Lecture 7: MANAGING INTELLECTUAL PROPERTY

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MANAGEMENT OF TECHNOLOGY AND INNOVATION (MTI)

Mr. Robert Mtowe – 0766838451

Mbeya University of Science and Technology - MUST

MANAGING INTELLECTUAL PROPERTY

Intellectual property (IP) management is a system that helps manage intangible products such as creations of the mind and human intellect. The main types of intellectual property include patents, copyrights, trademarks, trade secrets, and geographical identifications.

INTELLECTUAL PROPERTY

Intellectual property refers to creations of the human mind, whether creative or intellectual, such as art and designs, literary works, music, and the names, symbols, and images used in business. Also intellectual property is a broad categorical description of a set of intangible assets that are owned by a company or individual.

FEATURES OF INTELLECTUAL PROPERTY

- It is an intangible asset of businesses that cannot be easily identified by physical parameters but by its unique characteristics. They include patents, copyrights, trademarks, industrial design, geographical indications of goods and trade secrets, these assets are created using human intellect.
- Intellectual property can't be listed on the balance sheet as assets because it's hard to objectively value each asset. However, the value of the property tends to be reflected in the price of the stock because market participants are aware of the existence of the intellectual property.

IMPORTANCE OF PROTECTING INTELLECTUAL PROPERTY

1. Preventing unauthorized use. IP protection provides legal rights to prevent others from copying, using, or distributing your creations without permission. This is crucial for maintaining competitive advantage and preserving market share.

2. Enhancing economic growth**.** By safeguarding intellectual property, businesses can invest confidently in research, development, and creative works, driving economic growth. It also encourages innovation, as creators know their work is legally protected.

3. Build brand recognition. Trademarks help businesses establish brand identity, enabling consumers to recognize their products and services.

TYPES OF INTELLECTUAL PROPERTY

1.Trade secrets

2. Patents

3.Trade marks

4. Copyright

1. TRADE SECRETS

A trade secret is a form of intellectual property comprising confidential information that is not generally known or readily ascertainable, derives economic value from its secrecy, and is protected by reasonable efforts to maintain its confidentiality. These secrets give a business a competitive edge and are crucial to its success.

Trade secrets can include a wide array of information such as:

- **Manufacturing Processes:** Unique methods or processes used in production.
- **Business Methods:** Innovative business practices and strategies.
- **Customer Lists**: Comprehensive information about clients and their preferences.
- **Recipes/Formulas:** Unique recipes, like the Coca-Cola formula, or chemical compositions.
- **Marketing Strategies:** Plans and techniques for advertising and market positioning

Examples of Trade Secrets

An example of trade secrete is **google search algorithms**. Google developed a search algorithm and continues to refine it. Some changes are announced but many are not. Google continues to modify its led algorithm to keep businesses and people from gaming the system.

Another example of trade secrete is **Coca Cola company formula/recipe**. Coca Cola made a choice to brand the recipe a trade secret instead of patenting it, which would have led to the disclosure of the ingredients. Since one of those ingredients may have been cocaine, Coca-Cola decided to keep the recipe as confidential information.

FEATURES OF TRADE SECRETS

1. **Confidentiality:** The information must be kept secret and not disclosed to the public. Businesses take steps to protect this information through non-disclosure agreements, security measures, and limited access.
2. **Economic Value:** The trade secret must provide a competitive advantage or economic benefit to the company.
3. **Subject Matter:** Trade secrets can include a wide range of information such as formulas, processes, designs, patterns, practices, instruments, or compilations of information.
4. **Unlimited Duration**: Trade secrets can potentially last as long as the information remains confidential and retains its economic value.

2. PATENTS

A patent is an intellectual property (IP) right for a technical invention. It allows you to prevent others from using your invention for commercial purposes for up to 20 years. You decide who is allowed to produce, sell or import your invention in those countries in which you own a valid patent. You can also trade your patent, e.g. sell it or license the use of your invention.

NOVELTY AND KEY FACTORS OF NOVELTY

Novelty is a fundamental requirement for patentability. It means that the invention must be new and not already known to the public before the filing date of the patent application. If an invention lacks novelty, it cannot be patented because it would not be considered a new contribution to the existing body of knowledge.

Examples of novelty

- Smartphone Technology: The integration of multiple functions (phone, camera, internet) into a single device was a novelty invention that revolutionized the telecommunications industry.
- Medical Devices: New medical devices that offer significant improvements in diagnosis or treatment, such as advanced imaging technologies or minimally invasive surgical tools, often meet the novelty requirement.

KEY FACTORS OF NOVELTY

1. Prior Art

Prior art refers to any evidence that your invention is already known. This can include previous patents, publications, products, or public demonstrations.

2. Public Disclosure of the Invention

The key idea in novelty is public disclosure. The moment an invention is disclosed to the public in any form, it may be considered part of the prior art, potentially invalidating the novelty of the invention.

This means that an inventor must avoid publicly disclosing their invention (e.g., through presentations, articles, or sales) before filing a patent application.

3. Non-Obviousness

The invention should not be an obvious improvement over existing inventions. It must involve an inventive step that is not straightforward to someone with average knowledge and skills in the relevant field.

4. Date of Filing

The filing date of the patent application is a critical reference point for determining novelty. If an invention was publicly disclosed before the filing date, it will likely be considered prior art and will invalidate the novelty of the invention. The novelty test is based on the state of the art at the time of the filing, not at the time the invention was conceived or created.

5. Practical Utility (Usefulness)

Your invention must be useful in a practical sense. It should have a clear application and provide some benefit. This could be in terms of solving a real-world problem, making a process more efficient, or providing a new function. The utility ensures that the invention has real-world value and is not just a theoretical idea.

EXCLUSION FROM PATENTS

1. Discoveries

Discovering something that already exists in nature, such as a new plant species or a natural law (like gravity), is not patentable. This is because patents are meant for new inventions, not for finding what is already there.

2. Mathematical Methods

Purely theoretical or abstract mathematical concepts, equations, or algorithms can't be patented. However, if these methods are applied in a practical context (like in a software or a specific technology), the application itself might be patentable.

3. Computer Programs

In many places, software by itself isn't patentable. However, if a computer program provides a novel and technical solution to a technical problem, it may be patentable. This area can get pretty complex, as laws vary from place to place.

4. Methods of Doing Business

Generally, straightforward methods of conducting business, such as new marketing strategies, are not eligible for patents. However, this can vary by jurisdiction. For example, some countries might allow patents on innovative technical solutions in the field of business methods.

5. Inventions Contrary to Morality

Inventions that are considered unethical or harmful to society cannot be patented. This includes things like methods for cloning humans or using humans as guinea pigs for dangerous experiments.

KEY ELEMENTS REQUIRED FOR PATENT REQUEST DOCUMENT

1.Title of the Invention: The title should be clear, concise, and accurately reflect the essence of the invention. It acts as the first point of reference for anyone looking into the patent. For example, “Method for Reducing Carbon Emissions in Industrial Processes” is more specific and informative than just “Carbon Reduction”.

2. Abstract: The abstract is a brief summary (usually no more than 150 words) that provides an overview of the invention. It highlights the key features, the problem it solves, and its primary uses. This helps patent examiners and the public quickly understand the gist of the invention without delving into the full document.

3. Background of the Invention: This section explains the problem that the invention aims to solve and provides context by discussing existing solutions (prior art).

4. Summary of the Invention

This is a more detailed overview than the abstract. It outlines the core aspects of the invention and its intended benefits. It often includes a summary of the key features and advantages over existing solutions. The summary should be clear and concise but provide enough information to understand the invention's basic concept.

5. Detailed Description

A comprehensive description of the invention, including its components, how it works, and how it can be manufactured and used. This section often includes drawings or diagrams.

6. Drawings or Diagrams

Visual aids that help explain the invention and support the detailed description and claims. These can include technical drawings, flowcharts, or sketches.

SOME FAMOUS PATENT CASE

1. Isaac Newton v. Gottfried Wilhelm Leibniz (early 18th century)

This historical dispute involved the invention of calculus. Both Newton and Leibniz claimed to have independently developed the mathematical principles of calculus, leading to heated debate and accusation of plagiarism. Historians now recognize both as co-inventors.

2. Apple Inc. v. Samsung Electronics Co. (2011)

This high-profile case involved multiple lawsuits over the design and functionality of smartphones and tablets. Apple accused Samsung of infringing on its patents, and the legal battles spanned several years and multiple countries. The case resulted in significant financial damages awarded to Apple.

Patents in Practice

- Patents in practice refer to how patents are applied, used, and managed in the real world. This involves understanding their practical implications for businesses, innovation, and society.

Example: Technology Sector

- The smartphone industry heavily relies on patents to protect innovations. Example: Apple's design patents for the iPhone and Samsung's utility patents for hardware technologies.

Benefits of Patents in Practice

1. **Exclusive Rights:** Patents grant inventors exclusive rights to their inventions for a specified period, typically 20 years. This means others cannot make, use, sell, or import the patented invention without permission.

2. Market Position: Patents can provide a competitive edge by preventing competitors from copying or using the patented technology. This helps establish a strong market position.

3. Revenue Generation

- **Licensing**: Patents can be licensed to other companies, generating royalty income for the patent holder.
- **Sale of Patent**: Patents can also be sold outright, providing a lump sum of money to the inventor.

Benefits of Patents in Practice

4. Attracting Investment: A patent can enhance the credibility of a startup or company, making it more attractive to investors and venture capitalists. Investors are more likely to invest in a company with patented technology, as it provides a form of security and potential return on investment.

5. Legal Protection

Patents provide a legal framework for inventors to take action against infringers and protect their intellectual property. The presence of a patent can deter others from attempting to copy or steal the invention.

6. Branding and Marketing

Holding a patent can enhance the reputation and prestige of a company, positioning it as a leader in innovation. Patents can be used as a marketing tool to promote the uniqueness and advanced nature of a product or technology.

Challenges of Patents in Practice

- High cost of obtaining and maintaining patents.
- The patent application process can be lengthy, often taking several years to be granted.
- Patents are territorial, meaning protection is only granted in the countries where the patent is filed and approved.
- Patent holders are responsible for monitoring and enforcing their patents, which can be difficult and resource-intensive.
- Patents require inventors to publicly disclose detailed information about their inventions. This can provide valuable insights to competitors once the patent expires.
- Patent trolls can hinder innovation and impose significant legal costs on businesses through frivolous lawsuits.
- Competitors may obtain patents to block others from entering the market or developing new products, potentially stifling innovation.

Expiry of Patents and Extensions

- Patents generally last for 20 years from the filing date. After expiry, the invention enters the public domain.

- Extensions can be granted in specific cases, such as:
- - Pharmaceutical patents (to compensate for regulatory delays).
- - Design patents (extended up to 15 years in the U.S.).

Famous Patent Cases

❖- Apple vs. Samsung: Design and utility patent disputes.

❖- Amazon's 1-Click patent: Revolutionized online shopping.

❖- CRISPR patent battle: Rights over gene-editing technology.

Uses of Patents

❖- Protecting unique inventions and processes.

❖- Licensing patents to generate revenue.

❖- Boosting business value and competitive edge.

Trademark

A trademark is a symbol, word, or phrase legally registered to represent a brand name or product.

Examples:

❖- Nike's 'Swoosh' logo.

❖- Coca-Cola's distinctive script.

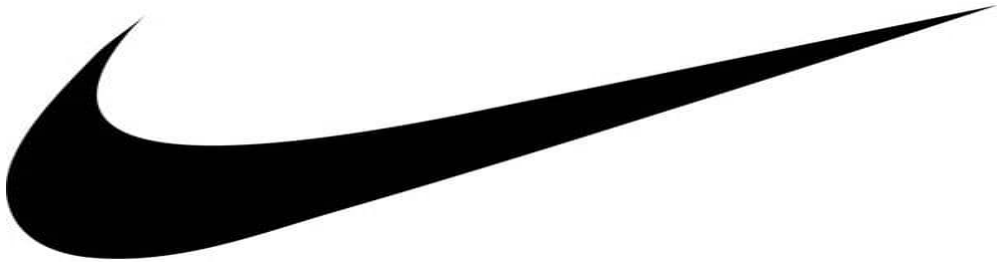
Trademarks ensure:

❖- Brand recognition and trust.

❖- Legal protection against misuse.

TRADEMARK AND THEIR BRAND NAME

APPLE LOGO



NIKE

ADIDAS

QN :Do Patents hinder innovation management?

How Patents can hinder Innovation

- In certain technology areas, there may be a dense web of overlapping patents (**patent thickets**) that make it difficult for companies to develop new products without infringing on existing patents.
- High cost
- Patent Trolls
- Reduced Collaboration
- Limited Accessibility

How Patents can support innovation

- Encourage investment
- Technology Licensing
- Public disclosure
- Competition

Copyright

Copyright protects original works of authorship, such as:

❖- Literary works

❖- Music and lyrics

❖- Artistic works (paintings, drawings, sculptures)

❖- Movies and software

Key Features:

❖- Automatically granted upon creation.

❖- Lasts for the author's lifetime plus 70 years (in most jurisdictions).

Copyright

What are the exceptions to copyright protection?

Answer: There are certain exceptions to copyright protection, such as:

- **Fair Use**: Allows limited use of copyrighted works for purposes such as criticism, commentary, news reporting, education, and research.
- **First Sale Doctrine**: Allows the purchaser of a copyrighted work to resell, lend, or give away the physical copy without the copyright holder's permission.
- **Educational Use**: Allows educators to use copyrighted works for teaching purposes under certain conditions.

Copyright Infringement

What is copyright infringement?

- Copyright infringement occurs when someone uses, reproduces, distributes, or displays a copyrighted work without the permission of the copyright holder. This includes unauthorized copying, sharing, or selling of copyrighted material.

Registering Copyright in Tanzania.

Copyright Society of Tanzania (COSOTA) is responsible for managing copyright matters in Tanzania.

Registering your copyright in Tanzania involves preparing your work, gathering necessary documents, completing an application form, submitting it to COSOTA, paying the registration fee, and waiting for processing. This registration helps prove ownership and simplifies enforcement if needed.

THANK YOU

FOR YOUR

ATTENTION