Outline

• What is research Intellectual Property (IP)?
  – Patents
  – Copyrights
  – Trademarks
  – Trade Secrets / Confidential Information
  – You are likely to see
    • Confidential Disclosure Agreement (CDA)
      – Also called Non-Disclosure Agreement (NDA)
    • Employee assignment agreements
    • Employee non-compete agreements
Patents

• In return for disclosing your invention publicly, you are given a limited monopoly (typically 20 years) to practice your invention
  – “A license to sue infringers.”
  – A patent’s Claims state the limit of the invention
  – Royalties, license fees, etc.

• A patent must be three things: Novel; useful; non-obvious

• Inventorship is a matter of law, determined by the patent attorneys
  – Inventors = those who contributed a (conceptual) inventive step to the Claims
  – Not an inventor: A “hired pair of hands;” one who pointed out the problem
  – An incorrect inventor list may invalidate the patent

• Typically takes 3-5 years and $5-100K from filing to issuing (US only)
  – First reply from Patent Office curtly dismisses all your claims
  – Thereafter, a negotiation ensues about what they will allow
  – US patent applications and issued patents are online at //www.uspto.gov/

• Provisional patent vs. full patent: provisional established priority date for full

• Must file a separate patent in each country desired
  – International translation and prosecution costs can mount rapidly

• US patent law differs substantially from most other countries
  – US priority = first conception, followed by diligence in reducing to practice
    • Keep good laboratory notebooks!
  – Harmonization efforts in progress, expect major changes in US patent law in coming years
Copyrights

• Gives the creator of an original work the exclusive rights to that work (typically for 50-100 years, maybe renewable)
  – Generally, gives control of copying; maybe other rights, e.g., attribution, translation, derivative works, other controls

• Creator has an implicit copyright on any created work
  – Stronger to mark it with © 2011, Richard Lathrop

  – Even stronger to register the copyright with the government ®

• Applies to source-binary code, firmware, schematics, VLSI masks, digital icons, other “works of art,” etc.
  – Images may be digitally “watermarked” as proof

• Text and images from the web are implicitly copyrighted
  – Be very careful about unauthorized public or commercial use
  – Safer to post the URL than to download and post text/images

• Many innovative copyright extensions for “open source/open access”
  – How to make it “public” without someone else just copyrighting it and keeping it themselves
  – Can control almost all aspects of derivative use
    • Require others to replicate copyright; make source code enhancements available; etc.
  – GNU public license; Creative Commons Attribution License; other “Open access” licenses
Trademarks

- Sign, logo, or indicator used to indicate or brand a unique source of goods or services
  - TM = unregistered trade-mark (goods)
  - SM = unregistered service mark (services)
  - ® = trade-mark registered with government
  - Trade-mark owner can prevent infringement by others

- Intent: Prevent confusion among consumers
  - Generally cannot be “too close” to existing trade-mark or word(s)
    • “Too close” may depend on industrial sector
    • Common words generally not allowed
    • Distinctive phrases may be allowed
  - Can be lost/unenforceable if it passes into common speech
    • Aspirin, cellophane, dry ice, escalator, heroin, laudromat, zipper

- Start-ups usually trade-mark their name, logo, product names, etc.
Trade Secrets / Confidential Info

- Information, not generally known, that confers economic advantage because it is secret
  - Process, formula, method, design, procedure, etc.
  - E.g., the formula for Coca-Cola® is a trade secret
- Three requirements for legal protection
  - Not generally known to the public
  - Confers benefit *because* it is a secret
  - Owner takes reasonable steps to preserve secrecy
- Enforced by non-disclosure/non-compete agreements, special handling procedures, technical measures
  - Reverse engineering or employee poaching is legal
  - Industrial espionage is illegal
- Legal remedies include injunctions and award of damages
You are likely to see

- Confidential Disclosure Agreement (CDA)
  - Also called Non-Disclosure Agreement (NDA)
  - You agree not to disclose confidential info for N years
    - Heavy legal/financial penalties
  - Standard exclusions:
    - Already known; public info; known from other channels

- Employee assignment agreements (often mandatory)
  - Commonly you assign all IP to your employer
  - Sometimes retain rights outside scope of employment

- Employee non-compete agreements (often mandatory)
  - You agree not to compete for N years
  - Avoids/reduces “employee poaching” for IP by competitors
  - Be careful! May greatly reduce your ability to get a new job
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