AN IP ROADMAP—PROTECTING YOUR IP

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Topics

- Introduction to Intellectual Property
- Patents
  - The Rights Conferred by a Patent
  - What is a Patentable Invention?
    - Conception, Reduction to Practice, and Diligence
  - Collaboration Between Inventor and Attorney
  - Filing and Prosecuting the Patent Application
  - How to Read a Patent
- Building a Valuable Portfolio
IP is a Valuable Asset

- IP is often the single most valuable asset of a company
  - Percentage of intangible assets
    - 3M: 75.6%
    - Johnson & Johnson: 87.9%
    - Merck: 93.5%

- IP is increasingly important in today’s corporate transactions involving technology
  - IP protects R&D, which is expensive
  - The deals are bigger
  - IP is more critical to the deals
Introduction—Types of IP Rights

- Trademarks—protection of commercially used marks
- Copyrights—protection of expression
- Trade secrets and know how
- Patents
Trademarks

- Word, logo, design, device identifying the origin of a product or service
  - Not a name of a product, identifies source
    - Kleenex tissue, Xerox photocopier
    - Use as noun risks loss of trademark
      - aspirin, thermos
- Term indefinite so long as continued use
  - Registration requires periodic renewal
    - U.S.—10 years
    - U.S. also requires at 5-6 years a showing of continued use
Acquiring Trademark Protection

- In U.S., acquired by use or intent to use
  - Common law
  - Federal registration (Title 15, U.S. Code)
    - Application, examination, publication
    - Some states provide registration

- Most foreign countries require registration
Transfer of Trademark Rights

- Trademarks may be sold or licensed
  - Sale must include associated goodwill
  - License must impose quality control obligations
    - Right of licensor to inspect and control quality of product or service
    - Use by licensee inures to benefit of licensor
Copyright

- Statutory right of author (Title 17, U.S.C.)
- Right attaches to original work of authorship fixed in any tangible medium of expression
  - Right comes into being on creation of work
  - No formalities necessary
    - May need publication and registration to enforce
  - Literary, musical, dramatic, choreographic, pictorial works; sound recordings, software
Scope of Copyright

- Protects only form of presentation, not the idea or concept
  - Romeo & Juliet = West Side Story
  - Software code, not concept
- Protects against copying; does not prevent independent creation
- National in scope, but international recognition by treaty—not the same everywhere
Copyright Term

- Life of author plus 70 years (in most countries)
- Work made for hire
  - 95 years from publication
  - 120 years from creation
- Copyright owned by creator
  - Joint creation—joint ownership
  - Work made for hire (requires contract terms)
    - Created by employee or consultant
- Copyright may be assigned
  - Requires written document
  - In U.S., may be revoked after 35 years
Trade Secrets

- Defined as anything secret (formula, program, device, method, technique)
  - Having independent economic value from not being generally known
  - Is the subject of reasonable efforts to maintain its secrecy

- Includes
  - Combination of generally known elements
  - Need not be patentable
  - Can be anticipated by prior art
Benefits of Trade Secrets

- Trade secret may be assigned or licensed
- Protection acquired through agreement and/or employment
- Revenue from license may last indefinitely without geographic restriction
- Damage potential similar in scope to patent infringement
  - Lost profits
  - Unjust enrichment
  - Reasonable royalty
  - Injunction
Trade Secret

- Economic Espionage Act (18 U.S.C. 1831, 1832)
  - Makes trade secret misappropriation a crime
    - "Knowing theft, unauthorized duplication, receipt and/or possession of a trade secret"
  - Defines trade secret broadly
    - “All forms and types of financial, business, scientific, technical, economic, or engineering information" that is kept secret and has reasonable independent economic value
The Congress shall have power to promote the progress of Science and the useful arts by securing for limited times to . . . Inventors the exclusive rights to their discoveries.

Legal monopoly which gives patentee right to exclude others from making, using, or selling the claimed subject matter for a limited period of time

NOT an authorization to make, use, or sell the claimed invention
What is a Patent?

- Congress established the U.S. Patent and Trademark Office to examine and award patents and trademarks.
- Granted by USPTO in return for “disclosure” of invention to the public
- Protects functional features of processes, machines, manufactured items, compositions of matter, or ornamental designs for articles of manufacture
Term of Patent Right

- 20 years from first filing of U.S. non-provisional application
  - In U.S., pre-June 8, 1995 applications, longer of 20 years from filing or 17 years from issue
- U.S. includes opportunity for extensions for Patent Office and FDA delays
Exclusive Rights of Patentee—
35 U.S.C. Sec. 271

(a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.

(b) Whoever actively induces infringement of a patent shall be liable as an infringer.
Exclusive Rights of Patentee—35 U.S.C. Sec. 271

(c) Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.
Statutory Definition of Patent—
35 U.S.C. Sec. 101

- Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- A valid patent is novel, non-obvious, and filed in the name of the inventor(s).
Patents

- Statutory grant
  - Title 35, U.S. Code

- Rationale
  - Grant of a limited duration monopoly in return for publicly disclosing the invention.

- Legal right to exclude others—NOT right to exploit
  - From making, using, selling, offering for sale and importing invention claimed in patent
    - Separable rights
Requirements for a Patent

- Useful, novel, and non-obvious (inventive)
  - Specific, substantial, and credible utility—no perpetual motion machines
  - Must be new over "prior art"
  - Cannot be obvious variation over "prior art"
- Filed in the name of the inventors
Priority of Invention

- United States
  - First to invent
    - Interference proceeding to determine
    - Application by inventors

- Rest of the world
  - First to file
  - Application by owner (often employer)
Novelty

- Public disclosure of invention is absolute bar to patent in almost all countries except U.S.
  - In U.S., inventor has one year grace period
- If international protection desired, critical to file before sale or public disclosure
  - Confidential disclosure may avoid international bar, but may start one year in U.S.
- U.S. application no longer secret
  - Typically published 18 months after first filing
Inventorship

- An inventor contributes to a definite and permanent idea of the complete and operative invention
- Having the wrong inventorship can result in the patent being invalid or unenforceable!!!
Elements of Invention

- Conception
- Reduction to practice or filing of a patent application
- Diligence
“The formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice.”
Conception is Touchstone of Inventorship

- Conception must be complete
  - Recognize the ultimate result desired and develop means to accomplish
  - Communicate completed thought such that one of skill in the art can make the invention

- Only inventors conceive, others can reduce to practice
Amount of Contribution to Final Conception

- Must contribute to subject matter of at least one claim to be joint inventor

- Contributing any disclosed means of a means-plus-function claim element suffices as a joint inventive contribution

- Merely exercising normal skill to reduce an inventor’s idea to practice, without an inventive act, does not make one a joint inventor of any type of claim
Joint Inventorship

- Inventors may apply for a patent jointly even though
  - They did not physically work together or at the same time;
  - Each did not make the same type or amount of contribution; or
  - Each did not contribute to the subject matter of every claim.
Collaboration Towards Conception

- Although collaboration requirement relaxed since 1984, joint inventors must at least be aware of each other
  - Some element of joint behavior
- Large inventorship entity does not create per se presumption of invalidity
- Intentional failure to name collaborating joint inventors may result in a finding of unenforceability due to inequitable conduct against the named inventors
Proving Date of Invention

- Conception—Diligence—Reduction to Practice

- Conception must be Corroborated: Evidence showing that the inventor provides to others a completed thought

- Maintaining Laboratory Records that can be used as evidence of Conception, Diligence, and Reduction to Practice
Define and Document

- Define the invention and make sure it is properly recorded, dated, and witnessed by someone (other than a co-inventor) who understands the invention.
Importance of Good Recordkeeping to Establishing Date of Invention

- Details of idea or work conducted
  - Permanent, complete, and continuous form
  - Bound and consecutively numbered notebooks
  - Date ideas formed or work conducted/completed
  - Protocols, designs of experiments, results, data

- Factual record—no researcher impressions

- Laboratory records properly signed and witnessed
  - Contemporaneously read, understood and signed records
  - Sign and date every entry (at least 2 people)
  - Corroborating witness

- Records should demonstrate authenticity and reliability
What Your Records Should Include

- Record books must be bound, not looseleaf
- All records must be in ink, not pencil
- Use the same pen for the entire day
- Date each page
- Sign each page
What Your Records Should Include

- Include all details of the experiments—don’t assume that another scientist will read this
- If you tape in data, initial over the tape
- Use descriptive titles
- Include results and conclusions
Electronic Record Keeping

- Much harder to use as evidence because file contents and dates are not permanent.
- Keep data files and engineering files in read-only files on folders on the computer.
- Have IT routinely download the folders onto a CD and sign a declaration attached to the CD of the date of download and the amount of data downloaded.
- Refer to the individual files in your written notebook, along with recording the file names and sizes of the file.
Reduction to Practice

- Reducing a complete and operative conception to practice
  - Inventor need not be the one to reduce conception to practice
  - Constructive and actual reduction to practice
Constructive Reduction to Practice

- Filing a patent application (U.S. or abroad) complying with requirements of 35 U.S.C. § 112, first paragraph
  - Written description
  - Enablement
  - Best mode!!
Actual Reduction to Practice

- Concrete embodiment of the invention demonstrated to work for its intended purpose
  - Amount of testing required depends on nature of invention
Diligence

- Diligence is a reasonable effort made toward actually or constructively reducing an invention to practice.
- First to conceive/second to reduce to practice may still be considered first inventor based on successful showing of diligence.
- “Reasonably continuous activity”
- Evidence of diligence must be corroborated.
Steps for Patenting Your Invention

- Fill out Invention Disclosure Form
- Collaborate with a patent attorney
- Determine
  - If there are any bar dates
  - If the inventorship is correct
  - If there are any known prior art references
- Filing your invention
  - Provisional
  - Non-provisional
Invention Disclosure Form

No. __________
(number consecutively indicating year, e.g. 00-001)

While some of the information on this form will not be applicable to every invention and sometimes all of the information requested will not be available to the inventor, a conscientious effort should be made to fill out this form as completely as possible.

A. Title of Invention: ______________________________________________________

B. When did you first think of the invention: ________________________________

C. Laboratory Notebook Pages on which this disclosure is based: _____________

D. Date of first drawing, if any, illustrating the invention: _____________________

E. Date of first written description of the invention: __________________________

F. To whom was the invention first disclosed? ________________________________

G. Date of disclosure: _____________________________________________________
H. When did you first do experimental work toward carrying out the invention?

I. When were you satisfied that you had solved the problem toward which your invention was directed:

J. Who has observed the progress of your experimental work?

K. Statement of the problem that the invention solves:

L. Statement of what had been done previously in the art to solve the problem:

M. Statement of how this solution is better than the prior art:

N. List all prior patents (including patents of Company) and published articles of which you are aware that are related to the invention:

O. Has the invention been described in a printed publication or sold or offered for sale?

P. Is this the Best Mode of the Invention?

Q. General statement of invention:
Invention Disclosure Form

1. Where appropriate, include drawings with reference characters.

2. If additional space is needed, use additional sheets. Each sheet should be dated and signed by each inventor and two disinterested witnesses.

- Date:__________
- Date:__________
- The above was read and understood by me on this ________ day of __________, 20____.
- By:_______________________
  Signature of inventor
- By:_______________________
  Signature of witness
- By:_______________________
  Signature of witness
Drafting Applications

- Inventor interviews to determine full scope of invention
  - 10,000 foot view of the invention
  - Sketch of figures
  - Additional embodiments
  - Drafting claims
  - Plan for going forward

- Understanding the scope of prior art
Developing a Strong Patent Portfolio

- Prosecuting a strong patent, i.e., a patent that will stand the rigors of repeated attacks
- Upfront investment in drafting broad applications to cover the invention, commercial embodiments, and likely competitors, but just inside the “prior art”
- Careful prosecution to avoid relinquishing subject matter in application
- Filing strategies—filing early; quality vs. quantity
Developing a Strong Patent Portfolio

- Preparation of a specification of a patent application
  - 35 U.S.C. 112 requirements
    - Written Specification
    - Enablement
    - Best mode
  - Drafting claims
Written Description

- Possession of idea is not enough: the claimed invention must be described in sufficient detail by written text of originally-filed patent application
- Purpose is to show that the inventor had possession of the claimed invention as of the filing date
  - Build specification with support for every embodiment disclosed
  - One skilled in the art should “reasonably conclude” that patentee had “possession” by describing claimed invention and all limitations
- Burden on USPTO to show failure to comply with requirement
Enablement

- Patent specification must describe the claimed invention in sufficient detail to enable a person of skill in the art to make and use the claimed invention without undue experimentation.
- “Enablement” required throughout the scope of the patent claims.
Best Mode

- If the inventor’s preferred technique for practicing the invention is known to any inventor before filing of a patent application, it must be disclosed in the patent application
- Policy against concealment—The best mode requirement restrains inventors from obtaining patent protection for an invention while concealing from the public their preferred embodiments
- No affirmative duty to discover best mode
Drafting Applications

- Disclose all known and possible embodiments—avoid single embodiment
- Define terms and use them consistently
- Avoid patent profanity (e.g., “must,” “essential,” “required”)
- Include actual and prophetic examples
Drafting Claims

- Draft claims of sufficient scope to cover commercial embodiment or read on the competition, yet just narrow enough to avoid the prior art

  **Balancing Act**
  Provide notice, but not too restrictive

- Use only terms that are necessary
- Use relative terms carefully
Claim Construction

- Issue—“the extent to which we should resort to and rely on a patent's specification in seeking to ascertain the proper scope of its claims.”
  - Phillips v. AWH Corp., 415 F.3d 1303 (Fed. Cir. 2005) (en banc)
Claim Construction—*Phillips*

- The specification is always highly relevant to claim construction and is the *single best guide* to the meaning of a claim term in dispute.
- The prosecution history, if in evidence, can indicate how the PTO and the inventor understood the patent, but it is **not** a tool for expanding the specification.
Claim Construction—*Phillips*

- Courts are authorized to rely on extrinsic evidence
- But it is less significant than the intrinsic record in determining the meaning of claim language
- Examples of extrinsic evidence: dictionaries and treatises, expert testimony
- Expert testimony can be useful, such as to ensure that the court’s understanding is consistent with that of person of ordinary skill in the art or to establish a particular meaning of a term
Software is Patentable

- Types of claims
  - Process;
  - Apparatus performing the process;
  - Computer-readable medium; and
  - System performing the process.
The “Duty of Disclosure”

- Each person associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the U.S. Patent Office.
Complying with the “Duty of Disclosure”

- Required to submit any documents that may be ‘materially relevant’ to the patent application.
- Duty is continuing, ongoing: any documents or references made aware of during prosecution of the application, not just at the time of filing.
- Possible consequence of failure to disclose—an unenforceable patent.
Timing and Filing Issues

- “First to Invent” (U.S.) vs. “First to File” (rest of the world)
  - U.S.—first to invent
  - Rest of the world—race to the patent office
  - Changes are in the offing
More Timing Issues

- Statutory bar in the U.S.—one year grace period from date of public disclosure (e.g., publication or offer for sale)
- Other countries—absolute novelty
Provisional Applications

- **TIMING!** Gives you priority
  - Saves the initial filing date
- Non-provisional can claim priority to the provisional application
- Formal requirements absent
  - Specification important (no claims needed)
- The disclosure has the same requirements as the non-provisional application to be valid (i.e., written description, enablement, and best mode).
Filing a Non-Provisional Patent Application

- Application contents
  - Drawings
  - Title
  - Reference to related applications
  - Background section
  - Summary of the invention
  - Detailed description of the invention
  - One or more claims
  - Abstract
Filing a Non-Provisional Patent Application

- Papers typically filed with the application
  - Oath or Declaration
  - Power of Attorney
  - Claim for Foreign Priority
  - Information Disclosure Statement
  - Fee
  - Assignment
Filing a Non-Provisional Patent Application

- Minimum required for a filing date
  - Description of the invention
  - At least one claim
  - A drawing, if the invention requires
  - A docket reference to identify the application
  - Note: The inventor’s names are not required
Timeline of Patent Prosecution

- File Declaration
- First Office Action
- Notice of missing parts
- File application Declaration is not required
- First Response
- Second Office Action May be a Final Rejection
- Response after Final
- Advisory Action
- Notice of Appeal or Request for Continued Examination
First Office Action

- Two to three years after filing
- Action on the merits
  - Objections
  - Rejections: enablement, indefiniteness, novelty, obviousness
Action on the Merits

- Common rejections
  - 35 U.S.C. 101
    - No utility or non-statutory subject matter
    - The claims are not clear and definite
  - 35 U.S.C. 112, First Paragraph
    - No enablement or written description
  - 35 U.S.C. 103: Obviousness
First Response or Amendment

- Action on the merits
  - Time period
    - Three months after office action
    - May be extended to six months
  - Amendment or Response
    - Argue against objections and rejections
    - Correct grammatical and typographical errors in specification
    - Amend the claims
Careful Prosecution

- Make only the arguments necessary
  - Rifle, not shotgun approach
  - Avoid narrowing characterizations of claims
- Consider Examiner interviews to explore allowable claims and possible evidence
Second Office Action

- May be a final rejection
  - Second rejection or subsequent examination
  - Limits the applicant’s response
    - Propose an amendment
    - File a Request for Continued Examination (RCE)
    - File a continuation application
    - Appeal a claim rejection
Allowance of Patent Application

- Patent term is from issuance until
  - Twenty (20) years from filing date
  - Filing date of first U.S. application
Realities of USPTO Examination

- Slow—average pendency to beginning of examination process is over 20 months
- Uncertain—over 3,500 patent examiners who vary considerably in technical, legal, and procedural expertise
- Easy to get a patent, but more difficult to get a valuable patent
Coordination of Multinational IP Prosecution

- “Global” patent applications
- Deferral of costs via PCT
- Translation and foreign associate issues
- Centralized approach to prior art
  - Consistency of arguments
Filing Strategies—Alternative 1

- Invention date/filing date
  - § 102 (b)
  - § 102 (a)
  - § 102 (e)
  - Patent Term

20 years
Filing Strategies—Alternative 2

- Invention date
  - § 102 (a)
  - § 102 (b)
  - § 102 (e)
  - Patent Term
Filing Strategies—Alternative 3

- Invention date
  - § 102 (a)
  - § 102 (b)
  - § 102 (e)
  - Patent Term
How to Read a Patent

- U.S. Patent Office requires
  - Title
  - Background
  - Figures (if needed)
  - Abstract
  - Detailed Description
  - “Best Mode”
  - Claims
Components of a Patent II

- Figures
- Background art
- Detailed description
Components of a Patent III

- Claims, claims, claims!
  - Boundary of what you own
Why and When to File a Patent Application

- Before publication or offer for sale
- Before public use
- When you are concerned that your competitors are getting close
- When you need patents or patent applications to establish credibility to attract partners or financing
- When you are required to because of your agreements
- When the inventions are in your core business areas
Introduction—“Strategic IP Management”?

“Strategic IP Management” relates to improving corporate value through the effective acquisition and use of IP

– “Value” can take many forms—cash, market exclusivity, basis for cross-licensing or joint venture, etc.
What Is “Strategic IP Management”?

- “IP Management” includes four basic processes
  1. **Creating New Value** through the integration of the company’s IP and new product development strategies to generate IP that strongly protects the products and products that avoid infringement of third party rights
  2. **Maximizing IP Value** by aligning the client’s IP portfolio with its business objectives and coordinating international prosecution and litigation
  3. **Assessing IP Value and Risks** in various litigation and transactional scenarios
  4. **Realizing Value** through IP enforcement and/or business arrangements (licensing, acquisitions, financings, donations, collaborative arrangements, etc.)
Goals of a Strategic Portfolio

- Defensive
  - Patents with claims that cover your products
  - Trademark registrations that protect your mark’s goodwill
  - Judicious use of copyrights to protect software
  - Trade Secret protection only for material that can be kept secret
Goals of a Strategic Portfolio

- **Offensive**
  - Patents with claims that cover competitor’s products
  - Patents on material that is anticipated to be necessary for production of a new generation of products
Goals of a Strategic Portfolio

- Attractive purpose
  - Patents that cover technology perceived to be of future value by investors
  - Trade Secrets and Know-how in a technology perceived to be of future value by investors
  - Documentation of IP in a manner to enhance value (i.e., well written specifications for patent applications)
  - “Clean” and complete prosecution of patent and trademark applications
Strategy Boards

- Decides which inventions to protect
- Makes strategic decisions regarding maintenance of the patent portfolio
- In some cases, investigates positions with respect to the IP of others
Strategy Boards—Composition

- Ideally, one for each line of business plus Central R&D
- Must have tripartite participation (business, legal, technical) and support
- Meets on regular basis (quarterly) or on continuous basis via e-mail
- Consider
  - New invention disclosures from your inventors and whether to file or to keep as trade secret
  - Filing strategy
Strategy Boards

- Other responsibilities
  - Pruning the existing database
  - Third party developments
  - Contracts
  - Litigation
  - Licensing
  - Opinions of Counsel
  - Changes in the law (legal decisions and patent changes)
  - “Horizon” issues—are we obtaining IP that will cover where the company/industry is going?