Intellectual Property

- Intellectual property rights are a bundle of **exclusive rights over creations of the mind, both artistic and commercial**
- Owners are granted certain exclusive rights to a variety of intangible assets, such as musical, literary, and artistic works; ideas, discoveries and inventions; and words, phrases, symbols, and designs
- Common types of intellectual property include **copyrights**, **trademarks** and **patents**
- The majority of intellectual property rights provide creators of original works **economic incentive to develop and share ideas** through a form of **temporary monopoly**

Intellectual Property

- The establishment of intellectual property rights represents a trade-off, to balance the interest of society in the creation of non-rival goods (goods which can be used or enjoyed by many people simultaneously) with the problems of monopoly power (producers will charge more and produce less than would be socially desirable)
- Some critics of intellectual property, such as those in the free culture movement, characterize it as intellectual protectionism or intellectual monopoly and argue that the public interest is harmed by protectionist legislation such as copyright extension, software patents and business method patents
- R. Stallman claims that the term “intellectual property” operates as a catch-all to lump together disparate laws [which] originated separately, evolved differently, cover different activities, have different rules, and raise different public policy issues

Copyright

- Is a form of intellectual property which **gives the creator of an original work exclusive rights for a certain time period in relation to that work**, including its publication, distribution and adaptation; after which time the work is said to enter the public domain
- Applies to any expressible form of an idea or information that is substantive and discrete
- May apply to a wide range of creative, intellectual, scientific, or artistic forms, or "works"
- **Does not cover ideas and information** themselves, only **the form or manner in which they are expressed**
- Typically, a work must meet **minimal standards of originality** in order to qualify for copyright, and the copyright **expires after a set period of time**

Copyright

- Copyright law recognizes the right of an author based on whether the work actually is an original creation, rather than based on whether it is unique
- **Is automatic**, and **need not be obtained through official registration** with any government office. Once an idea has been reduced to tangible form, for example by securing it in a fixed medium (such as a drawing, sheet music, photograph, a videotape, or a computer file), the copyright holder is entitled to enforce his or her exclusive rights
- The length of the term can depend on several factors, including the type of work (e.g. musical composition, novel), whether the work has been published or not, and whether the work was created by an individual or a corporation

Copyright

- Exclusive rights typically attach to the holder of a copyright:
  - to produce copies or reproductions of the work and to sell those copies (mechanical rights; including, sometimes, electronic copies: distribution rights)
  - to import or export the work
  - to create derivative works (works that adapt the original work)
  - to perform or display the work publicly (performance rights)
  - to sell or assign these rights to others
  - to transmit or display by radio or video (broadcasting rights)
- The copyright holder is free to exercise those rights, unless doing so would violate rights of others

Copyright

- A copyright, or aspects of it, **may be assigned or transferred from one party to another**.
- A copyright holder need not transfer all rights completely
- Some of the rights may be transferred, or else the copyright holder may grant another party a non-exclusive license to copy and/or distribute the work in a particular region or for a specified period of time
- Certain classes of copyrighted works are made available under a prescribed statutory license; anyone who wishes to copy a covered work does not need the permission of the copyright holder, but instead merely files the proper notice and pays a set fee established by statute (or by an agency decision under statutory guidance) for every copy made

Trademark

- A trademark or trade mark, identified by the symbols ™ (not yet registered) and ® (registered), is a distinctive sign or indicator used by an individual, business organization or other legal entity to identify that the products and/or services with which the trademark appears originate from a unique source, and to distinguish its products or services from those of other entities
- A trademark is typically a name, word, phrase, logo, symbol, design, image, or a combination of these elements
- The owner of a registered trademark may commence legal proceedings for trademark infringement to prevent unauthorized use of that trademark
- **Registration is not required**, but **an unregistered mark may be protectable only within the geographical area within which it has been used**

Trademark

- The law considers a trademark to be a form of property. Proprietary rights in relation to a trademark may be established through actual use in the marketplace, or through registration of the mark with the trademarks office
- A trademark can be registered if it is able to distinguish the goods or services of a party, will not confuse consumers about the relationship between one party and another, and will not otherwise deceive consumers with respect to the qualities of the product
- **Trademarks rights must be maintained through actual lawful use of the trademark**. These rights will cease if a mark is not actively used for a period of time

Trademark

- In the case of a trademark registration, failure to actively use the mark in the lawful course of trade, or to enforce the registration in the event of infringement, may also expose the registration itself to become liable for an application for the removal from the register after a certain period of time on the grounds of "**non-use**"
- It is not necessary for a trademark owner to take enforcement action against all infringement if it can be shown that the owner perceived the infringement to be minor and inconsequential
- **Trademark law is designed to fulfill the public policy objective of consumer protection**, by preventing the public from being misled as to the origin or quality of a product or service. By identifying the commercial source of products and services, trademarks facilitate identification of products and services which meet the expectations of consumers as to quality and other characteristics

Trademark

- In various jurisdictions a trademark **may be sold with or without the underlying goodwill** which subsists in the business associated with the mark
- In the U.S., trademark registration can only be sold and assigned if accompanied by the sale of an underlying asset
- Most jurisdictions provide for the **use of trademarks to be licensed to third parties**
- The licensor (usually the trademark owner) must monitor the quality of the goods being produced by the licensee to avoid the risk of trademark being deemed abandoned by the courts. A trademark license should therefore include appropriate provisions dealing with quality control, whereby the licensee provides warranties as to quality and the licensor has rights to inspection and monitoring

Patent

- A patent is a **set of exclusive rights granted by a state to an inventor or his assignee for a limited period of time in exchange for a disclosure of an invention**
- A patent application must include one or more claims (what a patent covers or the "scope of protection") defining the invention which **must be new, inventive, and useful or industrially applicable**
- The exclusive right granted to a patentee in most countries is **the right to prevent others from making, using, selling, or distributing the patented invention without permission**
- A patent is a limited property right that the government offers to inventors in exchange for their agreement to share the details of their inventions with the public

Patent

- **It may be sold, licensed, mortgaged, assigned or transferred, given away, or simply abandoned**
- Patent licensing agreements are effectively contracts in which the patent owner (the licensor) agrees not to sue the licensee for infringement of the licensor's patent rights, usually in return for a royalty or other payment
- It is common for companies engaged in complex technical fields to enter into dozens of license agreements associated with the production of a single product
- It is equally common for competitors in such fields to license patents to each other under **cross-licensing agreements** in order to gain access to each other's patents
- In the United States only the inventor(s) may apply for a patent although it may be assigned to a corporate entity subsequently and inventors may be required to assign inventions to their employers under the contract of employment

Patent

- In most European countries **ownership of an invention may pass from the inventor to their employer by rule of law if the invention was made in the course of the inventor's normal employment duties**
- The grant and enforcement of patents are governed by national laws; **patents are**, therefore, **territorial in nature**
- A patent is requested by filing a written application at the relevant patent office. The application contains a description that **must provide sufficient detail for a person skilled in the art** (i.e., the relevant area of technology) **to make and use the invention**
- In some countries there are requirements for providing specific information such as the usefulness of the invention, the best mode of performing the invention known to the inventor, or the technical problem or problems solved by the invention

Patent

- Four primary incentives embodied in the patent system:
  - to invent in the first place
  - to disclose the invention once made
  - to invest the sums necessary to experiment, produce and market the invention
  - to design around and improve upon earlier patents
- If inventors did not have the legal protection of patents, in many cases, they would prefer or tend to keep their inventions secret
- When a patent's term has expired, the public record ensures that the patentee's idea is not lost to humanity
- Patents have been criticized for conferring a "negative right" upon a patent owner, permitting them to **exclude competitors from using or exploiting the invention, even if the competitor subsequently develops the same invention independently**

Patent

- A holding company, pejoratively known as a "patent troll", owns a portfolio of patents, and sues others for infringement of these patents while doing little to develop the technology itself
- The law professors Michael Heller and Rebecca Sue Eisenberg postulated that intellectual property rights may become so fragmented that, effectively, no one can take advantage of them as to do so would require an agreement between the owners of all of the fragments
- The laws or patent practices of many countries suggest that **certain subject matter is or is not something for which a patent should be granted**
- The European Patent Convention provides a nonexhaustive list of what are not to be regarded as inventions, and therefore not patentable subject matter

Patent

- (EPC) The following in particular **shall not be regarded as inventions**:
  - discoveries, scientific theories and mathematical methods
  - aesthetic creations
  - schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers
  - presentations of information
- (EPC) Patents shall be granted for any inventions which are susceptible of **industrial application**, which are new and which involve an **inventive step**
- (EPC) Having **technical character** is an implicit requirement of the EPC to be met by an invention
- (EPC) **A patent application or patent which does not provide a technical solution to a technical problem would be refused or revoked as lacking inventive step**

Patent

- The United State Code sets out the subject matter that can be patented:
  - **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
- The United States Patent and Trademark Office assert that **a process, including a process for doing business, must produce a concrete, useful and tangible result in order to be patentable**. **It does not matter whether the process is within the traditional technological arts or not**

Patent

- The European Patent Office assert:
  - As with all inventions, **computer-implemented inventions are only patentable if they have technical character, are new and involve an inventive technical contribution to the prior art**
  - **Computer programs claimed as such, algorithms or computer-implemented business methods that make no technical contribution are not considered patentable inventions under the EPC**
  - **Any invention which makes a non-obvious "technical contribution" or solves a "technical problem" in a non-obvious way is patentable even if that technical problem is solved by running a computer program**
  - **The fact that an invention is useful in business does not mean it is not patentable if it also solves a technical problem**

Patent

- The United States Patent and Trademark Office has granted patents that may be referred to as software patents since at least the early 1970s
- A common objection to **software patents** is that they **relate to trivial inventions**. **A patent on an invention that many people would easily develop independently of one another should not**, it is argued, **be granted since this impedes development**
- There are a number of high profile examples where the patenting of a data exchange standards forced another programming group to introduce an alternative format. If it is discovered that these new suggested formats are themselves covered by existing patents, the final result may be a large number of incompatible formats

Copyleft

- Is a play on the word copyright to describe the practice of using copyright law to remove restrictions on distributing copies and modified versions of a work for others and requiring that the same freedoms be preserved in modified versions
- Copyright law allows an author to prohibit others from reproducing, adapting, or distributing copies of the author's work
- Through a copyleft licensing scheme, **an author may give every person who receives a copy of a work permission to reproduce, adapt or distribute the work as long as any resulting copies or adaptations are also bound by the same copyleft licensing scheme (GNU General Public License)**
- While **copyright law protects the rights of the creator by providing control of distribution and modification, the idea of copyleft is to grant subjective libre freedom to end users**

Copyleft

- **Copyleft licenses specify clauses which explicity remove those restrictions the creator considers to not provide libre freedom to the end user**
- **Many free software licenses are not copyleft licenses because they do not require the licensee to distribute derivative works under the same license**
- "Weak copyleft" refers to licenses where not all derived works inherit the copyleft license; whether a derived work inherits or not often depends on the manner in which it was derived
- "Weak copyleft" licenses are generally used for the creation of software libraries, **to allow other software to link to the library, and then be redistributed without the legal requirement for the work to be distributed under the library's copyleft license**
- Only changes to the weak copylefted software itself become subject to the copyleft provisions of such a license, not changes to the software that links to it