**RESEARCH METHODOLOGY & IPR**
**BRMK557**

# INTRODUCTION TO INTELLECTUAL PROPERTY

MODULE – 3

## WHAT IS INTELLECTUAL PROPERTY (IP)

- Intellectual Property (IP) is a special category of property created by human intellect (mind) in the fields of arts, literature, science, trade, etc.
- IP is intangible (i.e. invisible and indivisible) differs from the tangible property, such as land, house, gold and car.
- The rights are given to the creator/inventor in exchange for revealing the process of creation/invention in the public domain.
- The inventor is conferred with the special rights to use, sell, distribute, offering for sale and restricting others from using the invention without his prior permission

### DIFFERENT KINDS

**Intellectual Property (IP)** refers to intangible assets created by human intelligence, creativity, or imagination, which have commercial value. There are several types of IP, and each protects different kinds of inventions or creations:

1. **Trademarks**: Protect **symbols, logos, or signs** that distinguish one company's goods or services from another's.
    1. **Example**: The Nike "swoosh" logo is a trademark that identifies Nike products.
2. **Patents**: Provide legal protection for inventions, granting the inventor exclusive rights to use, sell, or manufacture the invention for a limited time and in a specific geographic area.
    1. **Example**: A patent for a new type of engine that improves fuel efficiency. Thomas Edison is one of the most famous inventors in history The Light Bulb is one of the most famous inventions.

**3.Industrial Designs**: Protect the unique visual design or shape of a product, preventing others from copying it.

1. **Example**: The design of an iPhone's sleek, rounded edges could be protected as an industrial design.

**4. Copyrights**: Protect original works of authorship like books, music, software, or artworks, giving the creator exclusive rights to reproduce and distribute their work.

1. **Example**: A software developer's code for a new app is protected by copyright**.**

# ROLE OF IP IN THE ECONOMIC AND CULTURAL DEVELOPMENT OF THE SOCIETY

### 1. Promotes Innovation and Creativity

IP laws, such as patents, copyrights, and trademarks, give creators and inventors the right to protect their ideas and creations.

This protection motivates people to come up with new inventions, products, or creative works because they know they can benefit from their hard work.

### 2. Boosts Economic Growth

IP helps businesses make money from their innovations, which can be **invested back into the economy**. This creates more jobs and attracts investments.

For example, technology companies earn from their patented products, artists earn from their copyrighted music, and businesses earn from their branded products, which all contribute to economic development.

### 3. Supports Small Businesses and Entrepreneurs

IP allows smaller companies and startups to compete in the market by protecting their unique products, services, or brands.

It helps them gain recognition and build a reputation, making it easier to attract customers and investors.

### 4. Encourages Cultural Development

Copyrights protect cultural creations like music, films, books, and art, allowing creators to share their work with the world

This encourages more people to produce cultural content, enriching society with diverse cultural expressions and ideas.

### 5. Facilitates Technology Transfer

IP enables the sharing and transfer of technology and knowledge between businesses, universities, and countries.

This helps developing nations access new technologies, which can improve industries like healthcare, agriculture, and education.

### 6. Improves Quality of Life

Innovations in areas like medicine, technology, and entertainment, protected by IP, can enhance people's lives by providing better products, treatments, and cultural experiences.

## IP GOVERNANCE

**IP Governance** refers to the rules and processes used to manage and protect **intellectual property**, like inventions, artistic works, and brand names. It's about setting up a system to ensure that people's ideas and creations are safeguarded, used properly, and can benefit society. Here’s what it involves in simple terms:

**1. Creating Clear Rules**

- IP governance means having clear laws that define what counts as intellectual property and how it should be protected.

**2. Helping People and Businesses Protect Their Work**

- The system helps inventors, artists, and companies register and protect their ideas or products, so others can't copy or use them without permission.
- For example, when someone invents a new gadget, they can apply for a patent to prevent others from making or selling it without their consent.

**3. Solving Disagreements**

- If there's a dispute about who owns an idea or whether someone is using it without permission, IP governance provides ways to solve the problem, such as through courts or mediation.

**4. Encouraging Sharing and Innovation**

- IP governance not only protects creators but also encourages them to share their ideas by setting rules for how others can use them.
- This can include licensing deals where someone allows others to use their invention in exchange for payment.

**5. Balancing Public Interests**

- The system tries to balance protecting the rights of creators with the public's need for access to information, culture, and technology.
- For example, there are rules that let people use parts of copyrighted works for education or research without needing permission.

**6. Adapting to Digital Changes**

- With more content and ideas being shared online, IP governance also includes rules for protecting digital works, like music, videos, and software.

**7. Working Across Borders**

- Since IP issues often involve different countries, IP governance includes international agreements to make sure that IP is protected even when it crosses borders.

**IP governance** is about making sure the rules for protecting and using ideas are fair, clear, and encourage people to create and innovate while considering the needs of everyone in society.

**IP AS A GLOBAL INDICATOR OF INNOVATION**

- **Intellectual Property (IP)** is a global indicator of **innovation** because it shows how much new and creative work is being produced around the world.
- When countries have many patents, trademarks, or copyrights, it suggests they are generating lots of new inventions, brands, and artistic works. This reflects a country's

ability to create new technologies, products, and cultural content, which drives economic growth and improves people's quality of life.

- High levels of IP activity signal that a country is investing in research, creativity, and development, making it an important measure of progress and competitiveness.

**ORIGIN OF IP**

- There is no official record of the origin of IP, IP was being practised around 500 Before the Common Era (BCE) in Sybaris, a state of Greece.
    - The natives of Sybaris were granted a year‘s protection for using their intellect to create ―any new improvement in luxury.‖
- A practical and pragmatic approach for IP governance started taking shape in medieval Europe.
- In 1623, Britain passed an Intellectual Property Legislation which entitled guilds (association of artisans or merchants) to create innovations and bring them to market for trade purposes. This legislation brought a lot of resentment amongst the public.
- Statute of Monopolies‘, which gave the rights to the original creator/inventor for 14 years
- Statute of Anne‘, was passed by the British parliament in 1710.
- By the end of the 18$^{th}$ century and the beginning of the 19th century, almost every country started laying down **IP legislation to protect** their novel inventions and creations.

**HISTORY OF IP IN INDIA**

- **Colonial Era (Pre-1947)**

  The foundations of IP in India were laid during the British colonial period, with laws modeled after British IP laws.

  The Indian Patents and Designs Act was enacted in 1911, which was one of the earliest IP laws in India. The Copyright Act of 1914 was also based on the UK's Copyright Act.

- **Post-Independence (1947-1990s)**

  After gaining independence in 1947, India began updating its IP laws to suit local needs.

  The Indian Patents Act, 1970, replaced the colonial-era law, focusing on promoting local industries and limiting patents on pharmaceuticals to process patents (not the products themselves) to make medicines affordable.

- **Globalization and TRIPS Agreement (1990s-Present)**

  Economic reforms in the 1990s and India joining the World Trade Organization (WTO) in 1995 led to significant changes.

The TRIPS Agreement required India to align its IP laws with international standards. This led to amendments, including the Patent (Amendment) Act of 2005, allowing patents on pharmaceutical products.

- **Modern Developments**

Today, India has comprehensive IP laws covering **patents, copyrights, trademarks, geographical indications**, and more.

The government has launched initiatives like the **National IPR Policy (2016)** to strengthen IP awareness, enforcement, and innovation.

**HISTORY OF DIFFERENT KINDS OF INTELLECTUAL PROPERTY RIGHTS**

**1. COPYRIGHTS AND RELATED RIGHTS:**

Copyrights began in the 15th century when the invention of printers made copying written works possible. At first, governments allowed printing freely, which helped spread information.

- **In India, copyright history can be divided into three phases:**

a) **First Phase (1847):** The idea of copyright was introduced through a law passed during the rule of the East India Company.
b) **Second Phase (1914):** The Copyright Act of 1914 was enacted, which was based on the UK's Imperial Copyright Act of 1911. This phase marked an update in copyright protection.
c) **Third Phase (1957):** The Copyright Act of 1957 replaced the 1914 law. It was created to align with the international standards of the Berne Convention of 1886, which aimed to protect the rights of authors across different countries.

**2. Trademarks**

a. The first statutory law related to Trademarks (TM) in India was the Trade Marks Act, 1940, which was carved out from the Trade Marks Act, 1938 of the UK.

b. The previous act renamed as Trade and Merchandise Marks Act,1958.

c. Four decades later, this Act was repealed by the Trade Marks Act, 1999.

**3. Geographical Indications**

a. India, as a member of WTO, enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999.

b. It came into force with effect from 15th September 2003.

c. Geographical Indicators have been defined under Article 22 (1) of the WTO Agreement on TRIPS.

**4. Trade Secrets**

a. Although India has no specific Trade Secrets Laws, Indian courts have upheld Trade Secrets protection under various statutes.

b. Including contract law, Copyright law, the principles of equity and the common law action of breach of confidence (which in effect amounts to a breach of contractual obligation).

**5. Semiconductor Integrated Circuits and Layout Designs**

a. India being a member of the WTO also passed an Act called the SICLD Act,2000. This Act is TRIPS compliant and fulfils the conditions of the TRIPS agreement (Articles. 35 to 38) concerning the protection of SICLD.

**6. Plant Varieties:**

a. The Indian Patents Act, 1970 excludes ―plants and animals in whole or any part thereof other than microorganisms from patentability.

b. To comply with the mandate of Article 27.3 (b) of TRIPS, India adopted the Protection of plant variety/FR Act, 2001 as a *sui generis* regime(a special kind) protecting not only new plant varieties but also farmers‘ rights.

**7. Traditional Knowledge:**

**a)** Traditional Knowledge (TK) includes the knowledge, practices, and cultural traditions passed down through generations, like traditional medicine and remedies.

**b)** To protect this valuable knowledge, it is now recognized as a form of Intellectual Property Rights (IPR) under the TRIPS Agreement, an international trade agreement.

**c)** In India, the government has set up the Traditional Knowledge Digital Library (TKDL), a digital collection that stores information about 250,000 traditional medicine formulations from different Indian medical systems, making it easier to protect and prevent misuse of this knowledge.

**8. Industrial Designs**

a. The need to protect Industrial Designs (ID) was recognized in the 18th century and the Indian legislation enacted the Patterns and Designs Act‘ in 1872 for the first time.

b. The Act was replaced by the British Patents and Designs Act in 1907, which later became the basis for the Indian Patents and Designs Act, 1911

c. **1911:** The **Indian Patents and Designs Act** continued to protect only the designs.

d. **2000-2001:** A new law focused just on Industrial Designs was created in **2000** and came into effect in **2001**, providing updated protection for design rights in India.

**9. Biodiversity Conservation**

India has several laws to protect the environment and biodiversity:

1. **Indian Forest Act (1927)** and **Wildlife Protection Act (1972)** provided early legal protection.
2. **National Forest Policy (1988)** brought major changes in conservation efforts.

   Other important laws include:

   1. **Mining and Mineral Development Act (1957)**
   2. **Water Pollution Act (1974)**
   3. **Forest Conservation Act (1980)**
   4. **Biological Diversity Act (2002)**
   5. **Tribal Rights Act (2006)**
   6. **National Biodiversity Action Plan (2009)**
   7. **National Environment Policy (2006)**

- These laws help preserve forests, wildlife, water, and tribal rights.

**MAJOR AMENDMENTS IN IP LAWS AND ACTS IN INDIA**

1. **Patent Act Amendments (1999, 2002, 2005)**

   **1999:** The Patents Act, 1970 was amended to comply with the TRIPS Agreement, introducing a "mailbox" system for filing pharmaceutical and agricultural product patents.

   **2002**: Further changes extended the patent term to 20 years and improved enforcement measures.

   **2005**: This amendment allowed product patents for pharmaceuticals, food, and chemicals, bringing India fully in line with TRIPS.

2. **Copyright Act Amendments (1994, 2012)**

   **1994:** Updated the Copyright Act, 1957, to address issues like satellite broadcasting, computer software, and digital formats.

   **2012:** The law was amended to recognize digital rights management and offer fair compensation to authors and performers, even in digital content.

3. **Trademarks Act Amendment (2010)**

   The Trademarks Act, 1999, was amended to allow for registration of "well-known" trademarks, better protection, and simplified processes for international trademark registration through the Madrid Protocol.

4. **Designs Act Amendment (2000)**

   The Designs Act, 2000, replaced the old law from 1911, providing a modern framework for protecting industrial designs and extending the protection period to 15 years.

5. **Geographical Indications of Goods (Registration and Protection) Act, 1999**

This act was introduced to protect products that have a specific geographical origin, like Darjeeling tea or Mysore silk, and prevent unauthorized use.

6. **Protection of Plant Varieties and Farmers' Rights Act, 2001**

   Aimed at protecting new plant varieties, it also ensures farmers' rights to use, save, and exchange seeds, balancing innovation with traditional agricultural practices.

## PATENTS

- **A patent** is an exclusive right granted for an innovation that generally provides a new way of doing something or offers a new technical solution to a problem.

### Criteria for Obtaining a Patent Protection:

**1. Novelty:** *Not part of 'State of the Art.(Which is new and original)*

a) **Not Known to the Public**: It shouldn't already be common knowledge.

b) **Not Published Anywhere**: It hasn't been shared or published in any form.

c) **Not Claimed by Others**: No one else has already applied for a patent or claimed it in an official document.

**2. Inventive step - *Not obvious to the person (s) skilled in the art.(*non-obvious solution** to a problem, showing true innovation rather than a simple or predictable step forward.)

**3. The innovation is**

a) **Technical Advancement**: It should improve or add something new to what we already know.

b) **Economic Significance**: It should have value or be useful for businesses or the economy.

c) **Not Obvious**: It shouldn't be an idea that experts in the field could easily come up with. It should be creative and unique.

**4. Capable of industrial application - *For the benefit of society.*** The invention is capable of being made or used in any industry.

## TO PATENT OR NOT TO PATENT AN INVENTION :

- When an invention is created, the inventor has to choose whether to benefit personally from it (using legal rights) or share it with the public.
- Miniscule of inventions are placed in the public domain without claiming any benefits.
- The owner of an invention choose from either of the two options, i.e. **patenting** or **Trade Secret** to seek monetary gains.
- If the inventor is absolutely sure of maintaining the secrecy of invention for a very long period (maybe 100 years or more) and the probability of reverse engineering of the technology is nil or very low, then the **'Trade Secret' category** is preferred

- If the invention has a short life span or can be kept secret only for a small period of time (a couple of years or so) or the probability of reverse engineering is high then the **'patent' category** is preferred.

- **EXAMPLES**
- **Trade Secret**:
- **Coca-Cola's formula**: The exact recipe for Coca-Cola is a well-known trade secret. The company has kept it secret for over 100 years because the formula can be kept hidden, and the risk of reverse engineering the exact taste and ingredients is very low.
- **KFC's blend of 11 herbs and spices**: The recipe for Kentucky Fried Chicken's seasoning is a trade secret, kept confidential for decades to maintain the unique taste that competitors can't replicate.
- **Google's search algorithm**: The details of how Google's search engine ranks websites are kept as a trade secret to maintain its competitive advantage, as revealing the algorithm could make it easier for others to copy or manipulate.
- **Patent:**
- **Pharmaceutical drugs**: New medicines are often patented because they can be easily reverse-engineered once the chemical formula is known. Patents allow the inventor to have exclusive rights for a limited time (usually 20 years) before generic versions can be made.
- **Technology inventions (e.g., smartphones):** Companies like Apple and Samsung patent the design and technology of their devices. These patents prevent others from copying the specific features for a certain period.
- **Electric car battery technology:** Companies such as Tesla patent their battery innovations to protect the technology from competitors while they continue to develop better versions.
- In these examples, Trade Secrets are used when the secret can be kept hidden indefinitely, while Patents are used when the invention is more likely to be copied or figured out quickly.

**RIGHTS ASSOCIATED WITH PATENTS:**

- According to court law a patent owner has the right to decide who may or may not use the patented invention.
- The patent protection provided by the law states that the invention cannot be commercially made, used, distributed, imported, or sold by others without the patent owner's consent.
- The patent rights are negative rights as the owner is restricting others from using the patent in any manner without his prior permission.
- The patent holder may choose to sue party to stop illegal use of the patent and also ask for compensation for the unauthorized use.

## ENFORCEMENT OF PATENT RIGHTS:

- Enforcement is the process of ensuring compliance with laws, regulations, rules, standards and social norms.
- **Enforcement** means making sure that people follow **laws, rules, and standards**.

- If someone is using an invention without permission, it's considered patent infringement.
- Courts can stop the infringement by ordering the person or company to stop using the invention and may even order them to pay damages.
- It is the **patent owner's responsibility** to watch for violations and take action if someone is infringing on their patent. They need to go to court to protect their rights.

## INVENTIONS ELIGIBLE FOR PATENTING

- Patents can be given for inventions in any field, from simple things like a paper clip or pen to advanced technology like a nanotech chip or even a genetically modified mouse used in medical research.
- Most patents are for improvements on existing inventions. For example, with penicillin, the patent was for a specific molecule and its variations used to fight infections.
- In everyday life, we use many things that have patents, such as:
- Toothbrushes, shoes, pens, eyeglasses, and mobile phones
- Bicycles, cars, TVs, and even cold drinks
- These items often contain many patented parts or features. For instance, a car or a smartphone involves **hundreds of inventions working together**, each with its own patent, making them more efficient, safe, or user-friendly.

- **NON-PATENTABLE MATTERS:**

The **Patent Act of 1970** lists certain things that **cannot be patented**. Here are some of the main exclusions explained simply:

1. **Inventions Against Public Morality**: Ideas that go against what is considered right or acceptable by society, like methods for **human cloning** or **gambling**, cannot be patented.
2. **Mere Discovery**: Just finding something that already exists in nature, like a new **micro-organism** or natural **laws of gravity**, is not enough to get a patent.
3. **New Form of a Known Substance**: If you only discover a new use for something that is already known, like using **aspirin** (which was already patented for pain relief) for heart treatment, that can't be patented.

4. **Frivolous Invention**: Simple or silly ideas that don't add real value, like **dough with herbs** just for taste or a **100-year calendar**, cannot be patented. These are considered not serious enough for protection.

5. **Arrangement or Rearrangement**: If you just combine existing items without a real new idea, like putting a **fan on an umbrella** or attaching a **torch to a bucket**, it's not patentable because it's just a rearrangement of known things.

**6. Inventions Related to Atomic Energy**: Inventions involving certain materials like Uranium, Beryllium, Thorium, Plutonium, and others are not patentable. For example, you can't patent a new method for processing Uranium for nuclear energy.

**7. Literary and Artistic Works**: Creative works like books, music, paintings, and even computer programs or methods of teaching fall under copyright law, not patent law. For instance, you can't patent a new novel or a unique painting because they are protected by copyright.

**8. Topography of Integrated Circuits**: The designs or layouts of integrated circuits (like the circuits found in computers) have their own protection laws under a different act (the Semiconductor Integrated Circuit Layout Designs Act, 2000). For example, a specific design for a computer chip cannot be patented under the patent act but is protected by this separate law.

**9. Plants and Animals**: You cannot patent living organisms like plants and animals, including seeds and varieties. For example, you can't patent a new type of rose plant or corn seed because they are considered part of nature.

**10. Traditional Knowledge**: Inventions based on traditional knowledge, or those that simply combine known traditional elements, cannot be patented. For example, if someone creates a herbal remedy that is based solely on traditional practices without any new innovation, it cannot be patented.

## PATENT INFRINGEMENTS

- If anyone uses the invention without the prior permission of the owner, that act will be considered an infringement of the invention
- Infringements can be classified into two categories:
    - **Direct Infringement** - when a product is substantially close to any patented product or in a case where the marketing or commercial use of the invention is carried out without the permission of the owner of the invention.
    - When a product is **very similar** to a patented product, or if someone is **selling or using** an invention without getting permission from the patent owner, it is considered **patent infringement**. This means that the person is **breaking the law** by using someone else's invention without authorization.
    - **Indirect Infringement** - When some amount of deceit or accidental infringement happens without any intention of infringement.

- If any type of infringements happen the patentee holds the right to sue the infringer through judicial intervention.
- **Following reliefs are made available to the patentee:**

1. **Interlocutory/Interim Injunction**: This is a temporary order from the court that can stop the infringer from using or selling the patented invention while the case is being decided. It helps prevent further harm until a final decision is made.
2. **Damages or Accounts of Profits**: If the patent owner wins the case, they can receive **damages**, which is money to compensate for losses caused by the infringement. They can also ask for **accounts of profits**, meaning they want the infringer to pay back the profits they made from using the patented invention.
3. **Permanent Injunction**: This is a long-term order from the court that permanently prevents the infringer from using or selling the patented invention in the future.

- Additionally, according to **Section 100 of the Patent Act, 1970**, and **Rule 32 of the Patent Rules, 2003**, the **Central Government** has the right to use a patented invention in cases of **national emergency** or other urgent situations. They must notify the patent owner before doing so.

## AVOID PUBLIC DISCLOSURE OF AN INVENTION BEFORE PATENTING

- An invention that has been either published or publicly displayed cannot be patented, as the claimed invention will lose the **'Novelty'** criterion.
- In that condition the Patents Act provides a grace period of 12 months for filing a patent application from the date of its publication in a journal or presentation in a reputed scientific society or exhibition.

## PROCESS OF PATENTING

The process of grant of a patent is a lengthy procedure that may take anywhere 3-4 years or more

The **process of patenting** involves several steps to protect an invention legally. Here's a simplified breakdown:

1. **Invention Creation**: The first step is developing a unique and useful invention, which can be a product, process, or method. The invention must be new, non-obvious, and useful.
2. **Patent Search**: Before applying for a patent, it's important to conduct a **patent search** to ensure the invention hasn't already been patented. This helps verify the novelty of the invention.
3. **Patent Application Preparation**:
    1. The application typically includes a **detailed description** of the invention, including drawings or diagrams if necessary.
    2. The applicant must draft **claims**, which define the scope of protection sought.

3. It's often beneficial to hire a **patent attorney** because patent applications require specific technical and legal knowledge.

**4. Patent Filing**: The patent application is submitted to a government patent office (e.g., the USPTO in the U.S. or the European Patent Office in Europe). There are two main types of applications:

1. **Provisional Patent**: Provides temporary protection for one year, allowing the inventor to further develop the invention before filing a full patent.
2. **Non-Provisional Patent**: A full application that begins the formal examination process.

**5. Patent Examination**: The patent office reviews the application to ensure the invention meets the requirements of novelty, non-obviousness, and industrial applicability. During this stage, the office may issue **office actions**, asking for clarifications or amendments to the application.

**6. Patent Grant**: If the application meets all the requirements and any issues are resolved, the patent office grants the patent, providing exclusive rights to the inventor for a limited period (typically 20 years from the filing date).

**7. Patent Maintenance**: After the patent is granted, the inventor must pay regular maintenance fees to keep the patent in force. Failure to pay these fees can result in the patent expiring before the 20-year term is up.

**Example:**

- If someone invents a new type of energy-efficient light bulb, they can file a patent application to protect their invention. After going through the patent search, filing the application, and addressing any issues raised by the patent examiner, they receive a patent that prevents others from making, using, or selling their invention without permission.

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