Class 6

- Intellectual property and technology issues
- Available on ANGEL Lessons:
  - Can You Patent Your Business Model?, Dickinson, T. Harvard Business Review
  - Leahy-Smith America Invents Act of 2011
  - Other Angel readings
- (Legal structures discussed later in course)

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What is property?

- Property:
  a) something owned or possessed
  b) the exclusive right to possess, enjoy, and dispose of a thing
  c) something to which a person or business has a legal title

Tangible property
vs.
Intellectual property

{ Discussion of Wealth (accumulated property) vs Income?}

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What is Intellectual Property?

- Property that results from creative thought
  - Specifically, the physical manifestation of original thought
  - Property of the mind
- Wide variety of forms
  - eg music, art, ideas, designs, inventions, brands
- Generally transferable

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Intellectual Property

- Three requirements of IP:
  1. Novelty
  2. Usefulness
  3. Non-obviousness

More about these later

- Provides **exclusionary** rather than **affirmative** rights

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Why protect IP?

- Community perspective
  - encourage creativity that benefits society
- Individual perspective
  - reward creative individuals / organizations
  - generate income

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Whose IP Law, Anyway?

- We are discussing US intellectual property laws and regulations
- See the USPTO article posted to Angel:
  - "Report on Patent Enforcement in China"
- ***PCT - Patent Cooperation Treaty***
  - An international patent law treaty (1970)
  - Provides a unified procedure for filing patent applications to protect inventions in each of its **117** contracting states
  - A patent application filed under the PCT is called an international application, or PCT application

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PCT Filings

1. A single filing of an international application is made with a Receiving Office (RO) in one language
2. It then results in a search performed by an International Searching Authority (ISA), accompanied by a written opinion regarding the patentability of the invention
   - It is optionally followed by a preliminary examination, performed by an International Preliminary Examining Authority (IPEA)
3. Finally, the relevant national or regional authorities administer matters related to the examination of application and issuance of patent

{ Note: Some information herein taken from Wikipedia }

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4. Publication
   - 18 months after the filing date or the priority date, the international application is published by the International Bureau at the “WIPO”, based in Switzerland, in one of the ten "languages of publication": Arabic, Chinese, English, French, German, Japanese, Korean, Portuguese, Russian, and Spanish
   - There is an exception to this rule, however - if 18 months after the priority date, the international application designates only the United States, then the application is not automatically published
5. From the publication of the international application until 28 months after the priority date, any third party may file observations regarding the novelty and inventive step of the invention
   - The observations may be submitted anonymously, and no fee is due for filing such observations
6. "Nothing in this Treaty and the Regulations is intended to be construed as prescribing anything that would limit the freedom of each contracting state to prescribe such substantive conditions of patentability as it desires. (...)"

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Advantages of PCT Filings

- Although the PCT system does not provide for the grant of an international patent, the system:
  - simplifies the process of filing patent applications
  - delays the expenses associated with applying for patent protection in other countries
  - and allows the inventor more time to assess the commercial viability of his/her invention
  - Under the PCT, an inventor can file a single international patent application in one language with one patent office in order to simultaneously seek protection for an invention in up to 117 countries throughout the world

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ISA/IPEA Authorities

1. **Austrian Patent Office** (AT)	9. **National Board of Patents & Registration of Finland** (FI)
2. **Australian Patent Office** (AU)	10. **Israel Patent Office** (IL)
3. **National Institute of Industrial Property** (BR)	11. **Japan Patent Office** (JP)
4. **Canadian Intellectual Property Office** (CA).	12. **Korean Intellectual Property Office** (KR)
5. **State Intellectual Property Office of the People's Republic of China** (CN).	13. **Federal Service for Intellectual Property (Rospatent) (Russian Federation)** (RU)
6. ***Egyptian Patent Office*** (EG)	14. **Swedish Patent and Registration Office** (SE)
7. **European Patent Office** (EP)	15. **United States Patent and Trademark Office** (US)
8. **Spanish Patent and Trademark Office** (ES)	16. **Nordic Patent Institute** (XN)

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"Patent Trolls"

- Patent troll is currently a controversial term, susceptible to numerous definitions, none of which are considered satisfactory from the perspective of understanding how patent trolls should be treated in law, including those who:
  - Purchases a patent, often from a bankrupt firm, and then sues another company by claiming that one of its products infringes on the purchased patent
  - Enforces patents against purported infringers without itself intending to manufacture the patented product or supply the patented service
  - Enforces patents but has no manufacturing or research base
  - Focuses its efforts solely on enforcing patent rights
  - Asserts patent infringement claims against non-copiers or against a large industry that is composed of non-copiers

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"Patent Trolls" Terms

- The term "**patent pirate**" is used to describe both patent trolling and acts of patent infringement
- Related expressions are "**non-practicing entity**" (NPE) (defined as "a patent owner who does not manufacture or use the patented invention, but rather than abandoning the right to exclude, an NPE seeks to enforce its right through the negotiation of licenses and litigation"), "**patent assertion entity**" (PAE), "**non-manufacturing patentee**", "**patent shark**", "**patent marketer**", "**patent assertion company**", "**patent licensing company**", and "**patent dealer**"

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- In 2011 patent trolls cost US bodies direct costs totaling $29 billion in the US alone
- Lawsuits brought by "patent assertion companies" made up 61% of all patent cases in 2012, according to the Santa Clara University School of Law
- A core criticism of patent trolls is that "they are in a position to negotiate licensing fees that are grossly out of alignment with their contribution to the alleged infringer's product or service", notwithstanding their non-practicing status or the possible weakness of their patent claims
- The risk of paying high prices for after-the-fact licensing of patents they were not aware of, and the costs for extra vigilance for competing patents that might have been issued, in turn increases the costs & risks of manufacturing

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"Patent Trolls" Example

- There is no obligation to defend an unused patent immediately, thus manufacturing companies may produce the patented product for years until the patent troll sues them
  - E.G., the JPEG format, intended to be free of license fees, was subject to two patent attacks, one by Forgent Networks during 2002–2006 and another by Global Patent Holdings during 2007–2009
  - Both patents were eventually invalidated based on prior art, but before this, Forgent collected more than $100 million in license fees from 30 companies and sued 31 other companies

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The Blackberry Patent Dispute

- In 1992 NTP (a patent "troll") was formed with a portfolio of about 50 patents, most from the defunct Telefind Corp
- In 2000, NTP send a bunch of notices regarding their wireless patents to companies, none of which licensed the patents
- In 2004, NTP filed suit in US District Court in E. Va, the "Rocket Docket" court
- Research in Motion (Blackberry) plead that the technologies in the patent were already in the public domain

Continued…

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- NTP showed that RIM's software was more current that what they demonstrated and it was covered by their patent; a jury agreed and NTP was awarded $53 million for lost royalties, plus $4.5 million in fees
- The court also issued an injunction that would have shut down Blackberry service; RIM appealed
- In March 2005 a mutual settlement was almost reached, with a $450 million payment to NTP
- In March 2006 a settlement was reached with RIM paying NTP $612.5 million
- RIM says they now use a different technology and don't need the patent

Why would RIM settle for so much more than the original suit?

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- Between 2002 and 2006 RIM stock price went from about $2.50/shr to about $28/shr
- {As high as $95/shr, was $76 in the past year; is 6.50 as of 6/11/13 due to recent issues – conversion to QNX, delay of the next model, exec departures, competition}
- It revenues grew very rapidly; it was $294 million in 2002 and will be about $15 billion for 2010; $19 billion for 2011; $16 for 2012; 3rd qtr '13 revenue was $1.6 bb w/$1 bb loss
- The growth value exceeded the value of the increase in the settlement

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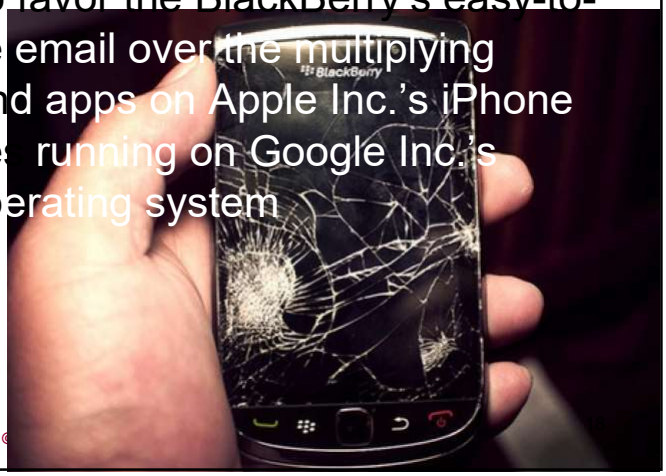
What has happened to RIM since?

- The bet long made by RIM was that both corporate and individual customers would continue to favor the BlackBerry's easy-to-use mobile email over the multiplying features and apps on Apple Inc.'s iPhone and devices running on Google Inc.'s Android operating system

From WJS: **WSJ details RIM's long, sad decline, June 28, 2012**



- Replaced co-Chief Executive Officers Jim Balsillie and Mike Lazaridis (co-founders) with former operating chief, Thorsten Heins
- RIM has fallen 90% in Nasdaq trading since 2008; now at $9,24/shr (7/13/13)
- 2008 market cap: $78 bb; Nov, 2013: $4.7 bb
- US sales dropped 57% from 2012Q1 Y-Y
  - $3bb sales/qtr; ($170mm) operating income (loss) (new product sales disappointing)
- Still has $2.5 bb in cash reserves
- New models not meeting sales expectations

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Major legal concepts

1. Inception
2. Ongoing
3. Growth & continuity

What are these? …

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1. Inception

- Intellectual property
  - Patents
  - Copyrights
  - Trademarks

We'll talk about only these tonight

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2. Ongoing

- Personal law
  - Hiring & firing policies
  - Equal Employment Opportunity Commission
  - Collective bargaining
- Contract law
  - Legal contracts
  - Sales contracts
  - Leases

These topics are not covered tonight

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3. Growth and continuity

- Tax considerations
  - Federal, state, local
  - Payroll
  - Incentives
- Government regulations
  - Zoning of property
  - Administrative agencies (regulatory)
  - Consumer law
- Continuity of ownership rights
  - Property & ownership
  - Wills, trusts, estates
  - Bankruptcy

These topics are not covered tonight

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What is Mediation?

- A neutral intermediary, the mediator, helps the parties to reach a mutually satisfactory settlement of their dispute
  - Non-binding
  - Confidential
  - Interest-based
- Any settlement is recorded in an enforceable contract
- Experience shows that intellectual property litigation often ends in settlement

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What is Arbitration?

- A dispute is submitted, by agreement of the parties, to one or more arbitrators who make a binding decision on the dispute
- Choosing arbitration, the parties opt for a private dispute resolution procedure instead of going to court
  - Consensual
  - Parties choose the arbitrator
  - Neutral
  - Confidential
  - Arbitrators' decision is final and easily enforced

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Intellectual Property Rights

Unregistered Rights	Registered Rights
– copyright	– patents
– confidential information	– trademarks
– passing off	– designs
– circuit layouts	– plant breeders rights

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Copyrights

- Provides exclusive rights for literary & artistic production
  - Not possible to copyright an idea, but the mode for expression of the idea
  - Works created after 1/1/78 are for the life of the author + 70 years
  - Owner may:
    1. Reproduce the work
    2. Prepare derivative works based on it
    3. Distribute copies
    4. Perform the work publicly
    5. Display the work publicly

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Copyright

- Automatic protection
- Literary and artistic works
  - Includes music, paintings, sculpture, writing, architectural plans, software code
- Term - life of the author plus ~~50 years~~ **Now 70 Years!**
  - Oops, extended by the Sonny Bono Copyright Term Extension Act (Mickey Mouse Act) by **another 20 years**
- Corporate rights: 120 years from creation or 95 years from first publication

(See The Sonny & Cher video on Angel)

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What you should do

- Copyright all materials (put a "©" on it)
  - Or "Copyright, date, owner"
  - Front or end of document or media
- Not required to register the copyright
  - Register if you anticipate suing for infringement

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- The **Copyright Term Extension Act** (CTEA) of 1998 –extended copyright terms in the US by 20 years to life of the author plus 70 years and for works of corporate authorship to 120 years after creation or 95 years after publication, whichever endpoint is earlier.
- The Act also affected copyright terms for copyrighted works published prior to 1978, also increasing their term of protection by 20 years, to a total of 95 years from publication.

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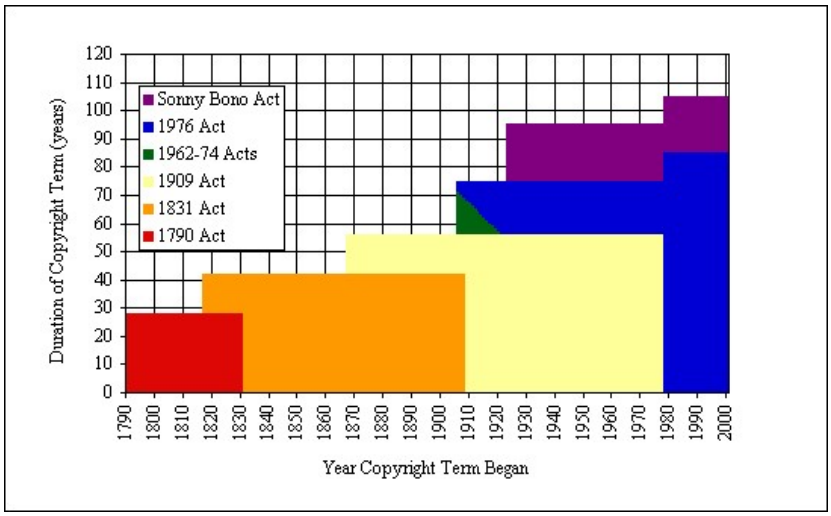
Copyright Protection History



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"Fair use" doctrine

- Reproduction permitted for:
  - Criticism, comment, news, teaching, scholarship: **How do you think I can provide you with so many articles from so many sources for this course?**
  - Factors considered are:
    1. Purpose and nature of the use (commercial/nonprofit)
    2. Nature of the copyrighted work itself
    3. Amount of the work that is used in relation to the whole
    4. Effect of the use on the potential market of the work

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The Teach Act of 2002

- An educator may show or perform any work related to the curriculum, regardless of the medium, face-to-face in the classroom
  - Still images, music of every kind, even movies
  - There are no limits and no permission required
- Fair use is almost always going to be the best source of authority for making copies in any context
  - Teach Act authorizes us to digitize works for use in digital distance education, so long as they are not available digitally in a format free from technological protection

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TEACH Act Fair Use

- When TEACH Act requirements are met, Fair Use is determined primarily by:
  1. Purpose & character of use
  2. Nature of the work

     Eg, published or not, fiction or nonfiction, ….
  3. Amount or portion used
  4. Effect upon potential market of value

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The Digital Millennium Copyright Act of 1998

- Makes it a crime to circumvent anti-piracy measures built into most commercial software, *even if no copyright is violated*
- Outlaws the manufacture, sale, or distribution of code-cracking devices used to illegally copy software
- Does permit the cracking of copyright protection devices, however, to conduct encryption research, assess product interoperability, and test computer security systems
- Provides exemptions from anti-circumvention provisions for nonprofit libraries, archives, and educational institutions under certain circumstances
- In general, limits Internet service providers from copyright infringement liability for simply transmitting information over the Internet

more…

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- Service providers, however, are expected to remove material from users' web sites that appears to constitute copyright infringement
- Limits liability of nonprofit institutions of higher education -- when they serve as online service providers and under certain circumstances -- for copyright infringement by faculty members or graduate students
- Requires that "webcasters" pay licensing fees to recording companies
- Copyright office must submit to Congress recommendations to promote distance education through digital technologies while “maintaining an appropriate balance between the rights of copyright owners & the needs of users”
- States explicitly that "nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use..."

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Video

Duration: 19:07

- Larry Lessig: How creativity is being strangled by the law
  - Stanford professor Larry Lessig is one of our foremost authorities on copyright issues, with a vision for reconciling creative freedom with marketplace competition
  - TED stands for **Technology, Entertainment, Design**
    - It started out (in 1984) as a conference bringing together people from those three worlds

http://www.ted.com/index.php/talks/larry_lessig_says_the_law_is_strangling_creativity.html

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Specific Registered Rights

- Plant breeders rights
  - novel plant varieties
- Circuit layouts
  - novel integrated circuit designs
- Trademarks (registered)
- Trade Dress
- Patents

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Registered Designs

- What is a Registered Design?
  - In the USA, protection is provided to designs through the Designs Act 1953 ("the Act")
  - A registered design is used to protect the external appearance of a manufactured article, rather than the article itself
  - The design must:
    - Consist of "features of shape, configuration, pattern or ornament"
    - Be applied to an article by any industrial process or means
    - Have features, which in the finished article, appeal to and are judged solely by the eye
    - Not be purely functional
    - Not relate to a method or principle of construction
    - Be new or original

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Registered Designs

- A registered design is used to protect the external appearance of a manufactured article, rather than the article itself
  - E.G., a registered design would not be granted for designing a fork, as this would prevent everyone else from making forks
  - However, the shape of a fork, or a particular pattern applied to a fork, may be registered as a design
- Protects visual appearance of product
- What is registrable?
  - New and distinctive designs, eg. having features of shape, configuration, pattern or ornamentation
  - Applied to an article
- Term - 10 years

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The Overlap of Design with Copyright

- In the USA, designers have tended to rely more on copyright protection under the Copyright Act of 1994 than on registering designs
  - This means that a large number of designs in the USA are protected solely by copyright
  - Copyright protection provides a number of advantages over registered design protection including:
    - There is no requirement to register copyright, therefore protection is automatic and immediate
    - There is no cost in obtaining protection
    - Copyright protection lasts for a longer period than design protection more…

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Registered Design Advantages Over Copyright

1. In some countries industrial designs are not protected by copyright, meaning that unregistered designs may not have protection overseas
2. The Certificate of Registration serves as evidence in Court of ownership of the design
3. The number of a registered design may be applied to the product or packaging indicating that the design is protected
4. The filing date of a the USA design application may be used to establish priority for any overseas design applications
5. The statutory monopoly to use a design in the USA (and overseas if applications for protection in other countries are made) for the period of protection
6. The costs of obtaining registered design protection are not high

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Trademarks

- A distinctive name, mark, symbol, or motto identified with a company's products and registered with the USPO
- New trademarks are good for 10 years; can be continuously renewed
- Types of marks…
  - Trademarks: goods
  - Certification marks: quality, materials, or other aspects
  - Collective marks: members of groups
- 1988 revision: intent to use within 6 Months

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Trademarks

- Sign that provides a connection in the course of trade between product and producer
- Brand, logo, slogan, shape, sound, smell, color
- Two means of protection
  - Registration - ® symbol
  - passing off: rely on reputation derived through use - ™ symbol

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Trademark Symbols

- ™ (for an unregistered trademark, that is, a mark used to promote or brand goods)
- SM (for an unregistered service mark, that is, a mark used to promote or brand services)
- ® (for a registered trademark)

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Trade Dress

- Refers to the look and feel of a retail establishment
- You can't knock off the concept
- Protected by the Lanham Act, the US statute which regulates trademarks and trade dress
- Trade dress protection protects consumers from packaging or appearance of products that are designed to imitate other products

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Trade Dress Examples

- The shape, color, and arrangement of the materials of a children's line of clothing
  - though, the design of the garments themselves is not protected
- The design of a magazine cover
- The appearance and décor of a chain of Mexican-style restaurants
- A method of displaying wine bottles in a wine shop

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Confidential Information

- Common law protection of trade secrets
- Information that is:
  - Conveyed under obligation of secrecy
  - Non-public
- Potentially indefinite protection
- Confidentiality agreement (evidence)

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Trade secrets

- Information that cannot be otherwise protected may be marked “trade secrets”
  - Things that make the company unique
  - Customer lists, price info, production techniques
  - Extends to both ideas and expressions

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Non-disclosure agreements

- Always have one
- Base yours on a “standard” agreement; have a lawyer review it
- Make sure it is bi-lateral
- Make sure its term in specified and delineate what happens to residuals
- Include non-disclosure requirements on employee agreements

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Patents

- Antitrust law:
  - Sherman Antitrust Act of 1890
    - Outlawed trusts and prohibited "illegal" monopolies, or monopolies that could be shown to be using their power to squelch competition
    - In the early 1900s, Congress used the act to break up two such monopolies — the Standard Oil Co. & the American Tobacco Co. (See the following slide)
  - Clayton Antitrust Act of 1914
    - Added price-fixing and other supplements to Sherman
  - Robinson Patman Act of 1936 ("anti chain-store act")
  - Hart-Scott-Rodino Antitrust Improvements Act of 1976
    - Merger/Acquisition issues & confidentiality protections

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Standard Oil & The Seven Sisters

1. *Standard Oil of New Jersey (ESSO)*, which merged with Mobil to form ExxonMobil
2. Royal Dutch Shell (Dutch 60% / British 40%)
3. *Anglo-Persion Oil Company* (British). Became Anglo-Iranian Oil Company then British Petroleum, and then BP Amoco following a merger with Amoco, then BP Amoco Arco following merger with Atlantic Richfield. It is now known solely by the initials BP
4. *Standard Oil Co. of New York ("Socony")*. Became Mobil, which merged with Exxon to form ExxonMobil

Continued…

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5. *Standard Oil of California ("Socal")*. This became Chevron, then, upon merging with Texaco, ChevronTexaco. It has since dropped the 'Texaco' suffix, returning to Chevron
6. *Gulf Oil*. In 1985, most of Gulf became part of Chevron, with smaller parts becoming part of BP and Cumberland Farms, in what was, at that time, the largest merger in world history.
7. *Texaco*. Merged with Chevron in 2001. The merged company was known for a time as ChevronTexaco, but in 2005, changed its name back to Chevron. Texaco remains a Chevron brand name

How's that anti-trust working out?

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So… we don't like monopolies?

- Well, only illegal monopolies
- Legal monopolies are created through IP protection…

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Patents

- Protection for inventions
- Bargain between inventor and government
  - Statute of Monopolies - 1624
  - Encourage innovation
- Separately granted in each country
- Tool of commerce
- Form of publication

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Rights of Patentee

- Exploit invention
  - make, use, sell, hire, etc.
- License or assign patent
- Take action against infringers
- 20 year term from filing date or 17 years from issue date

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Requirements to Obtain Patent

- Entitled to apply
  - inventor, employer, assignee
- Patentable subject matter
  - manner of manufacture, novel, inventive
- Written application
  - description, examples, claims, drawings, sequence listings, microorganism deposits

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Manner of Manufacture

Useful and of economic significance

Artificially created state of affairs

- Exclusions
  - displays of information
  - algorithms / laws of nature
  - discoveries
  - combinations of known integers
  - specific exclusions (human beings etc.)

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Patent Requirements: (1) Novelty

- Invention must be new (more about this in a few moments)
- Subject matter of patent application is compared against publications and prior use from anywhere in the world
- Must not publish or use invention commercially before filing patent application (academic dilemma)

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Patent Requirements: (2) Usefulness

- Can't be something that is just an idea; it must be useful and that use must be describe-able and described

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Patent Requirements: (3) Inventiveness or non-obviousness

Conception of invention must involve creative thought or ingenuity

Test

If confronted with same problem, would a skilled person consider "invention" to be obvious?

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Patent Process

- Initial application (priority date)
- International application (12 Months)
  - bundle of applications
  - publication, search and examination
- National phase entry (30 Months)
- National examination / opposition
- Grant / Renewal fees

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The Story of Henry Yuen

(from Wikipedia & other sources)

- Chinese: 袁子春; born 1948 in Shanghai is a founder and former CEO of Gemstar-TVGuide Int'l
- Has a PhD in applied mathematics from Caltech
- Law degree from Loyola School of Law
- Founded Gemstar in 1986
- Sued *everyone* for everything regarding his patent portfolio… primarily grid-formats for TV guides
- Sued Scientific Atlanta; they countersued
- He posted potential revenues from SA as Revenue
- His CFO was Elsie Lueng

(Refer to 2007 Gemstar 8-K Filing for info on $94.6m Settlement)

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- He was fired from Gemstar in 2003, after the company revealed missing revenue and other accounting problems
- He was convicted of securities fraud in 2006, and ordered to pay $22 million in penalties
- **Gemstar: Arbitration: They pay $94.6m; also up to $30m fines**
- **Henry on the lamb since 2007 (suspeced to be in Taiwan)**
- As of 2010, his whereabouts are unknown

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Gemstar 2007 8-K Filing

- Arbitration: Found in favor of Gemstar claims
- $94.6 million payments due from Yuen to Gemstar in settlement of claims
- Also, denies $30.9 million in Yuen claims against Gemstar
- Also, enforces Gemstar patent rights against Yuen
- Etc, etc.

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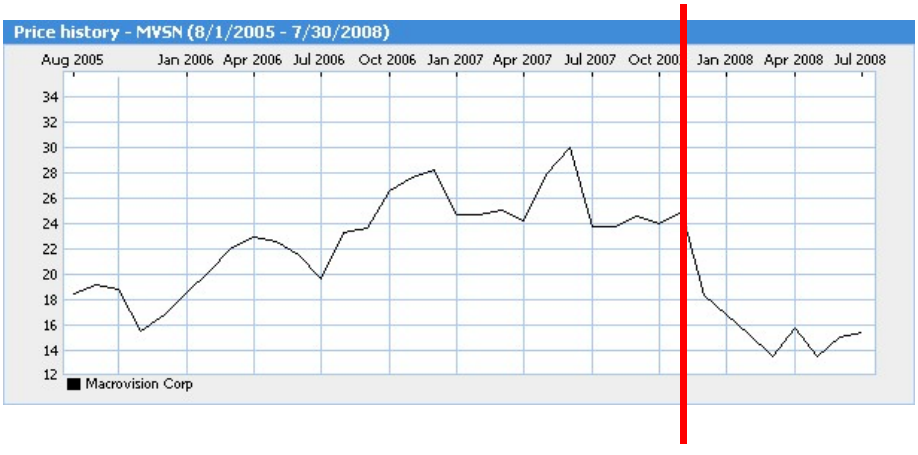
Dec '07: Macrovision Buys Gemstar From News Corp



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Patents

- An intellectual property right
  - Design patents: 14 years; all others: 20 years
  - Provides a temporary Monopoly… a "negative" right… to encourage the creation and disclosure of new ideas
    - Processes, machines, products, plants, compositions of elements, improvements on existing items, …
- Types of patents:
  1. Utility: new articles, machines, processes, etc
  2. Design: new ornamental designs
  3. Plant: for new varieties of plants

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Timing of Filings

- A patent must be "new"; filed within 1 year of invention; if you used, sold, described in print, or attempted to secure a foreign patent more than one year prior to the US application, it will be denied
- The one-year period is considered an inventor's "grace period" to file or publish information about the invention

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Leahy-Smith America Invents Act (AIA) of 2011

- Three Major Facets:

1. "First to File" replaces "First to Invent"
2. Eliminates interference proceedings
   - Because of "first to file", so-called "inter parte" contests (settled by an admin panel) or appeals
3. Post-grant "opposition" allowed

- Other aspects… (following pages)

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Leahy-Smith Prior Art Changes

- Actions and prior art that bar patentability will include public use, sales, publications, and other disclosures available to the public anywhere in the world as of the filing date, other than publications by the inventor within one year of filing (inventor's "publication-conditioned grace period"), whether or not a third party also files a patent application

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Leahy-Smith Act of 2011

1. Tax strategy inventions – specifically unpatentable
2. False marking (indicating a non-existent patent)
3. Filing by other than the inventor (anybody can)
4. Best mode – not a basis for invalidating patent
5. Prior user rights defense permitted
6. Micro-entity fee reductions
7. Confidential sale no longer sets the 1-year prior status

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Patent strategies

- Broad (offensive) patents
  - Effective for shutting out competition
- Narrow (defensive) patents
  - Effective for warding of suits and cutting deals

When offensive patents are unattainable, shift the strategy to gathering defensive patents which can serve as the currency needed for cross-licensing deals

See Smith's "Patents play powerful part…"

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Preparing a patent

- Specifications… to "teach" understanding, duplication, and use of the invention
  - Introduction to explain why it is useful
  - Description of all "prior art" similar to the invention
  - Summary of the invention emphasizing the differences from prior art
  - Detailed description, including anything remotely relevant
  - Examples or experimental results, in detail
  - It is inherently broad enough to teach and to allow flexibility in the claims based on it

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- Claims… to identify particular features protected by the patent
  - Claims can "build on claims", meaning there is reference to just-mentioned claims to extend them or their use

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TargetTV patent

- Privacy application
  - Monitoring of cable TV use, guaranteeing the anonymity of the viewers
  - 18 prior patents and writings cited as relevant
  - 24 claims made
- Viewership patent
  - Filed 3/29/99; granted 9/11/2001
  - Over 70 prior works cited
  - 22 claims made

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Provisional applications*

- Since June 8, 1995, the USPTO has offered inventors the option of filing a provisional application for patent to provide a lower-cost first patent filing in the United States.
  - Applicants are entitled to claim the benefit of a provisional application in a corresponding non-provisional application filed not later than 12 months after the provisional application filing date
  - *There is no such thing as a Provisional Patent, only a Provisional Application

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- The corresponding non-provisional application would benefit in three ways:
  1. Patentability would be evaluated as though filed on the earlier provisional application filing date
  2. The resulting publication or patent would be treated as a reference of the earlier provisional application filing date
  3. The twenty-year patent term would be measured from the later non-provisional application filing date
- The term “patent pending” may be used

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The USPTO …

- Application filings: 2012 projections:
  - 600,000 patent applications
  - Backlog of 1,400,000
  - 100,000 provisional applications filed per year
- Patents granted & published in 2004
  - 170,637 Utility (not Design or Plant)
  - 16,533 PCT (see slides at beginning of this pack)
  - 248,561 pending applications were published

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WSJ – 'Silly' Apple and Google

- July, 2, 2012: Judge Richard Posner of 7th US Circuit Court of Appeals threw out Apple's suit to enjoin Google from selling Android phones and Google's counter-suit, which held that Apple violated Motorola patents (Google acquired Motorola for $12 billion last year for its patents)
- Smartphones include about 250,000 claimed patents; the USPTO has set the bar for patents too low

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Can you patent your business model?

- HBR interview with Q. Todd Dickinson, Director of US Patent & Trademark Office
- You cannot patent the business model, but can patent business methods
  - Amazon one-click; Priceline's reverse auction
- Four part test for patent ability:
  1. It has to be useful
  2. It has to be new
  3. It can't be so incremental to be obvious to a skilled practitioner
  4. Disclosure has to be complete enough to other practitioners can understand it

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- State Street Bank vs. Signature Financial:
  - Software that governs business methods can be patented as long as it produces some tangible result
- 161,000 patents issues in 1999; 600 were software-related; 1,000 in 2000
- Patents are not issued for old processes that are simply made electronic

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State Street Bank vs. Signature Financial Group

- Major change in the patent environment has occurred in the past 10 years. This case effectively created a category of patents that many had previously believed to be unpatentable - generically referred to as "business method" patents (BMP's)
- The decision held that inventions relating to methods of doing business should not be rejected by the United States Patent Office, nor struck down by the courts, as non-statutorily defined subject matter
- The decision had an immediate impact on the United States Patent Office, and patent practice in general - the number of patent applications filed within this field has grown from approximately 1,300 applications in 1998 to 10,000 applications in 2001, an impressive 670% growth in four years

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Needed: a new system of IP rights

- HBR, 1997, Lester C. Thurlow
  - Shifts in technology & the economic landscape are rapidly making the current system of IP rights unworkable; an undifferentiated one-size-fits-all system
    - (next seven slides)
    - See also: "NYT – Inventing a Better Patent System – Robert Pozen, Nov 2009"

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Why the old system fails

1. The centrality of IP rights
2. The decline of public knowledge
3. The emergence of new technologies
4. The globalization of the economy

Let's examine each…

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The centrality of IP rights

- Skills & knowledge have become the only source of sustainable long-term competitive advantage
  - Used to be materials and capital
  - Microsoft-Gates vs. Oil-Rockefeller & Sultan of Brunai
- IP is central to strategic battle plans
  - eComm growth; retailer's success based on electronic info & logistics systems rather than art in the window
  - Legal budgets for IP attacks & defenses

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The decline of public knowledge

- US Gov used to pay for most basic research
- Americans believed in their tech lead
- Antitrust laws forced large labs to share
- Secrecy is a deterrent to expansion of knowledge

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The emergence of new technologies

- Creates potential new forms of IP rights & makes old rights unenforceable
- Differentiate between fundamental advances and logical extensions in knowledge
- End of the copyright system
- Consider software piracy

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Globalization of the economy

- Chinese demand for tech sharing to gain access to their Monopolist markets
- Indian-made drugs (only processes are patentable, not the drugs)

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Principles of a new system

- Balance between production and distribution of new ideas – the social benefits of faster distribution
  - The standard incentive is to give inventors a Monopoly on the right to produce the products that can be created with their knowledge – a right they can sell
- Laws must be enforceable
- The system must determine rights and resolve disputes quickly

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Discovering new value in IP

- Kevin Rivette, David Kline, HBR, Jan/2000
  - Richard Thoman, Xerox CEO: “My focus is on IP”
  - Where others see legal instruments, he sees bus tools
  - IBM generates $1 billion/year in IP license fees
    - That is largely free cash flow, drops to the bottom line
    - Would mean having to sell $20 billion of additional products
  - Challenge: how to unlock the hidden power of patents

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- Establish a proprietary market advantage
  - Stake out a proprietary market, leading to high margins
    - Barnes & Noble being Amazoned; Amazon one-click
  - Protect core technologies and business methods
    - Dell's 42 innovative business process patent apps/patents; Dell's $16 billion cross license deal with IBM; this vs. Wal-Mart
  - Boost R&D and branding effectiveness
    - Gillette's choke hold on sensor razors
    - Clustering, bracketing, and mapping
  - Anticipate market and technology shifts
  - Improve financial performance
    - Intangible assets; Tap patents for revenue
  - Enhance competitiveness

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Innovators and Entrepreneurs

Elon Musk vs Henrik Fisker

Tesla vs Fisker – Electric Automobiles

- Fisker
  - BMW (Z8) & Aston Martin (Vantage8) designer; left Ford to build a coach co, turned into a hybrid co partnered w/Quantum Technologies
  - Kleiner Perkins (Ray Lane) backed, got a $529mm US backed loan (political influence?)
    - Karma sedan (Finland) got $169mm; Nina (Delaware) got $359mm of the money – Nina to start prod in 2013
  - All electric range is 32-50 miles; combined mileage is 52 mpg – hype was for much more

What has happened to the Fisker?

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- Elon Musk
  - Born in S. Africa; sold “Blaster s/w” at age 12
  - Came to U of Penn Wharton in ’92; then to Stanford, where he dropped out after 2 days to form Zip2; in ’99 sold for $341mm
  - Started X.com in ’99, merged w/confinity, which became PayPal, acquired by eBay in ’02 for $1.5bb (Musk owned 11.7%)
  - Formed SpaceX in ’02 – Falcon 1 & 9 rockets; ’08 NASA contracts for $1.5bb & more
  - Early investor (“Cofounder”) of Tesla, & CEO
  - Also, founded Solar City, others

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Fisker Karma:
- 175 KW *generator*
- 2.0 liter 260 HP 4-cylinder direct injection motor
- 300 mi total range
- 50 mi electric range
- 0-60: 6.3 secs
- Top Speed: 125 mph
- From: $96,000
- Nextgen: “Atlantic”, US-mfg, $50-70,000, hybrid, 100% electric drive

Tesla Model S:
- 85 KW *battery*
- 265 mi range
- 0-60: 4.4 secs
- Top Speed: 130 mph
- $85,000 - $98,000

What is their status now?

- Fisker:
  - Crashed and burned, including burning over $1.2 billion in private equity and a $529 DOE LofC
  - Sold only about 2,000 Karma models, total
- Tesla:
  - Sold over 5,000 Model S's this past quarter (?), exceeding Wall Street expectations
  - Outsells Jaguar, Porche, Lincoln, Land Rover, Volvo, Lexus GS, Audi A6 and others in CA
    - Toyota Prius is CA top seller at about 17,000 units/qtr
    - Ford F-Series Pickup is nation's top seller
  - Priced at over $60,000, up to about $100,000

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Next Class: Ad Hoc Group Presentations

- Four groups formed tonight (not your teams):
- Each group will lead a discussion:
  1. Designing an Organization
  2. Legal Structures
  3. A Paradigm of Entrepreneurship Mgmt
  4. Decision Making: Between Analysis & Paralysis
- 15 – 20 minute discussion, including class participation
- **Let's assign the Groups now…**

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Next class

- The Founding Team
  - Who is your team
  - How will you build the company
  - Decision making
- Allen Ch 8: The founding team
- Angel readings, including “Between Paralysis by Analysis and Extinction by Instinct”
  - “Resiliency Through Crisis”
- Next Class: Ad Hoc Group Presentations

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