Professional Practice

5. Intellectual Property

Level III - Semester 5

Intended Learning Outcomes

At the end of this lesson, you will be able to;

- Be familiar with the main types of intellectual property right
- Understand how these rights can be used to protect software and be aware of the limitations of this protection
- Understand the main issues in the continuing debate about software patents
- Outline different types of creative commons licenses and how they can be applied to software.
- Understand the fair use policy and how to apply it.

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5.1.1 Tangible Properties Vs Intangible Properties

Tangible properties

- Anything you can physically touch.
  eg: bicycle, inventory of buildings

➢ If someone steals your bicycle, you no longer have it.

Intangible properties

- Anything of value that you can't physically touch.
  eg: trademarks, domain names, knowledge

➢ If you invent a drug that will cure all known illnesses and leave the formula on your desk.
➢ Someone can come along, read the formula, remember it, and go away and make a fortune out of manufacturing the drug.
➢ But you still have the formula even though the other person now has it as well.

💡 Formula vs Bicycle

5.1.1 Tangible Properties Vs Intangible Properties

Theft - taking away a piece of someone's property with the intention permanently to deprive them of it.

- Property such as bicycles or computers is called **tangible property**, that can be touched. It is protected by laws relating to theft and damage.
- Property that is intangible is known as **intellectual property**. It is governed by a different set of laws, concerned with **intellectual property rights**

Intellectual property rights is, rights to use, copy, or reveal information about intellectual property.

- Why is it **important** for us?
    - Software can be very valuable, and software is intangible property. The industry can only therefore protect its assets by using intellectual property rights.

5.1.2 Different Types of Intellectual Property Rights

In software and the information systems industry following rights should be looked on as a package, since different rights may be used to protect different aspects of a piece of software.

Copyright,

- Concerned with the right to copy something.
- It may be a written document, a picture or photograph, a piece of music, a recording, or many other things, including a computer program.

Patents

- Primarily intended to protect inventions, by giving inventors a monopoly on exploiting their inventions for a certain period.

Confidential information

- Information that a person receives in circumstances that make it clear they must not pass it on.

Trade marks

- Identify the product of a particular manufacturer or supplier.

5.1.2 Different Types of Intellectual Property Rights

Example:

A company has developed an innovative computer game called 'Spookcatcher'. The game is marketed in packaging that features the name superimposed on the image of a ghost. It comes with an add-on device that the company has invented called a wailer. This attaches to the computer and emits very convincing ghostly wails at suitable points in the action. The software uses some very clever data structures developed within the company that make it possible to achieve very high performance.

- The law of **copyright** automatically protects the source code and all documentation of the package from copying.
- The company might be able to **patent** the wailer, in which case no one else would be able to produce a similar product.
- The law relating to **confidential information** could be used to prevent any employee who left to join a competitor from passing on details of the clever data structure.
- The name and the logo could be registered as a **trade mark** to prevent other companies from using it on their products.

Example taken from Bott, F., 2014. Professional issues in information technology (2nd edition). Chapter 13

5.2 Copyrights

- **Copyright** is associated primarily with the right to copy work.
- Copyright law protects three categories of **work**,
  - Original literary, dramatic, musical and artistic works
  - Sound recordings, films, broadcasts and cable programs
  - The typographical arrangement of published editions
- In Software industry, concerned with the first category since the 1988 **Copyright Design and Patents Act** states that the term '**literary work'** includes
  - A table or compilation
  - **A computer program**
  - Preparatory design material for a computer program
  - **Certain databases.**

Even if you did copy the statement i :=i+1 from someone else's program, you will not have infringed their copyright, because the word "**Original"** in Original Literary

5.2.1 The rights of the copyright owner

Copyright law gives the owner of the copyright certain **exclusive rights.** The rights relevant to software are,

- **The right to make copies of the work**:
- **The right to adapt the work** (This includes translating it, from English to Chinese or from C to Java.)
- **The right to issue copies of the work to the public**:
- **The right to rent or lend the work to the public**
- **The right to perform, play or show the work in public**
- **The right to broadcast the work**

Need copyright owner's permission to do these things.

5.2.1 The rights of the copyright owner

- In some cases, the permission may be implied rather than explicit.

  Example:

  The act of making a document available on the web implies,
  - People are allowed to view it over the internet
  - Which involves copying it into the memory of their own computer
  - It does not necessarily extend to allowing people to store copies on their local disc or to print it.

- These rights last for **70 years after the death of the author**, But, there are many exceptions and special cases which overwrite this.

- Copyright law does not give the owner of the copyright any power to prevent someone else **using** or **publishing identical material** .
  - They can show that they did not produce it by copying the copyrighted work.

5.2.2 What you can do to a copyright work?

The law specifically permits certain actions in relation to a copyrighted work that you have **rights** to use.

- Can **make a backup of a program** that you are authorized to use. Only one such file is allowed.
- Can '**decompile' a program** to,
  - **correct errors** in it.
  - **obtain the information** you need to write a program that will '**interoperate' with it**, provided this information is not available to you in any other way.
- Can **sell your right** to use a program in the same way that you can sell a book you own.
  - When you do this, you sell all your rights. In particular, **you must not retain a copy of the program.**

5.2.3 Databases

- Copyright subsists in a database if '**its contents constitute the author's own intellectual creation'**.
- Many databases do not satisfy this criterion but require a lot of effort and a lot of money to prepare. Examples might include databases of hotels, pop songs, geographic data
- To encourage the production of such modest but useful databases, regulations were introduced in **1997 to create a special intellectual property right** called the `**database right**`.
- This subsists in a database 'if there has been substantial investment in **obtaining**, **verifying** or **presenting** the contents of the database'.
- It lasts for **15 years** and prevents anyone from extracting or reusing all, or a substantial part of, the database without the owner's permission.
- If it is updated, a new 15-year period will start.

5.2.4 Copyright Infringement

- Anyone who, without permission, does one of the things that are the exclusive right of the copyright owner is said to **infringe the copyright**.
- There are **two sorts of infringements**,
  - **Primary Infringement** - takes place whenever any of the exclusive rights of the copyright owner is breached.
  - **Secondary Infringement** - occurs when primary infringement occurs in a business or commercial context.

5.2.4 Copyright Infringement

Primary Infringement - Takes place whenever any of the exclusive rights of the copyright owner is breached.

- It is a matter for the civil courts
- A **claim for damages** and an **injunction to refrain from the infringement** are some remedies for this.

Secondary Infringement - Occurs when primary infringement occurs in a business or commercial context.

- In the case of software it involves,
  - Trading in pirated software
  - Using pirated software within a business.
- This is a much more serious matter and may result in criminal proceedings leading to a **substantial fine** or **imprisonment** and the **confiscation of the copying equipment**, as well as **civil damages**.

5.2.4 Copyright Infringement

There are some cases in which it may be **difficult to demonstrate** that **copying** has taken place.

- **Books of mathematical tables** -
  - The numbers in them have an objective existence

    Eg:

    > The square root of 2 correct to four decimal places is 1.4142, regardless of who calculated it.
  - The compilers of mathematical tables commonly insert a few small, random errors in their tables.
  - Anyone who copies the tables rather than recalculating them will reproduce the errors and this can be adduced as evidence to show that copying has taken place.
- **Source code** -
  - The writer could insert the occasional statement that had no functional effect.
  - If the code were copied, the presence of such statements would be convincing evidence of the fact.

5.2.5 Ownership and Licensing

5.2.5.1 Ownership

The copyright in a work **belongs initially to its author**.

- If the work is **jointly** written by several authors, they **jointly own the copyright**.
- If the author is **legally an employee** and has written the work as part of his job, then the **copyright belongs to the employer**. Unless there is an explicit, written agreement to the contrary.
- If the author is an **independent contractor, he or she will own the copyright** unless there is an agreement to the contrary.

The owner of the **copyright can transfer ownership** to someone else. This is known as **assignment of the copyright** and must be done in writing. In this case, the new owner of the copyright has all the rights that the previous owner had.

5.2.5 Ownership and Licensing

5.2.5.2 Licensing

- The owner of the copyright can **license** other people or organizations to carry out some of the activities that are otherwise the exclusive right of the copyright owner.
- The copyright remains the property of the owner, but the licensees (the people to whom licensed) acquire certain rights.
- There are many different types of licences in use.

  Examples:

  - Creative Commons
  - Royalty-free
  - General Public License (GPL)

5.3 Examples of Copyright Cases Involving Software

- Copyright infringement is one of the commonest reasons for litigation in the IT industry.
- Following are few examples of typical copyright cases involved in software, to avoid inadvertently exposing ourselves to such litigation.
  - Lotus Dev. Corp. versus Borland Int'l, Inc.
  - Perreira and Oroyan versus US Federal Government
  - Cantor Fitzgerald versus Tradition (UK) Ltd and Others
  - Navitaire Inc. versus easyJet and Bulletproof Technologies Inc.
  - Oracle Corp versus SAP AG
  - Oracle Corp versus Google

5.3.1 Lotus Dev. Corp. versus Borland Int'l, Inc.

- Borland released a spreadsheet product, **Quattro Pro**, that had a compatibility mode in which its menu imitated that of **Lotus 1-2-3**, a competing product.
- None of the source code or machine code that generated the menus was copied, but the names of the commands and the organization of those commands into a hierarchy were virtually identical.
- Quattro Pro has a function called "Key Reader" that enabled it to use Lotus 1-2-3 keyboard macros. The Quattro Pro code included a clone of the Lotus menu hierarchy that represented each command by its first letter rather than by its complete name in order to accommodate this feature.
    - Philippe Kahn, CEO of Borland, presented his argument to the software development community claiming that Lotus's position would hinder innovation and harm the field's future. The majority of the software development community agreed with Borland's stance.
    - Lotus filed suit on July 2, 1990, claiming that the structure of the menus was copyrighted by Lotus. The district court ruled that Borland had infringed Lotus's copyright. The decision was somewhat supported by the notion that a different, acceptable menu structure could be created. For example, the "Quit" command could be changed to "Exit"

5.3.2 Perreira and Oroyan versus US Federal Government

- The two defendants had been buying Microsoft X-box game consoles, which are normally sold without any game or other software, the purchaser being expected to buy or rent games software, DVDs and so forth, separately.
- The defendants were installing hundreds of games, as well as music videos and feature length movies, without the permission of the copyright owners, and selling the resulting modified X-boxes at a considerable profit.
- The defendants could have faced a penalty of five years in jail and a fine of $250,000. In the event, when they were arrested in 2006, they chose to cooperate with the FBI's investigators and as a result the penalties were comparatively light.
  - One defendant was sentenced to four months imprisonment, four months of home confinement and three years of supervised release.
  - The other defendant escaped a prison sentence but was sentenced to 300 hours of community service, three months of home confinement and five years' probation.

5.3.3 Cantor Fitzgerald versus Tradition (UK) Ltd and Others

- A system for inter-dealer bond broking, a somewhat esoteric financial activity in which both Cantor Fitzgerald (CF) and Tradition (UK) are involved.
- Michael Howard, the managing director of CF, was fired and later accepted a job with Tradition. He brought along with him two very talented junior employees who were formally employed as trainees as well as Christopher Harland, a senior member of the team who had worked on CF's system.
- They created a system for Tradition in less than three months that was a huge advance over the CF system while sharing many of its characteristics.
- The claimants alleged that this must have been a copy of their system. They therefore brought an action for copyright infringement against Tradition itself and against Howard and Harland.

5.3.3 Cantor Fitzgerald versus Tradition (UK) Ltd and Others…

- The judge ruled that Howard, Harland and the programmers (who were not sued individually) had infringed copyright and that Tradition, as their employer, was also liable.
- The extent of the liability was, however, very much limited by the fact that only a small proportion of the system had been copied. Many of the claims made by CF were unjustified.
- Howard denied there had been any copying when CF filed the lawsuit against Tradition. This caused Tradition to spend a lot of money on a line of defense that ultimately had to be abandoned.
- The judge ruled also that, by not telling Tradition about the copying while the system was being developed, he had failed in his duty to his employer. For these reasons, therefore, Howard was obliged to indemnify Tradition against its costs and damages
- The circumstances of this case are not unusual and it serves to demonstrate how easily behaviour that may seem only marginally dishonest can result in expensive litigation.

5.3.4 Navitaire Inc. versus easyJet and Bulletproof Technologies Inc.

- In November 1996, easyJet, a successful UK budget airline, purchased a license from Open Skies Inc to use its ‘OpenRes’ ticketless airline booking system.
- In October 1998, Open Skies Inc was acquired by Hewlett Packard who, in November 2000, sold it on to PRA Solutions, a subsidiary of Accenture, one of the world’s biggest management consulting companies.The company was later renamed Navitaire Inc.
- By 1999, communication between the two businesses had weakened as a result of Navitaire's slowness in responding to maintenance requests and a significant rise in maintenance fees following its acquisition by Accenture.
- As a result, easyJet hired Bulletproof to create a substitute system that had almost exactly the same features, down to the user interface. This new system, known as ‘eRes’, went live in December 2001.
- Navitaire did not claim that easyJet or Bulletproof had access to the source code, it claimed there were copyright infringements occurred in a number of aspects of the system:
    - **User keyboard commands.** The judge ruled that these were not protected by copyright.

5.3.4 Navitaire Inc. versus easyJet and Bulletproof Technologies Inc.

- **Screen layouts and icons.** The judge ruled that the GUI screens and the icons were subject to copyright and it had been infringed. However,this infringement had not caused Navitaire any losses.
- The '**business logic**' of the OpenRes system, which refers to aspects of the system such as the relationship between the commands and the screens. The judge ruled that all of these had been copied but that they were not protected by the copyright in the source code. Instead, these were characteristics found frequently in airline reservation systems.
- The **OpenRes database structure**. The judge ruled that although a few instances of direct copying of low-level aspects of the OpenRes database structure were infringements, they had no influence on how the eRes database was created. Most of what might be regarded as copying was covered by the interoperability right. That for the purpose of data migration, various infringing interim copies of the OpenRes database structure were made. The judge found these were either covered by the interoperability right or were infringements that caused no loss.

The judge's rulings in this case were important.

5.3.5 Oracle Corp versus SAP AG

- Oracle claimed that TomorrowNow, a SAP subsidiary which provides support for older Oracle products at a discount, had infringed Oracle's copyright by downloading documentation and software from its customer support site, using the credentials of Oracle's customers whose support credentials had just expired or were about to.
- Initially SAP argued that it had a right to download the material since those clients had hired TomorrowNow to offer third-party support for their Oracle products.
- Later, SAP admitted the infringement and the suit was brought in order to determine the damages payable. Oracle argued that the damages should be based on the amount that a customer would have had to pay in licence fees and support charges to be able to access legally all the material downloaded by TomorrowNow.
- This amounted to some $2bn. SAP argued that Oracle had not suffered any financial loss through TomorrowNow's actions and that the damages should be limited to a very much smaller figure, somewhere between $28mn and $409mn.
- In November 2010, the jury in the case awarded damages of $1.3bn to Oracle, essentially accepting Oracle's argument that the damages should be based on hypothetical licence fees.

5.3.6 Oracle Corp versus Google

- A case concerning Google's use of Oracle's Java APIs in the Android platform.
- The Court held that Google's use did not constitute fair use as a matter of law, and remanded the case for a trial on damages.
- The Court rejected Google's argument that using the APIs in a smartphone context was transformative enough and held Google effectively prevented Oracle from accessing the potential mobile devices market for the APIs.
- The Court stated that "there is nothing fair about taking a copyrighted work verbatim and using it for the same purpose and function as the original in a competing platform," and that Google's "superseding use is inherently unfair."

5.4 Confidential Information

- Information cannot be ‘stolen’.
- It is possible to take action in a civil court to prevent someone from using or revealing information that they have received in confidence.
- The critical point is that the information must have been given to that person in circumstances that give rise to what is known as an **obligation of confidence.**

💡 Confidential information is not at all the same thing as professional skill and expertise.

> If, as part of your employment, you learn to program in Java or to design using UML you take these skills with you and you are entitled to use them in your new employment.

5.4.1 Obligation of Confidence

- There is an **implicit** obligation of confidence on employees restraining them from revealing confidential information relating to their employer and his business.
- In order to ensure that the employee is aware of this commitment, it will be reaffirmed in the **employment contract.**
- A **non-disclosure agreement (NDA)** is an agreement that is specifically intended to set up an obligation of confidence.

  For example, when two companies are discussing possible collaboration, each side will sign such a non-disclosure agreement to protect the information that they exchange.

- **Where there is no specific contractual term** that creates an obligation of confidence, such an obligation may still exist if a reasonable person, acting in the place of the recipient of the information, would reasonably understand that the information was being given to them in confidence.

5.4.2 Trade Secrets

- The term **trade secrets** refers to novel and effective techniques that companies develop to enable them to produce goods efficiently or perhaps to produce goods that are uniquely attractive to their target market..

  Examples:

  - Secret ingredients in soft drinks, cat foods fall into this category
  - Use of a novel data structure in the implementation of a database management system.
  - Ideas that might be the subject of a patent application, because the application may be rejected if it can be shown that the ideas had already been made public.
- It is important that the trade secrets needs to be only discusses in conditions where an **obligation of confidence exists**, through the signing of a non-disclosure agreement or otherwise.

5.4.3 Public Interest Disclosure

- An obligation of confidentiality is not absolute. A court may rule that it is in the public interest that certain confidential information is disclosed.
- Disclosure of information will be a **qualifying disclosure** if one or more of the following has occurred or is about to occur and information showing that any of these has been concealed.
  - A criminal offence
  - Failure to comply with a legal obligation
  - A miscarriage of justice
  - Danger to health and safety
  - Environmental damage
- A worker making a qualifying disclosure will only be protected against victimization if the disclosure is made in the **right circumstances.** In this case, the disclosure is known as a **protected disclosure**.
- To be a **right circumstance**,
  - First raise the matter internally
  - If it is inefficient disclose the information to a professional body or to a public official.
  - In most serious cases disclosure to the media

5.5 Patents

- Inventors are often hesitant to reveal the details of their invention, since they fear that someone else might copy it.
- A **patent** is a temporary right, granted by the state, enabling an inventor to prevent other people from exploiting his invention without his permission, which will **encourage new inventions, and disclosure of those new inventions**.
- It does not come into existence automatically like copyrights; the inventor must **apply for the patent to be granted**.
- The **protection** it gives is much stronger than copyright. Because the grant of a patent allows the person owning it (the patentee) to prevent anyone else from exploiting the invention, even if they have discovered it for themselves.

5.5 Patents

- Patent grants a **temporary monopoly** which gives the inventor a chance to recoup investments made during the development of his invention. They could,
  - Use the patent to monopolize the market
  - Excluding possible competitors by enforcing their patent.
  - Set a high price and make a nice profit.
  - Request money from others in return for a license to practice the invention. The licensing income then provides extra income. Licensing a patent can be a very lucrative business.
- **After the monopoly period expires,** everyone else is free to exploit the invention. And because of the disclosure made by the inventor, it is very easy to do so.

5.5.1 What can be patented?

Invention can only be patented if it satisfies following:

- Is new -
  - It must not have been disclosed or used publicly before the date on which the patent application was made.

    If Alexander Graham Bell had demonstrated the telephone or written an article about it before he applied for his patent, the patent would not have been granted.

  - Any publication describing the invention, no matter how obscure the source, will lead to the rejection of the application.
- Involves an inventive step
  - It must not be something that anyone reasonably competent in the field would have produced if faced with the same requirements
- Is capable of industrial application
  - invention must have a practical application
- Is not in an area specifically excluded

5.5.2 Areas Specifically Excluded

- Scientific theories:

  The theory of gravity cannot be patented although a machine that uses it in a novel way could be.

- Mathematical methods:

  Methods used for carrying out floating point arithmetic cannot be patented. A machine that uses the ideas can however be patented.

- A literary, dramatic, musical or artistic work or any other aesthetic creation:

  These are protected by copyright.

- The presentation of information:

  This is covered by the law of copyright.

- A scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer.

5.5.3 Obtaining a Patent

- Unlike copyright, which comes into existence automatically when the protected work is recorded, a patent must be explicitly applied for.
- Patents are granted by national patent offices. Inventors who want protection in several different countries must, apply separately to the patent offices of each country.
- The requirement that an invention must be new if a patent is to be granted means that the date at which the patent application is first filed is critical, because it is at this date that the invention must be new.
    - If someone else filed a similar application the day before, then that one will have priority. An initial application to one national patent office is enough to establish priority
- The full patent specification needs to be prepared by a specialist patent attorney and it can take up to four years for the process of obtaining patents to be completed.
- Because computing is a global industry, any patents relating to computing need to be taken out in enough countries to make sure that the market in which the invention is not protected is too small to attract a competitor.

5.5.4 Enforcing a Patent

- The grant of a patent is not a guarantee that it can be effectively enforced.
- If you own a patent and you find that someone is infringing the patent, you have to go to the courts to enforce your rights.
- In the court hearing, the offender can challenge your patent on the grounds that,
  - The invention is not new.
  - Anyone of reasonable competence in the field could have produced the invention simply by following established practice.
- The problem is that enforcing a patent that you own or challenging a patent held by someone else is a time-consuming and expensive process.

5.5.5 Software Patent

A **software patent** is a patent on a piece of software, such as a computer program, libraries, user interface, or algorithm.

- Some large companies have a policy of defensive software patenting.
  - They take out large numbers of software patents, which they have no intention of enforcing.
  - They do this in order to prevent other, unscrupulous companies from taking out similar patents and then suing for infringement.
- Different countries have different restrictions on patenting software innovations.

  For example:

  - U.S. patent law does not permit patents that involve abstract ideas. This restriction has been used to deny software patents.
  - In the European Union (EU), software applications, as a whole, are excluded from patent restrictions.

The question of software patents has proved to be extremely controversial, The arguments for and against the patenting of software can be summed up as follows:

For Patenting	Against Patenting
● It is illogical and unfair that something that would be clearly patentable, if implemented completely in hardware should not be patentable if implemented in software. ● Furthermore, patents encourage investment because: - A patent is a well-defined asset that allows shareholders and venture capitalists to be confident that their investment is producing something of value. - Patents ensure that the benefit of research and development accrues to the people who financed it	● The IT industry has been immensely productive and successful. Much of its success is due to the efforts of small companies. Patents are not helpful to small companies, which, even if they can afford to file for patents, cannot afford to defend their patents or defend themselves against invalid claims for patent infringement coming from large companies. ● The industry has done well enough without patent protection. ● Many of the patents granted are **'bad'** patents because they are **not new** or because there is **no inventive step**. ● A very great deal of software was written before software patents were thought possible. This means the records of prior art are very patchy. Although such patents could not be successfully defended in court, the threat of patent litigation, which is always likely to be both expensive and protracted, could restrict the activities of many smaller companies or even force them out of business.

5.6. Trademarks

- **Trade mark** is any sign capable of being represented graphically which is capable of distinguishing goods or services of one undertaking from those of other undertakings.
- A trade mark may, in particular, consist of words (including personal names), designs, letters, numerals or the shape of goods or their packaging.

  Examples:
  - The name Coca Cola,
  - The characteristic shape of the Coca Cola bottle,
  - The large M that serves to advertise McDonalds hamburger outlets.

5.6.1 Purpose of Trademarks

- The primary purpose of trademark legislation is to stop the sale of bogus or counterfeit goods,

  Example,

  - A flourishing trade in luxury goods that imitate the products of such well-known houses as Gucci or Rolex.
- Under the **General Agreement on Tariffs and Trade (GATT),** to which most countries are signatories, countries that do not have suitable laws to protect trademarks (or intellectual property rights more generally) or where such laws are not effectively enforced will face **trade sanctions.**
- Even **where a trademark is not registered**, action can be taken in the civil courts against products that imitate the appearance or 'get up' of an existing product. This is known as '**passing off**'.
- It is usually better to register the trademark than to rely on protection under civil law, because the legal action involved in defending it will be much more straightforward.

5.6.2 How to Protect Software using Trademarks

- Trademarks are a effective way of **protecting retail package software from piracy.**
- It is desirable to **display the trademark prominently when the software is loaded**, as well as **displaying it on the packaging**.
- Anyone will be subjected to penalties if they,
  - Sells pirated copies of the software, since the software will display the trademark without authorisation.
  - Applies someone else's trademark to software they have written

5.7. Creative Commons Licenses

- **Licensing** gives users the ability to legally use a piece of media in their product or design, while the original creator retains the copyright.
- **Creative Commons** is a standardized set of licenses that cover artists worldwide. It allows creators to set legal boundaries around public uses of their work, including copying, distribution, and use in designs.
    - A **major goal** behind Creative Commons is to make sure that creators get the proper credit for their work.
    - These licenses are straightforward and easy to understand for the licensor.
    - These licenses are based on existing copyright laws and last as long as copyright.
    - Beyond that, creators can give licensors extra rights for using their works.

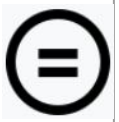
5.7.1 How to choose CC License

Creative Commons licensors answer a quick question in choosing the license to use

- Do I allow **commercial use**?
- Do I allow the **creation of derivative works**?

  If the licensor permits the creation of derivative works,
  - Can choose any user of the work to license the derivative work under a license that has the same conditions. We call this idea "**ShareAlike**"
  - It is a mechanism that (if chosen) can help the development of the digital world. ShareAlike is inspired by the GNU General Public License, used in many free and open software projects.

5.7.2 Four Rights

Right	Description
Attribution (BY) 	In order to use the work you need to **attribute the original author of the work.** Since version 2.0, all Creative Commons licenses require attribution to the creator and include the BY element.
Share-alike (SA) 	Licensees may distribute derivative works only **under a license identical to ("not more restrictive than") the license** that governs the original work.
Non-commercial (NC) 	Licensees may copy, distribute, display, perform the work and make derivative works and remixes based on it only for **non-commercial purposes**.
No derivative works (ND) 	Licensees **may copy, distribute, display and perform only verbatim copies of the work, not derivative works and remixes based on it**. Since version 4.0, derivative works are allowed but must not be shared.

5.7.2 Four Rights

- The CC licenses all grant "baseline rights", such as the **right to distribute** the copyrighted work worldwide for **non-commercial purposes** and **without modification.**
- Different versions of licenses prescribe different rights.
- The **last two clauses** are **not free content licenses**.
- For **software**, Creative Commons includes three **free licenses** created by other institutions: the **BSD License**, the **GNU LGPL**, and the **GNU GPL**.
- These requirements can be combined in sixteen different ways, eleven of which have legal Creative Commons licenses while the other five don't.
    - In the **five** invalid **combinations, four include both the "nd" and "sa" clauses,** which are mutually exclusive; and one includes none of the clauses.
    - 98% of licensors requested attribution, thus of the **eleven valid** combinations, the **five without "by" clause have been retired**.
    - This leaves **six** regularly used licenses plus the **CC0 public domain** declaration.

5.7.3 Six regularly used licenses

CC-BY (Creative Commons Attribution License)

- Allows others to copy and redistribute the material in any medium or format and remix, transform and build upon the material for any purpose, even commercially.
- This is often the preferred choice for journal articles, particularly in science, technology and medicine, as it allows other researchers to make full use of the findings in their own work.

CC-BY-SA (Creative Commons Attribution Share-alike License)

- Allows others to copy and redistribute the material in any medium or format and remix, transform and build upon the material for any purpose, even commercially, **provided it is distributed under the same license as the original**.

5.7.3 Six regularly used licenses

CC-BY-ND (Creative Commons No-Derivatives License):

- Allows others to copy and redistribute the material in any medium or format.
- If you remix, transform or build upon the material these **modifications cannot be distributed.**

CC-BY-NC (Creative Commons Non-Commercial License):

- Allows others to copy and redistribute the material in any medium or format.
- The material **may not be used for commercial purposes.**
- It can be an appropriate license for **monographs** because it protects print copy sales while still providing scope for users to create derivative works of the online version to the benefit of all academia.

5.7.3 Six regularly used licenses

CC-BY-NC-SA (Creative Commons Non-Commercial Share-alike):

- Allows others to copy and redistribute the material in any medium or format, remix, transform and build upon the material for any non-commercial purpose, but the material **may not be used for any commercial purpose.**
- If the material is remixed, transformed or built upon, it must be **distributed under the same license as the original.**
- While the Share-alike license might sometimes encourage further uptake of OA by authors wanting to re-use the content, it can also create an unnecessary barrier to the re-use of the OA content.

5.7.3 Six regularly used licenses

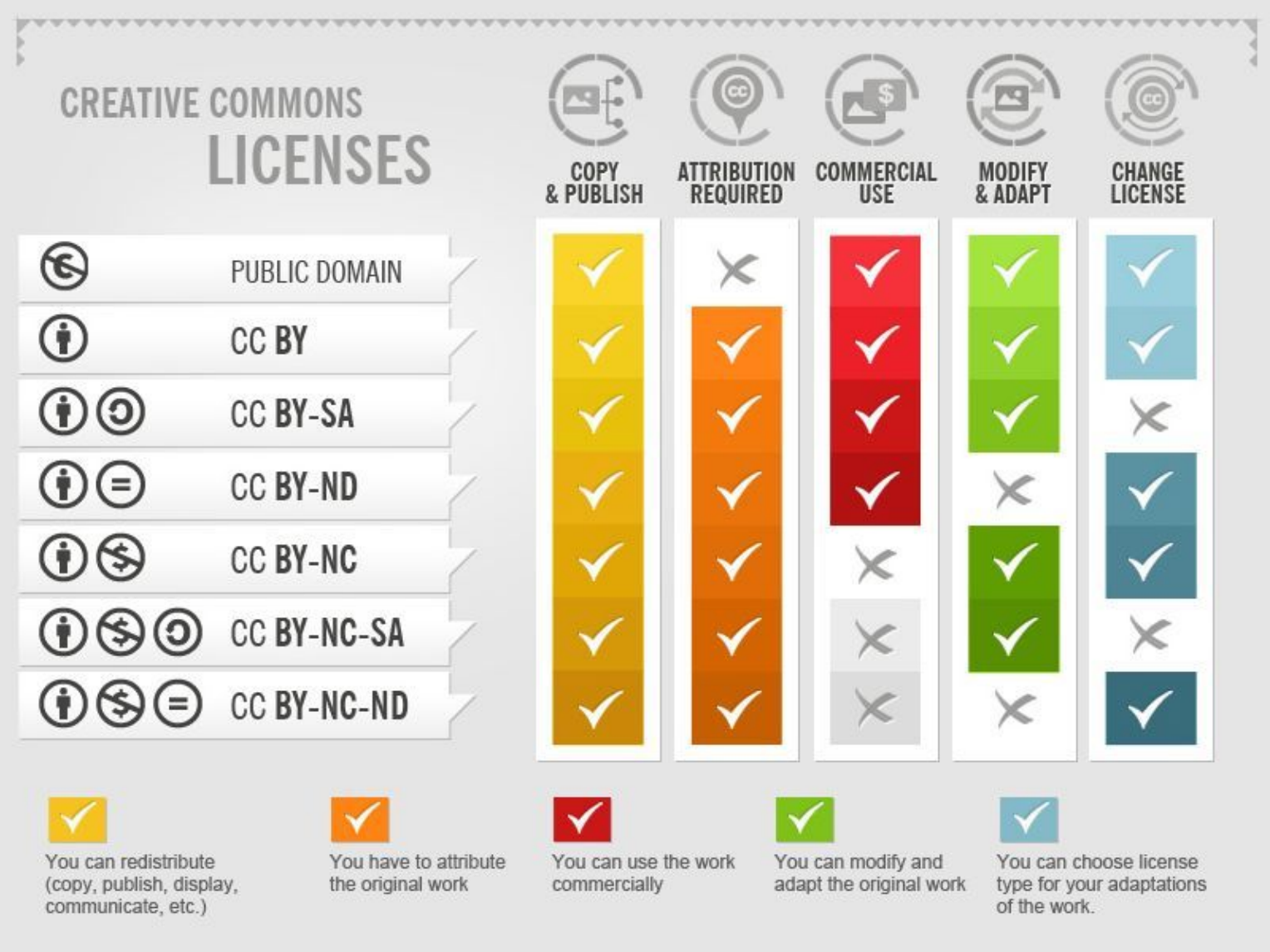
CC-BY-NC-ND (Creative Commons Non-Commercial No-Derivatives License):

- Allows others to copy and redistribute the material in any medium or format.
- The material **may not be used for commercial purposes**
- If you remix, transform or build upon the material these **modifications cannot be distributed**.
- The license is particularly appropriate for **books** and other products where significant revenue is needed from derivative rights sales (for example, translation rights), in order to keep author charges low.

5.7.4 CC0: No Rights Reserved

- CC0 enables scientists, educators, artists and other creators and owners of copyright- or database-protected content to waive those interests in their works and thereby place them as completely as possible in the public domain
- Others may freely build upon, enhance and reuse the works for any purposes without restriction under copyright or database law.

5.7.5 Summary of Commonly Used CC Licenses



Infographic by foter.com

5.8. Domain Names

- In the beginning, domain names were only intended to be used as a **way to make connecting computers to the internet** easily.
- They are now used to **identify businesses** because they are simple to remember
- They are frequently used in advertising. Conversely, it is not surprising that companies should want to use their trademarks or their company names as their internet domain names.
- Domain names are usually allocated by a nongovernmental organization and are **globally unique**
- They are normally **allocated on a first come, first served basis**.

5.8.1 ICANN

- Internet domain names are ultimately managed by the Internet Corporation for Assigned Names and Numbers (ICANN).
- ICANN is an internationally organized, non-profit making corporation.
- Its main responsibility is ensuring that the same domain name will always lead to the same internet location wherever it is used from and whatever the circumstances.
- In practice, ICANN delegates the responsibility for assigning individual domain names to other bodies, subject to strict rules.

5.8.2 Cyber Squatting

- The potential for conflict between trademarks and domain names is inherent in the two systems.
- If **different companies** own **identical trademarks** for **different categories of product** or for **different geographical areas**, only one of them can have the trademark as domain name, and that will be the first to apply.
- The **inconsistencies between the two different systems of registration** has made it possible for people to register, as their own domain names, trademarks belonging to other companies. This is known as **cyber squatting**.
- They then offer to sell these domain names to the owner of the trademark at an inflated price.
- It is usually cheaper and quicker for the trademark owner to pay up than to pursue legal remedies, even when these are available.

5.9. Fair Use Policy

- Fair use is a legal doctrine that promotes freedom of expression by permitting the unlicensed use of copyright-protected works in certain circumstances.

  Examples of activities that may qualify as fair use:
  - Criticism
  - Comment
  - News reporting
  - Teaching
  - Scholarship
  - Research.

- Such uses can be done without permission from the copyright owner.
- If your use qualifies as a fair use, then it would not be considered an infringement.

5.9.1 Four Factors of Fair Use

1. **Purpose and character of the use, including whether the use is of a commercial nature or is for nonprofit educational purposes**:

- Look at how the party claiming fair use is using the copyrighted work.
- Nonprofit educational and noncommercial uses are fair.
    - This does not mean all nonprofit education and noncommercial uses are fair and all commercial uses are not fair; it will be balanced by the purpose and character of the use against the other factors below.
- Additionally, "**transformative**" uses are more likely to be considered fair.
    - Transformative uses are those that add something new, with a further purpose or different character, and do not substitute for the original use of the work.

5.9.1 Four Factors of Fair Use

2. Nature of the copyrighted work:

- Analyzes the degree to which the work that was used relates to copyright's purpose of encouraging creative expression.
- Using a more creative or imaginative work (such as a novel, movie, or song) is less likely to support a claim of a fair use than using a factual work (such as a technical article or news item).
- Use of an unpublished work is less likely to be considered fair.

5.9.1 Four Factors of Fair Use

3. **Amount and substantiality of the portion used in relation to the copyrighted work as a whole:**

- Look at both the quantity and quality of the copyrighted material that was used.
- If the use includes a large portion of the copyrighted work, fair use is less likely to be found
- If the use employs only a small amount of copyrighted material, fair use is more likely.
- That said, some courts have found use of an entire work to be fair under certain circumstances. And in other contexts, using even a small amount of a copyrighted work was determined not to be fair because the selection was an important part or the “heart” of the work.

5.9.1 Four Factors of Fair Use

4. **Effect of the use upon the potential market for or value of the copyrighted work:**

- Review whether, and to what extent, the unlicensed use harms the existing or future market for the copyright owner's original work.
- In assessing this factor, it considers whether the use is hurting the current market for the original work (for example, by displacing sales of the original) and/or whether the use could cause substantial harm if it were to become widespread.

Summary

Intellectual Property	• Intangible properties are governed by intellectual property rights • There are different types of intellectual rights such as copyrights, confidential information patents and trademarks
Copyrights	• Exclusive right to distribute, display, perform, or reproduce an original work in copies; to prepare derivative works based on the work; to and grant these exclusive rights to others. • Protect three categories of work and software comes under **original literary work.** • There are two sorts of infringements as primary and secondary infringement • Ownership initially belongs to the author unless he is legally an employee where owner will be the employer unless there is a written agreement to the contrary.

Summary

Confidential Information	• Information that receives in circumstances that make it clear they must not pass it on. • Trade secrets refer to novel and effective techniques that companies develop to enable them to produce goods efficiently or to produce goods that are uniquely attractive to their customers
Patents	• Primarily intended to protect inventions, by giving inventors a monopoly on exploiting their inventions for a certain period • Invention is eligible for a patent, if it is novel, involves an inventive step, capable of industrial application and not in an area specifically excluded
Trademarks	• Trademark is any sign capable of being represented graphically which is capable of distinguishing goods or services of one undertaking from those of other undertakings

Summary

Creative Commons Licenses	• Ensure that creators get the proper credit for their work. • Grant "baseline rights", such as the right to distribute the copyrighted work worldwide for non-commercial purposes and without modification. • There are four clauses such as BY, SA, NC, ND • There are six widely used CC licenses
Domain Names	• Domain names managed by ICANN • They are used to simplify the process of connecting one computer to another over the internet. • Now companies tend to use domain names as their trademarks or company names.
Fair Use Policy	• This promotes freedom of expression by permitting the unlicensed use of copyright-protected works in certain circumstances