Intellectual Property

What are the laws for Intellectual Property?

Copyright law

- Protects authored works such as art, books, film, and music;

Patent law

- Protects inventions

Trade secret law

- Helps safeguard information critical to an organization's success

Together, copyright, patent, and trade secret legislation form a complex body of law that addresses the ownership of intellectual property.

Protection for Intellectual Objects

Literary or artistic idea should be protected by expressing it in some **tangible medium** such as a **physical book** or a **sheet of paper** containing a musical score.

If the idea is **functional in nature**, such as an invention, it must be expressed as a **machine or a process**.

Copyrights

The main aim of the copyright laws is to protect creative works such as art, music and writing.

Copyright protects "original works of authorship fixed in any tangible medium of expression" in the area of literature. Music , drama graphic, art, Sculpture, motion picture, sound recordings , architecture, and software.

Copy right cannot cover ideas or common knowledge.

Copyright does not cover creative works in intangible form.

Copyrights

The copyright owner does not have to do anything to get a copyright.

Once a creation appears in a fixed medium, it is automatically protected by copyright.

The default length of a copyright is the lifetime of the author plus 50 years after the author's death.

It recognizes four main rights of the author:

1. **Reproduction rights:** The right to reproduce the copyrighted work e.g. printing, photocopying or converting books to other medium , audio or digital format duplicating computer media such as disks, CDROMs and so on.

Copyrights

2. **Derivative rights:** The right to prepare derivative works based on the copyrighted work e.g. transferring the work into language other than its original one. Such as making a movie based on novel.

3. **Performance rights:** The right to perform or display the copyrighted work publicly. This covers all rights related to performing the work such as playing music or orchestras, acting on stages, singing songs. This also covers all rights related to communication to the public like broadcasting and distribution over cables or Internet.

Copyrights

4. **Distribution rights:** The right to distribute copies of the copyrighted work to the public by sale or other transfer of ownership or by rental , lease or lending.

Saudi copyright law was issued as per Royal Decree No. M/41 dated August 30, 2003. The Saudi copyright protects all the intellectual works of any type, and the author rights will be protected until a period of 50 years after his/her death.

Copyrights (cont'd.)

Copyright infringement

- Copy substantial and material part of another's copyrighted work without permission.
- An infringement occurs under all of the following three conditions:
  - The owner must hold a valid copyright.
  - The alleged infringer must be able to access the copyrighted work.
  - Duplication of the copyrighted work must occur beyond exceptions.
- Software piracy involves the unauthorized use of copyrighted software programs.

Copyrights (cont'd.)

What is a Fair Use Doctrine?

- A fair use is any copying of copyrighted material done for a limited purpose.
- Allows portions of copyrighted materials to be used without permission under certain circumstances such as criticism, comment, news reporting teaching, scholarship or research is not an infringement of copyright.
- Maintains balance between protecting an author's rights and enabling public access to copyrighted works

Copyrights (cont'd.)

The factors for deciding whether a particular use of copyrighted property is fair and can be allowed without penalty include:

- Purpose and character of the use (commercial use, nonprofit education purpose)
- Nature of the copyrighted work
- Portion of the copyrighted work used in relation to whole work.
- Effect of the use upon the potential market or value of the copyrighted work.

Fair use policy is not used for unpublished works.

Intellectual Property Protection for Software

Copyright is used to protect the parts of a computer program that are works of creative authorship.

The source code of a computer program is a creative work of authorship and is copyrighted.

Short snippets of code may not be copyrighted for the same reason that very short phrases cannot be copyrighted.

If the programs look different such as Java and C++ and they could be considered the same program **if they use exactly the same logic.**

The look and feel of a game as a whole can be copyrighted.

Doctrine of First Sale

The doctrine of first sale says that the author is not entitled to a second royalty. The owner of a particular copy is entitled to sell or otherwise dispose of the possession of that copy without the authority of the copyright owner.

But first sale does not apply for ebooks. We should know for modern copyright protection schemes – Digital Rights Management (DRM)

Digital Rights Management (DRM)

The term Digital Rights Management (DRM) refers to a collection of technologies that work together to ensure that copyrighted content can be only viewed by the person who purchased it. When you purchase content for devices protected by DRM, the content is often locked so that so that it can be used only on your devices e.g., a book purchased for Amazon Kindle cannot be read on your friend's Kindle and vice versa.

In DRM system, the copyrighted material is encrypted. This means it cannot be read, unless you have a special numerical key specific to your device to unlock it,

Digital Millennium Copyright Act (DMCA)

No system of encryption is fool proof. Computer Security experts or hackers are often able to decrypt the material and produce a version that is usable on any device.

To prevent this, A Digital Millennium Copyright Act (DMCA) has been passed.

Anti-circumvention clause: "*No person shall circumvent a technological measure that effectively controls access to a work protected under this title.*"

DMCA prevents hackers to decrypt the material and produce a versions that can be used on any device.

Comparing Plagiarism to Copyright violation

Plagiarism means "Stealing someone's ideas or words and passing them off as one's own".

Plagiarism does not mean copy infringement. Consider a situation where a student pay a friend to write an essay. The student turns this essay in as her own work, with the friend's permission. This would be plagiarism,

Copyright infringement does not imply plagiarism. If we include a copy of Mr. X's professional photographs., we would be charged with copyright violation unless we obtained permission from him. However, we would avoid charges of plagiarism.

Copyrights (cont'd.)

Example

A software manufacturer can observe the operation of a competitor's copyrighted program and then create a program that accomplishes the same result and performs in the same manner. To prove infringement, the copyright holder must show a striking resemblance between its software and the new software that could be explained only by copying. However, if the new software's manufacturer can establish that it developed the program on its own, without any knowledge of the existing program, there is no infringement.

For example, two software manufacturers could conceivably develop separate but nearly identical programs for a simple game such as tic-tac-toe without infringing the other's copyright.

Copyrights (cont'd.)

Tetris is a very popular computer game that was created in 1984. Over the years, versions of Tetris have been developed and licensed to run on Nintendo's Game Boy, DS, and Wii; Sony's PlayStation; Apple's iPod, iTouch, and iPhone; and Android phones. Xio Interactive was a small company formed for the purpose of creating an unlicensed iPhone version of Tetris—named Mino.21 However, shortly after Xio posted its Mino app to the Apple iTunes store, Tetris filed a copyright infringement lawsuit against the company. In its defense, Xio argued that because it only copied the rules and basic functionality of the game, and not its more original components, there was no infringement. While the court agreed that the fundamental rules and basic functionality of the game could not be protected, it pointed out that many other elements of the game had been copied, including the color, shape, and number of game bricks; how the pieces were formed from the game bricks; and the manner in which the pieces moved. In addition, the court noted that screen shots of the games viewed side by side were nearly identical. The court ruled that Xio was permanently banned from selling, displaying, or promoting the Mino game.

Sharing Versus Selling

Earlier copyright infringement through sharing had only a small impact on businesses, because each legal purchaser would only share his/her media with a few close friends.

With the advent of the internet, it became possible to share a single legal copy of a work with thousands of other people. The fact that these items were shared not sold turned out to be legally relevant, since there was no private financial gain.

Nowadays, the term financial gain includes receiving copyright material for free.

Patents

Invention: any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement.

- Distinct from an artistic or creative work which is largely aesthetic and based on its usefulness.
- Protected by patents. Grant of property right to inventors

Permits an owner to exclude the public from making, using, or selling the protected invention

Allows legal action against violators

Unlike a copyright, it prevents independent creation as well as copying

Patents

An invention must pass four tests

- Must be in one of the five legal classes of items: process, machine, manufacture, composition of matter, new improvement.
- Must be useful
- Must be novel- if it has not previously been invented by someone else.
- Must not be obvious to a person having ordinary skill in the same field

Items cannot be patented if they are:

- Abstract ideas
- Laws of nature
- Natural phenomena

Patents

Once is patent is issued, it typically lasts twenty years from the date the application is filed.

Obtaining patent can be expensive. Many different fees are associated with filing a patent. Additional fees are associated with maintaining an existing patent.

Once an invention is patented, no one can make, use, offer to sell or sell the invention without the patent holder's permission. Patents were designed to stimulate the advancement of the technological arts by allowing inventors of new technologies to profit from them.

Software Patents

The term "**software patent**" encompasses ideas, processes and operational methods executed on a computer to achieve some desired result. The figures in software patents tend to be flow charts and decision trees.

Thus, for a particular software program, it is possible that one or more features or aspects are patented, but it would be unusual for an entire program to be the subject of a single software patent, as most programs or games incorporate too many independent features (many of which have been in existence for a long time).

Software Patents

A software patent's cost and enforcement may be higher, depending on the complexity of the patent's requirements.

The U.S. Patent and Trademark Office (USPTO) granted thousands of software-related patents per year. Application software, business software, expert systems, and system software were patented, along with such software processes as compilation routines, editing and control functions, and operating system techniques.

Intellectual Property Protection for Software

The biggest controversy over IP and software revolves around the use of patents to protect software.

It would be reasonable to patent a piece of software if it was a genuine invention, but sometimes experts cannot agree which pieces of software are genuine inventions, or even on whether or not a piece of software can be an invention

Concerns for Software Patents

1. A software patent may involve the protection of abstract ideas that may have commercial value. The legal boundaries used to define an abstract idea are not well defined and may differ according to region and law.
2. Allowing the patenting of software may lead to reduced innovation in the technology world, as there may be dependencies and interdependencies for different software and discourage the same.
3. Patentable and non-patentable software does not have a globally recognized separation.
4. There may be legal and technical complications related to understanding software innovation and associated technical requirements.

What Is Patent Infringement?

When someone sells, imports, uses, or makes a product that someone else invented without permission, patent infringement has occurred. Patent infringement is easy to do, as all patent information is public and accessible by anyone.

While it may be simple, the act is illegal. In the event a patent holder decides to sue, the court will often step in and stop the illegal activity from continuing and sometimes punish the infringer with penalties such as monetary awards to the patent holder.

What Are the Types of Patent Infringement?

Direct infringement. Making, using, selling, trying to sell, or importing something without obtaining a license from the patent holder is considered direct patent infringement.

Indirect infringement. Indirect infringement includes contributory infringement and inducement to infringe a patent. Under these terms, even if a company isn't the one that originally infringed on the patent, that company can still be held accountable for patent infringement.

Induced infringement. This occurs when a person or company aids in patent infringement by providing components or helping to make a patented product. It occurs through offering instructions, preparing instructions, or licensing plans or processes.

What Are the Types of Patent Infringement?

Contributory infringement. Someone provides a part or a product to help someone else infringe a patent. That part or product must not have any other reasonable use.

Literal infringement. To prove literal infringement, there must be a direct correspondence between the infringing device or process and the patented device or process.

Willful infringement. Willful infringement means that another person or company purposely used someone else's patented ideas or products. A simple way to disprove willful infringement is to hire a patent attorney, who presumably will inform his or her client if infringement is about to occur.

Patent infringement

Patent infringement, or the violation of the rights secured by the owner of a patent, occurs when someone makes unauthorized use of another's patent. Unlike copyright infringement, there is no specified limit to the monetary penalty if patent infringement is found.

In fact, if a court determines that the infringement is intentional, it can award up to three times the amount of the damages claimed by the patent holder.

Patent lawsuits

Oracle and Google battled over patent infringement claims associated with Oracle's Java programming language—with Oracle seeking $6 billion in damages.

Apple sued Samsung for patent infringement regarding several patents associated with Apple's smartphone and tablet devices. Apple was ultimately awarded $1.1 billion in damages.

Cross-Licensing Agreements

Many large software companies have cross-licensing agreements in which each party agrees not to sue the other over patent infringements. For example, Apple and HTC battled for several years over various mobile phone-related patents, which eventually led to the U.S. International Trade Committee banning imports of two models of the HTC mobile phone. The two companies eventually agreed to a 10-year cross-licensing agreement that permits each party to license the other's current and future patents.

Trademark

Trademark is a legally registered sign such as logos, words, letters, abbreviations, symbols, drawings or any combination, package design, phrase, sound that enables consumer to differentiate one company's product or services from another's in the market place.

Trademark owner can prevent others from using the same mark or a confusingly similar mark on a product's label

Organizations frequently sue one another over the use of a trademark in a Web site or domain name.

Trademark is a property of a single person, company or even institute that registers it.

Trademark

It is also possible to register a trademark that protects other identifying characteristics of a product.

- colors
- sounds
- shapes

No one can use the company's trademark in a way that is likely to cause confusion among consumers.

One important law of trademark is **trade dress** of a product which involves the look and feel of the product or its packaging.

Some companies have attempted to use **trade dress protection** to prevent others from copying the look and feel of their websites.

Trademark

The company must register its trademark so it can protect it by trademark laws. As a result this company can prohibit others from using it. Unregistered trademarks can be protected after it has acquired enough reputation in the market.

As a result, customers can be protected from cheating caused by using the same mark but different quality and different origin.

The trademark is held for indefinite time once it is registered, it will remain for the owner but he/she must keep renewing it.

Trade Secrets

A trade secret is a formula, practice, process, design, instrument, pattern, commercial method, or compilation of information not generally known or reasonably ascertainable by others by which a business can obtain an economic advantage over competitors or customers….. ***Wikipedia***

Trade Secret is an alternative to patent or trademark law that allows for intellectual property to remain undisclosed.

Trade Secrets

Trade secret is defined as business information

- Represents something of economic value
- Requires an effort or cost to develop
- Some degree of uniqueness or novelty
- Generally unknown to the public
- Kept confidential

Information is only considered a trade secret if the company takes steps to protect it

Trade secret law protects only against the misappropriation of trade secrets.

Trade Secrets

Owners of trade secrets seek to protect trade secret information from competitors by instituting special procedures for handling it, as well as technological and legal security measures.

Legal protections include

- non-disclosure agreements (NDAs), and
- non-compete clauses

Trade Secrets

In other words, in exchange for an opportunity to be employed by the holder of secrets,

- an employee **may sign agreements** to not reveal their prospective employer's proprietary information.
- to **surrender or assign** to their employer **ownership rights** to intellectual work and work-products produced during the course (or as a condition) of employment.
- to **not work** for a **competitor** for a given period of time (sometimes within a given geographic region).

Violation of the agreement generally carries the possibility of heavy financial penalties which operate as a disincentive to reveal trade secrets.

Trade Secrets (cont'd.)

Trade secret law has a few key advantages over patents and copyrights

- No time limitations on the protection of trade secrets,
- No need to file an application
- Patents can be ruled invalid by courts after some time period but this risk does not exist for trade secrets
- No filing or application fees to protect a trade secret.

Trade secret law varies greatly from country to country

Saudi Authority for Intellectual Property (SAIP),

Saudi Arabia has recently established a new "Saudi Authority for Intellectual Property" (SAIP), which will consolidate all the different IP departments under one umbrella. The intention of this newly established authority is to lead the Saudi Arabia IP national strategy, updating the IP rules and regulations, providing the IP products and services in a timely and high-quality manner, increasing IP awareness for all stakeholders, including inventors, creators, entrepreneurs and consumers; and coordinating IP enforcement efforts with the other Ministries and Departments.

Plagiarism

Stealing someone's ideas or words and passing them off as one's own

Many students:

- Do not understand what constitutes plagiarism
- Believe that all electronic content is in the public domain

Plagiarism is also common outside academia

Plagiarism detection systems

- Check submitted material against databases of electronic content

Plagiarism (cont'd.)

TABLE 6-3 Partial list of plagiarism detection services and software

Name of service	Web site	Provider
iThenticate	www.ithenticate.com	iParadigms
Turnitin	www.turnitin.com	iParadigms
SafeAssign	www.safeassign.com	Blackboard
Glatt Plagiarism Services	www.plagiarism.com	Glatt Plagiarism Services
EVE Plagiarism Detection	www.canexus.com/eve	CaNexus

Source Line: Course Technology/Cengage Learning.

Plagiarism (cont'd.)

Steps to combat student plagiarism

- Help students understand what constitutes plagiarism and why they need to cite sources
- Show students how to document Web pages
- Schedule major writing assignments in portions due over the course of the term
- Tell students that instructors are aware of Internet paper mills and plagiarism detection services
- Incorporate detection into an antiplagiarism program

Competitive Intelligence

Competitive Intelligence (CI) is the collection and analysis of information to anticipate competitive activity, see past market disruptions and dispassionately interpret events.

It is an essential component to developing a business strategy.

CI analysis provides insight into marketplace dynamics and challenges in a structured, disciplined, and ethical manner using published and non-published sources.

Data needed for CI

- Annual reports or quarterly reports
- Press releases
- Promotional materials
- Web sites
- Analyses by the investment community, such as a Standard & Poor's stock report
- Interviews with suppliers, customers, and former employees
- Calls to competitors' customer service groups
- Articles in the trade press
- Environmental impact statements and other filings associated with a plant expansion or construction
- Patents

Competitive Intelligence Software

Rapportive is software that can be added to your email application or Web browser to provide you with rich contact profiles that show you what people look like, where they are based, and what they do. Such information can help you build rapport quickly by enabling you to mention shared interests.

Crunchbase is a free database of technology of over 110,000 companies, people, and investors.

Competitive Intelligence Software

CORI (http://cori.missouri.edu/pages/ksearch.htm) is a database of contract documents available online using a full-text search and retrieval system.

ThomasNet.com is an excellent source for identifying suppliers and sources for products.

WhoGotFunded.com is a comprehensive Web site of data about what organizations have received funding and for what purposes.

Cybersquatting

Cybersquatting (also known as domain squatting), is registering, selling or using a domain name with the bad faith intent of profiting from the goodwill of someone else's trademark.

It generally refers to the practice of buying up domain names that use the names of existing businesses with the intent of holding the address hostage or sell it at an inflated value to the trademark owner or a third party..

In short, Cybersquatting means using somebody's name and creating a website for one's benefit.

To curb cybersquatting, register all possible domain names

- .org, .com, .info

Cybersquatting

Most common instances of Cybersquatting:

An identical domain with a different extension(e.g. you own **yourbrandname.com.au** and the cyber squatter **registersyourbrandname.net.au**)

A slightly misspelled version of your domain name(EG: you own **yourbrandname.com.au** and the cyber squatter **y0urbrandname.com.au**)

Posting paid links or advertising related to the trademark to attract users seeking information

Sell the 'squatted' domain to the brand owner for a profit

Example of Cybersquatting

If a random person, Joe, made a website called **www.michaeljordan.com**, pretending to be Jordan, etc, he would make unwarranted profits, and have an unfair advantage over his online colleagues in terms of revenue from advertising.

Hence, for obvious ethical reasons, there are anti-cybersquatting laws in effect. The law was introduced on the grounds that it is unethical for people to obtain domain names that are identical to a trademark. This legislation gave the victim the power to sue violators of this task.

Cybersquatting (cont'd.)

Internet Corporation for Assigned Names and Numbers (ICANN)

- Several top-level domains (.com, .edu, edu., .gov, .int, .mil, .net, .org, aero, .biz, .coop, .info, .museum, .name, .pro, .asis, .cat, .mobi, .tel, and .travel)
- Current trademark holders are given time to assert their rights in the new top-level domains before registrations are opened to the general public
- Anticybersquatting Consumer Protection Act allows trademark owners to challenge foreign cybersquatters

ACPA says

Anti-Cybersquatting Consumer Protection Act (ACPA) determines cybersquatting if

The domain name registrants' intention was to profit from the domain name in bad faith.

The trademark was in effect and widely known at the time the domain was registered

The domain name is identical to the trademark

Reverse Engineering

Process of taking something apart in order to:

- Understand it
- Build a copy of it
- Improve it

Applied to computer:

- Hardware
- Software

Convert a program code to a higher-level design

Convert an application that ran on one vendor's database to run on another's

Example of reverse engineering

Microsoft has been accused repeatedly of reverse engineering products—ranging from the Apple

Macintosh user interface,

- to many Apple operating system utility features that were incorporated into DOS (and later Windows),
- to early word-processing and spreadsheet programs that set the design for Word and Excel,
- to Google's methods for improving search results for its Bing search engine