but no utility: only have to show that you were first to make the compound

- Same rule for partial invention, defeats reference if reference discloses only that part.

Griffith v. Kanamaru (Fed Cir 1987, handout): no priority if no reasonable diligence. Professor was waiting to work with an incoming graduate student, for funding: no excuse

NONOBVIOUSNESS, § 103

- No patent if subject matter and prior art are such that it would have been obvious at the time of invention to a person having ordinary skill in the art
- Must show more than ordinary ingenuity and skill
- Secondary considerations:
 - commercial success
 - long felt but unresolved necessity
 - failure of others
 - acquiescence: others in the field are taking licenses rather than challenging validity

Hotchkiss v. Greenwood (1851, p617): change in material, but not form, is obvious (doorknobs)

Graham v. John Deere (1966, p631): compare state of the art with patent application

Shank plows, those with ordinary skill would see benefit

US v. Adams (1966, p653): companion to Graham. Wholly unexpected results = nonobvious.

New battery offered to Navy, rejected, then Navy used in WWII. Implied contract, just compensation under 28 U.S.C. 1498.

Atlantic Works v. Brady (p627): trial and error does not count as nonobvious, "flash of creative genius" (later SCOTUS states that "flash of creative genius" not meant to lower standard of invention)

Sears v. Roberts (7th Cir 1983, Posner): Sears employees invents new wrench, sold to Sears, gets bad deal. Sues Sears for fraud, patent is reassigned. Sears sues for invalidity/obviousness: Posner uses but-for test: things that would only have been invented but for the promise of a patent.

Great A&P Tea: united old elements with no change in their respective functions is obvious

Rubber Tip Pencil v. Howard (1874, p627): pencil and eraser already exist, putting two together is obvious

- Combination patents possible when combination behaves in a way that ordinarily would not be imaginable (*US v. Adams*).
 - Ex., when prior art explodes.
 - When prior art teaches away from this combination.
- Fed Cir first tries “obvious to try” test
 - Most mechanical combinations are deemed obvious.
 - Risk of hindsight bias, “I could do that” preferences certain types of patents.
- TSM test. Fed Cir, 1982: reference to “combination” patents is meaningless.
 - Teaching, Suggestion, or Motivation, *Stratoflex v. Aeroquip* (Fed Cir 1983, p663).

In Re Dembiczak (Fed Cir 1999, p683): TSM test applied to jackolantern trashbags

Patentable, desirability of combination, successful changes

In re F Su Lee: court rejects notion that commonsense shows obviousness (not documented in prior art)

- Too many patents granted (50%), too much overlap
- Issue of regulatory change: cold medicine + ibuprofen, when ibuprofen goes OTC...is it obvious to substitute ibuprofen for acetaminophen?
 - Fed Cir was not looking at external circumstances
- SCOTUS then takes *KSR*, overruling TSM test (took a mechanical case)
 - Synergistic result → patentable, *Sakraid* (cow manure, obvious if yields no more than what one would expect)
 - People with ordinary skill can fill in some gaps
 - Removes from jury, is amenable to summary judgement

KSR Int'l Co. v. Teleflex (2007, p665): discontent with Fed Cir: SCOTUS applies broad inquiry and secondary features.

Electronic sensor + automatic automobile pedal. Fed Cir found nonobvious under TSM, reversed.

Subject matter may be proved obvious by nothing that, at the time of invention, there was a known problem with an obvious solution that is covered by the patent's claims. Ex, electronics in cars.

**Person of ordinary skill is also person of ordinary creativity: not an automaton.*

Secondary considerations:

If market pressure exists, and there are finite predictable solutions, then it is obvious to try. Anticipated success is likely the product of ordinary skill and common sense, not innovation.

- Doctrinal themes
 - Predictability of the art, *Eisai v. Dr. Reddy's Labs* (Fed Cir 2008)
 - Starting point from which artisan might pursue solutions...infer obvious where there is a finite number of alternatives
 - Less impact on pharma industry, fewer identified, predictable solutions.
 - Updating is obvious, *Muniauction v. Thomson* (Fed Cir 2008)
 - Combination of existing software...”established functions”
 - Applying computer technology to old ideas is obvious
 - Secondary considerations

- Growing in importance. *In re Sullivan* (Fed Cir 2007) only case to reverse holding of obviousness, for PTO's failure to consider expert testimony on secondary evidence
- Once PTO makes prima facie case, burden shifts to applicant to show nonobviousness
- Other factors: high variance in results, unpredictability, funds spent to develop...indicial of nonobviousness.
- Secondary factors...

Leapfrog v. Fisher-Price (Fed Cir 2007): simplicity of substitution of computer chip for electrical connection is obvious. Cf. Amazon one-click.

Arkie Lures v. Gene Larew Tackle (Fed Cir 1997, p685): Secondary considerations, Unexpected results, skepticism within trade, other combinations exploded, complex combination

Hybridtech v. Monoclonal Antibodies (Fed Cir 1996, p703): patent is valid, secondary factors prior art: sandwich assays for new purpose.

Objective evidence of commercial success, other's failure, longfelt need, and unexpected results...considered in the obviousness analysis (not just icing on the cake).

Is market share due to invention's nonobviousness, or b/c of business acumen? Here, the former.

- Factors to determine skill in the art, *Environmental Designs*
 - Education level
 - Type of problems encountered in the art
 - Prior art solutions to the problem
 - Rapidity with which innovations are made
 - Sophistication of technology
 - Education level of active workers in the field
- There must be a nexus between the secondary factors and the invention itself (i.e., not just the reputation of the inventor). *Alco Standard v. TVA*.
- Obviousness is a matter of law. Clearly erroneous standard for parts of obviousness that are factual in nature.

Scope and content of prior art

- Early draft of §103 instructed to look to §102 to define prior art, but this was removed from the final draft. Courts left to determine prior art for obviousness.
 - Law assumes knowledge of *pertinent* prior art, not all prior art.
 - Standard is objective, knowledge of hypothetical person skilled in the art, not actual person's subjective knowledge.

In re Winslow (CCPA 1966, p724): modifying prior art = obvious

Stacked paper bags, air jet to open: merely applied existing prior art to an existing patent.

Hazeltine Research v. Brenner (1965, p731): Pending patents count as 103 prior art

Delays of PTO should not lower the standard of patentability.

- Amended §103(c) avoids problem of in house prior art: if only prior art under 102(e), (f), or (g), then no preclusion of patent where subject matter and invention are owned by same person or entity.
 - Can almost never anticipate yourself, except *Hafner*, where you publish after conception before reduction to practice, then you can't swear behind your publication.
 - But, under other circumstances, (not owned by the same person), then this IS prior art.
 - 103 analysis is not conflated with 102(f): first analyze derivation under 102(f), then 103 analysis that may include 102(f) prior art.

In re Bass (CCPA 1973, p734): earlier invention dates count for prior art under 102(g): 102(g) prior art is prior art for 103 purposes.

Two prior inventions by members of the same inventive team indicate prior art

Kimberly Clark v. Johnson & Johnson: 102(g), no need to show that applicant knew about prior art. Secret art can render invention obvious. Here, one strip anticipates two strip sanitary napkin. No personal knowledge required.

Oddzon Products v. Just Toys (Fed Cir 1997, p745): 102(f) prior art counts for 103.

Vortex football...confidential designs disclosed to inventor of O's product constituted prior art.

102(f) subject matter is not prior art under limited circumstances that prior art is owned by same person...under all other circumstances, it is prior art.

- 102(b) references can be prior art for 103: may be generated *after* the date of invention.
 - Timing: under 103, obviousness at time of invention, but 102(b) looks to one year before filing
- Patent race: prevent leading competitor from winning
 - Assumptions:
 - Lagging firm can decrease chances of a patent
 - Defeating the patent has value to lagging firm
 - Rivals are unable to bargain
 - Idea here is to destroy obviousness, because if you could destroy novelty, you could get your own patent.
 - Leading firm gets one year after lagging firm's publication to get its patent filed before the publication destroys obviousness
 - Lagging firms' disclosure starts their own one year clock ticking, if the disclosure is enabling

In re Foster (CCPA 1965, p751): is subject matter of claims obvious in light of 102(b) reference, one year time bar. Don't grant patent if invention became obvious to public more than a year before filing.

- 103: references from nonanalogous art can be removed from consideration (not true for 102).
 - Question: what about Internet, making info more searchable across fields?

In re Clay (Fed Cir 1992, p765): references must be candidates for consideration

Classification group that the patent is in, is this the kind of info that the inventor would look at to solve this problem. Reference is reasonably pertinent, even if from another field, if it would logically comment itself to the inventor's attention. Person reasonably skilled in the art.

- 103(c)(1): look at inventorship through lens of inventor, not company, but firm's own R&D can't count against it for 102(f)
- 102(c)(2): university/industry relationships. Disallow the problem in joint research agreements.
- 103(b): short answer, ignore it. Possibly relevant...
 - apply for patent on product at the same time apply for patent on process, then have patent on both.
 - Can't get around by going to a country where process isn't patented and importing, §271(g) makes this an infringement.
- Ex, think about Rubik's Cube case under 103 analysis...not novelty problem b/c 2D puzzles doesn't anticipate 3D puzzle, but does it make it obvious?

INTERNATIONAL ISSUES

- Foreign activities can establish priority date, but not to defeat US patents with prior art, generally
 - TRIPs: no discrimination as to place of invention, but not for prior art
- §119: prevents interlopers from stealing foreign patents and applying in US
 - foreign filing date can be filing date for interference purposes, but no patent if invention has been patented or published in foreign country more than a year prior to filing of US application.
 - 119 gets you a year's grace period (but doesn't affect 102(b) references, one year before US filing date)

Westinghouse Machine v. GE (2d Cir 1913, p496): reduce to practice abroad, written description sent to US. Knowledge in Italy could NOT defeat patent for novelty in US. Info must be publicly known in US in order to defeat, sending info back to US with one person was insufficient.

- Now, with TRIPs, *Westinghouse* would go the other way because Italy is in WTO: activity in WTO countries can count for novelty analysis. §104
 - Treatment no less favorable than afforded own nationals
 - Patents available for any invention without discrimination as to place of invention (can interfere with US patent prosecution)
- Foreign countries don't have grace period between critical date and filing date: if you take advantage of US grace period, risk losing patentability in other countries

In re Hilmer (CCPA 1966, handout): A files Swiss, B files German, A files US, B files US. B can't win interference for obviousness... §119 only deals with right of priority and not status as prior art. Can foreign priority date of US patent be used as effective filing date when used as prior art? One year after domestic filing to file elsewhere (paris convention)

- Dept Commerce comments (handout): patentable subject matter, disclosure, written description: US is outlier. Trading partners are very unhappy with *Hilmer* results.

INFRINGEMENT

In re Bilski: demise of State Street.

Subject matter is threshold question. Would claim pre-empt all uses of fundamental principle?

Principle of nature is eligible subject matter if tied to particular machine, apparatus, or transforms to different state.

Did not alter the Machine or Transformation test to accommodate new technology. Business methods are subject to same legal requirements for patentability.

- Machine test isn't a good one, can still infringe if different machine

Claim Construction and Literal Infringement, §§ 251-252, 271(a)

- Irrelevant if had access to inventor's work, intent to infringe
 - Independent creation and state of mind are NOT defenses to infringement
- §271 leaves courts to determine the scope of the invention / patent rights
 - 19C, courts place weight on claims, not specifications
- Claim is primary, specification used to construe claims.

Merrill v. Yeomans (1877, p782): process, or product

Require clear claims and specification. Claim is of primary importance, since specification can contain old information to explain what is new. Claimed "manufacture," so this is process.

- Remedy for wrongly claimed patent is not in courts, but in PTO. Courts will not enlarge what the PTO granted.
 - §250 et seq provides for patentee to get correction of patent from PRO. 2 year limit.
- Recent patent should not abridge rights of parties who, prior to grant of patent, had started to make and use the invention (intervening rights)

Texas Digital Systems v. Telegenix (Fed Cir 2002): ordinary dictionary meaning of claim language
Meant to combat reading limitations from specification into the claims

Phillips v. AWH Corp. (Fed Cir 2005, p788): general purpose dictionaries in claims construction, plus publicly available sources to determine what it means to persons in the art, use intrinsic and extrinsic evidence. Had relied too heavily on extrinsic evidence in *Telegenix*.

*Internal baffles: broad and narrow (acute angle) claims, so broad claim includes right angles
 Inventor's lexicography prevails.*

- Canons of Claim Interpretation
 - Narrow construction, chose plausible option that preserves validity if last resort
 - Ordinary v. contextual meaning, context trumps. *Nystrom v. TREX* (Fed Cir 2005), board means wood in lumber context.
 - Lexicographer, intent of patentee. *Jack Guttman v. Kopykake* (Fed Cir 2002), photocopier can be scanner + printer...interpret so as to include new technological developments that do the same thing.
 - Disclaimers: specification may limit otherwise broad claim language
 - Context from other claims in the patent, anti-redundancy
- Extrinsic evidence; prosecution history “file wrapper” ...back and forth between patentee and examiner
- *Gentry* elevated written description. Fed Cir focuses on 4 corners, not extrinsic evidence, if there is a plain meaning.
- Experts in the field can testify.

Unique Concepts v. Brown (Fed Cir 1991, p812): modular frame, right angle corner pieces does not include 45 degree side pieces joined together: let patentee be own lexicographer.
Discourage filing of narrow claims with intent to (judicially) broaden later.

- Equivalents and means + function claims: claim language of M+F is tied closely to specification, equivalents analysis needed for claim to cover anything not in the specification.
 - Means for performing specified function w/o providing specification, construed to cover corresponding structure and equivalents thereof.

Wright v. Paulhan (SCNY 1910, L.Hand, p821): M+F, rudder causes drag, don't need direct connection to have this function. Fair equivalent of human serving same function as ropes and pulleys. Importance of judge understanding the technology, don't have to be literalist to give adequate notice.

Procedural Aspects of Literal Infringement

- Fact/law issues: claims are questions of law, *Markman* decided the same time as *Daubert*, judges are keeping junk science out of court
 - Where mixed fact/law, dominant approach to review is *de novo*
- Don't defer to PTO, PTO construes broadly
- Claim construction done by court, give jury instructions as to their construal
- Most courts have Markman hearings to the judge pre-trial (this is not required by *Markman*)

Markmand v. Westview Instruments (1996, p829): claim construction is exclusive juris of court
Meaning of “inventory,” in tracking system, appealed error of jury's claim construction
No historical evidence of claim constructions as guaranteed jury issue, no 7A problem
Value of uniformity

- Construction affects what evidence parties present, so if reversed by appellate court, have to start over so parties can present proper evidence based on
- Fed Cir, en banc: defer to trial court's construction

Cybor Corp. v. FAS Tech. (Fed Cir 1998, p839): intended to solve appellate review problem
Court of Appeals should defer to trial court on claim construction

Phillips v. AWH (Fed Cir 2005, p845): Leaves Cybor undisturbed
Dissent: claim construction has become a black box.

Doctrine of Equivalents

- Enlargement of patent claims beyond what their literal meaning will bear

Winans v. Denmean (1854, p849): claims not limited to specific geometrical form
Other shapes also embrace the mode of operation and produce same new and useful result
Not fair to allow ∂ to escape infringement by slightly changing shape. No longer infringing when you go far enough away from the design that the basic principles no longer apply

- IP rights go beyond exact express terms or they are too easy to avoid
- Test: function, means, result: if they are all the same, then there is infringement. *Graver Tank*
 - If ordinary person could have made the substitution, then it's within the domain of the patent

Wilson Sporting Goods v. Jeffrey (Fed Cir): what's covered under doctrine of equivalents, then construct a hypothetical claim that would literally encompassed that invention. Then use that "claim" to see if it would have been allowed had it been what was submitted to the PTO

- Doctrine of equivalents becomes a second claim in most cases
- Test: does the accused product or process contain elements identical or equivalent to each claimed element of the patented invention? *Pennwalt v. Durand Wayland* (Fed Cir 10987, p866).
 - Intent of accused infringer irrelevant: SCOTUS rejects rule that independent invention is a defense to infringement under the Doctrine of Equivalents.

Warner-Jenkinson v. Hilton Davis (1997, p856): DoE in *Graver Tank*, predates 1952 Patent Act, though the act still contains M+F language.
In prosecution, they added a pH range to distinguish an earlier patent above the range, but not below. Reasons for amended claims in "file wrapper" are relevant...many reasons to request language change aren't because of patentability.
Infringement requires absence of substantial difference.

- Prosecution estoppel arises when the amendment is made to secure the patent and the amendment narrows the patent's scope.

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. (2002, p867): doctrine of equivalents necessary to overcome shortcomings of language, especially given rapidly changing technology. If modified patent on certain issues to get patentability, can't then later go back and claim them under doctrine of equivalents. Surrendered territory cannot be subject of equivalents doctrine. Look at amendments during prosecution: no DofE if amendment narrowed the scope to get patent. **Presumption in case of no explanation for amendment is NOT a complete bar: patentee must show that at the time of amendment, one skilled in the art could not have reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent

Johnson & Johnson v. R.E. Service (Fed Cir 2002): patentee can't use DofD to reach matters disclosed but not claimed in the patent.

Reverse Doctrine of Equivalents

- Not commonly used
- Discovery of better method/function of machine: does not detract from patent that later devices have rendered its operation more efficient
- Blocking patents and holdup: can give windfall to original inventor if improvement adds a disproportional amount of value

Westinghouse v. Boyden Power Brake (1898, p882): modification to air brake, but better than patented one. Second inventor truly contributes to public good. Claims of patent have ceased to represent the invention.

Scripps Clinic v. Genentech (Fed Cir 1991, p889): process is entirely different, though addresses same product. Broad product claims, but new inventor has better product.

Roche, can't sell drug during entire patent period b/c of clinical research
Ambrex, inoculation of chickens, easier method

DEFENSES

Experimental Use

- Based on common law exception
- Exception for philosophical experiments or to ascertain sufficiency of machine to produce desired effects, *Whittemore v. Cutter*.
- §271(e)(1): general immunity for acts that are solely for uses reasonably related to development of info to supply to regulatory board
- Without experimental use, improvement patents are impossible to reach

Roche v. Bolar Pharma (1984): doesn't protect experiments that are part of infringer's legitimate business, i.e., getting FDA approval for generic pharma (overturned by §271(e)).

Madey v. Duke (Fed Cir 2002, p896):

experiment is w/in legitimate business operations of infringer (here, university's business interests are scientific research). University can find more uses for a patented invention, but can be sued if they attempt to commercialize them

- Test turns on whether researcher has reasonable basis for believing the compound might work

Merck v. Integra (2005): commercial research, not experimental: exception does not apply if investigation isn't related to FDA hurdles

First Sale

Convertible top case: buying embodiment of invention is not a lifetime right to that invention: if it breaks, buy a new one, don't copy it yourself. Must show that there is no other non-infringing use.

Bard v. Advance Cardiovascular: because of §287(c), can't sue doctors for using surgical methods, but you can go after manufacturer. Must be designed for this use, and have no substantial noninfringing use. (here, DoFE can't capture art in public domain, so no other noninfringing use)

Adams v. Burke (1873, handout): sale by person with patent right confers right to continually use that product until no longer serviceable.

Mallinckrodt v. Medipart (Fed Cir 1992, handout): single use product, refurbishment and resale: sale constitutes exhaustion of patentee's control, under Adams, but anticompetitive efforts to condition sale are legitimate under contract law. Conditional sales are okay if they don't violate antitrust. Here, patentee would be liable for quality control, name recognition &c.

Territoriality, § 271(f), (g)

- Liability only on those who make/sell inventions within the US, or import
- Codified *Brown* in §272, extend rule to any vessel of any country that affords similar privileges to vessels of the US

Brown v. Duchesne (1856, p923): §271. Only violate US law if you make, use, or sell into the US. Docking on US for one night with "infringing" gaff on sailboat is no violation. (Too high a cost, against US interests)

Jazz Photo Corp. v. ITC (Fed Cir 2001, handout): Refurbishment of single use cameras permissible ITC can exclude goods at border in infringe US patent. No monetary damages. If no viable market in US, public interest favors importation, so some goods come in, patentee can sue users (soft compulsory license is result).

Jazz purchased from Fuji overseas, and imports. No international exhaustion.

- Paris, TRIPs do not cover international exhaustion.
- Assembling around patents:
 - *DeepSouth Packing*, machine sold outside US with instructions on how to assemble, no infringement, if patent only in US, even if produced but not assembled in US.
 - *Paper Converting*, infringement to assemble around if sales are in US. Assembly and sale w/in US, where patent applies, is infringement.
- §271(f) responds to *Deepsouth*, makes component exporters liable where they sell components and would have been liable if assembly happened in US

- Creates right of action for inducement for US supplier inducing combination abroad that would be infringement here.
- Induced infringement charge for supplying from US a component that is not part of normal commerce, and sell with intent to be combined abroad in a manner that would constitute infringement here.

Microsoft Corp. v. AT&T (2007, p926): Sold Windows abroad with AT&T patented compression system built in. No infringement, b/c software itself is produced abroad...sent abroad an idea w/o physical embodiment (problem with all software).

In copyright can sell for reproductions, but not on patented software copies.

Eli Lilly v. American Cyanamid (Fed Cir 1996): enduring patent by manufacturing outside the country: if product is not materially changed, then infringement. If altered, no infringement.

Biotechnology General v. Genentech (Fed Cir 1996): process patent affords patentee right to sue importer of the product, since it is disclosed in the patent.

- Outerspace: §105, if anything sold on space object under control of US, then sold in US
- Where product is data, no physicality, so can't apply §271(g)

NTP v. Research in Motion (Fed Cir 2005, handout): every element of product must be practice domestically. Here, one element was in Canada.

Place of use is the place where system as a whole is put into use.

Offers to sell: infringement of method claims, however are limited to use.

Where part is only to be used with patented invention where the combination occurs within the US, then infringement.

- Where one part is outside US because it has to be (i.e., triangulation system with offshore components), then there can still be infringement. In *NTP*, no requirement to have part of it in Canada.
- *NTP* is a holdup case: *NTP*'s contribution was small, but refused to license.

Double-Patenting

- Second patent to same patentee would extend patent term. One patent per invention.

Miller v. Eagle Manufacturing (1894, p1208): anticipated interference, so patentee divided patent. If same patent, then the latter should be void. Issue date of first patent determines priority. *Suffolk v. Hayden*. Here, first patent included the second, inseparably, so second patent is void.

Rule of thumb: if latter patent would infringe the first, then void.

Misuse (antitrust)

- Exception to the rule: most exclusivity regarding patents is legal. Private contracts can take a variety of forms
- If you stop the anticompetitive conduct, then patent becomes enforceable again.

- Tying agreements: conditioning a patent license on the purchase of an unpatented product, or refraining from buying from a competitor.
 - Tie-in: *Morton Salt*, per se misuse where require use of unpatented product
 - Tie-out: *National Lockwasher*, per se misuse where require not to use products of a competitor
- Demand curve might make it cheaper to buy patented product if patentee can engage in tying.
- Patentee made market for invention, appropriate that they can monitor use of the process. *Roman Hass*, no patent misuse w/o market power
 - Congress later amends statute, no misuse w/o antitrust violation, have to prove market power, no presumption
 - Patent and above-market price for tied product does not prove assumption of market power

In re Recombinant DNA (SD Ind 1994): 1998 Patent Misuse Act limits findings of misuse to situations in which patentee has market power. Act covers both tie-ins and tie-outs.

Illinois Tool Works v. Independent Ink (2006, p1243): §271(d)(5) eliminated market power presumption. Mere fact that tying product is patented does not support presumption of market power as a matter of antitrust law.

Had to buy ink from printer manufacturer.

Need showing of market power: this presumption stemmed from patent misuse doctrine, imported to antitrust law.

Congress excludes conduct of tying a product that is essential to patent and has no use other than as part of the patented product or method

- Refusal to license, *Continental Paper Bag* (1908), patent is not void if patentee is not practicing it. §271(d)(4): do not withhold infringement remedies b/c patentee has refused to license or use patent rights.
- Patent is right to exclude.

Other Defenses

- § 273(b): prior art for business method patents
- § 287(c): special provision for surgical methods (no relief from surgeon, only contributory infringement from manufacturers)
- 28 USC § 1498: sovereign immunity, right to just compensation only. Can't exclude government from practicing.
- 11th Amendment: applies in IP cases as in all others, citizens can't sue state in federal court for monetary damages (but can still sue for injunctive relief...sort of the opposite of §1498)

Inequitable Conduct

- Once shown, there is no way to fix patent, permanently unenforceable.
- PTO Rule 56: duty to disclose, candor & good faith. Encourage applicant to examine information related to pending claim, including foreign patent offices' search reports for prior art
 - Substantial likelihood that a reasonable examiner would have considered the false or omitted reference (merely cumulative/similar references are NOT material)
- Prima facie case of unpatentability when information compels conclusion under preponderance of evidence standard
- Courts police the integrity of the administrative process

JP Stevens v. Lex Tex (Fed Cir 1984, p1106): common law fraud:

Misrepresent material fact

Intent to deceive

Justifiable reliance on the misrepresentation

Injury resulting from this reliance

Inequitable conduct before the PTO, broader...includes omission as well

Threshold degree of materiality

- Sherman Act violations
 - Social value of preventing fraud is high
 - *Precision Instrument v. Automotive Manufacturing* (1945), PTO, not the applicant, should consider sufficiency of evidence.
 - *Hazel-Atlas Glass v. Hartford-Empire* (1944), condemn patent attorney for ghostwriting an article praising the invention
 - *Kingsland v. Dorsey* (1949), PTO has authority to disbar
- Intent is rarely direct evidence, must be inferred.
- Materiality is not limited to prior art.

Critikon v. Becton Dickinson Vascular Access (Fed Cir 1997, p1111):

Prior patent was material but not reported. Did not tell PTO at reissue hearings, adding claims, did not tell PTO that claims were already topic of litigation.

Balancing test: the more material the omission or misrepresentation, the lower the level of intent required to establish inequitable conduct, and vice versa.

- Where claims are separated in divisional patent, invalidity of parent application due to inequitable conduct won't affect the other claims, if it has no relation to the nondisclosed reference.
- Intent to deceive can be inferred from mischaracterization of a foreign language reference, even if provided to PTO.
- Similarities to Securities and 10b-5
- Sliding scale of intent: low level required if very material AND patentee doesn't offer exonerating evidence.

Kingsdown Medical Consultants v. Hollister (Fed Cir 1988, p1121): complex prosecution history

Attorney negligence is insufficient to infer intent, didn't catch mistake.

- Disclosure required where information either establishes a prima facie case of unpatentability under preponderance of the evidence standard, or refutes a position that the applicant takes.

Dayco v. Total Containment (Fed Cir 2003): culpability requires materiality, intent to mislead, in light of circumstances

Materiality is any information that a reasonable examiner would substantially likely consider important
Same attorney prosecuted both applications but didn't notify the examiner that one had been rejected by another examiner: no intent to deceive merely because didn't notify examiner.
Not enough to show materiality just because another examiner thought so.
Trial court must address INTENT to deceive.

Purdue Pharma v. Euroceltique (Fed Cir 2006): test: threshold materiality and intent, weigh to determine whether equities warrant a conclusion of inequitable conduct
Standard of review: clear error for M & I, abuse of discretion for inequitable conduct finding
Here, patentee implied nonexistence clinical results: materiality, but trial court gave this too much weight.

REMEDIES

Injunctive Relief, § 283

- Principles of equity, court's discretion. Hard line, property right.
- Preliminary injunctions. Fed Cir decides there should be parity with copyright, all IP. W/o preliminary relief, it's like a compulsory license.
 - US Code only has one compulsory license, Clean Air Act
- Where patentee's only source of income is licensing, then patentee is not irreparably harmed
 - Harm to patentee's licensees (no longer exclusive) does not count

Polaroid v. Kodak: injunction shut down Kodak's business, layoffs, customer inconvenience. Big public interest hit in the interest of property rights.

Amazon.com v. BarnesandNoble.com (Fed Cir 2001, p956): standard for preliminary relief:

Likely success on the merits
Irreparable harm
Balance of hardships
Favorable impact on public interest
Difficult to get monetary relief, no point in trial if preliminary injunction not granted

- Permanent injunction
 - Patent holdup: small contribution, leverage
 - Assume that some leverage is illegitimate
 - Trolls: no development, only licensing.

Vitamin Tech v. Wisconsin Alumni Research Foundation: didn't want to license because it would use patent to make margarine better, under influence of dairy lobby.
Court says there was public interest in health benefit, so no injunction available

eBay v. MercExchange (2006, p934): four factor test, (from where?)

irreparable injury

remedies at law (damages) are inadequate compensation

balance of hardships warrants equitable remedy

public interest not disserved

THOMAS: can grant injunctive relief to patentee even if he has unreasonably declined to use the patent

ROBERTS: can't protect right to exclude via money damages

KENNEDY: existence of a right doesn't dictate the remedy, should consider economic function of patent holder, is troll using injunction as a bargaining tool, patent holdup

Compare to copyright cases, Tasini and Stewart

z4 Technologies v. Microsoft (ED Tex 2006, p949): denied permanent injunction

only lost royalties from Microsoft, won't lose market share: monetary damages are adequate

public interest: Windows is on so many computers

do not presume irreparable harm

Paice v. Toyota: ordered ongoing royalty

Monetary Relief, §284

- Past infringement:
 - lost sales
 - had to lower price b/c of competition, so lost profits.
 - reasonable royalties.
- In other IP areas, what the ∂ gained is usually a proxy, but not in patent.
“adequate to compensate” in statute.
 - Counter cyclical: if economy is good, patentee can't meet full demand so can't get lost profits.
- Factors for Reasonable Royalties: *Georgia-Pacific*
 - Royalty received from other licenses
 - Rate paid by licensee for other comparable patents
 - Nature and scope of license (exclusive?)
 - Does patentee make other sales when he sells patented product?
 - Duration of patent and term of license
 - Established profitability of product made under the patent
 - Portion of profit customary in business or comparable business
 - Licensing structures in business
 - Portion of profit credited to invention, not nonpatented elements
 - Expert opinion
 - ?: hypothetical negotiation (treble damages can account for deterrence)
 - Commercial success, long felt need...*Graham*
 - Similar to secondary considerations for nonobviousness

Panduit v. Stahl Bros. (6th Cir 1978): patents must be given attributes of personal property

Reasonable royalty damages reversed, special master had taken damages evidence.

Test: demand for product

absence of noninfringing substitutes

manufacturing/marketing capacity

amount of profit would have made
can't treat as equivalent of ordinary royalty negotiations, as this makes it more tempting for potential infringers to infringe rather than negotiate royalties to begin with.
If had negotiated, would have taken potential changing circumstances into account, but now can't renegotiate. Can't consider the evolution of market demands in determining royalty damages.

- Fantasy contract, courts can look to events that took place *after* the hypothetical negotiation would have occurred.
- Infringer shouldn't be put into position it would be in had it negotiated instead of infringing, wrong incentives.
- Lost profits, compensate for foreseeable harm, limited to ex post compensation (not injunction). Liability rules.

Rite-Hite v. Kelley (Fed Cir 1995, p985): *Sells 2 kinds of devices, one that doesn't use patent But infringing device competes with the one that doesn't include the patent. But For test: lost profits on both devices. Any damages. No limitations for recovery.*

- Noninfringing substitutes
 - Prove acceptable/available to customers
 - Does not have to be identical in all respects

Grain Processing Corp v. American Maize-Products Co. (Fed Cir 1999, p1000): *denied lost profits, but for cause for lost sales is rebutted by presence of noninfringing substitute that is acceptable to customers. Burden shift to ∅ to show that but for test fails in face of noninfringing substitute.*

- Entire market rule: where non-patented device can't be sold separately w/o patented feature, can recover entire value of apparatus

Willful Infringement

- Open-ended: totality of circumstances.
- No requirement of bad faith, only willfulness.
- Avoid willfulness by attempting to design around.

Knorr-Bremse v. Dana Corp. (Fed Cir 2004, p1029): *no adverse inference from withholding of counsel's opinion. Or from failure to seek counsel. Can't presume that opinion of counsel would be unfavorable.*

In re Seagate (Fed Cir 2007, handout): *relied on counsel's letters to defend against willful infringement, to establish that it's done in good faith. Don't waive privilege of trial counsel if you disclose opinion counsel.*
Ex, if case is not close, duration of misconduct, behavior in litigation, motive to harm, concealment Objectively high likelihood that actions were infringement, reckless disregard for patent.

Underwater Devices: *require showing of objective recklessness. No affirmative duty of due care, no affirmative obligation to obtain opinion of counsel.*

- §285, attorney's fees for unusual circumstances...winds up reducing amount of damages, because once adequate compensation is paid, then have to pay lawyer.
 - Exceptional: bad litigation behavior, willfulness, inequitable conduct
- Prejudgment interest: between judgement and payment, interest always. If you get prejudgment, this can be huge (*GM v. DebEx*, p1001, 27 year trial)