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Chapter 1

Introductory Chapter: Intellectual Property Rights

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1. Introduction

Intellectual Property Rights are rights given to any particular person/organization for their new creations based on their minds for a certain period of time with an exclusive right over the use of their creation [1].

1.1. International Intellectual Property Regime

In the nineteenth century, foundation for the International Intellectual Property Protection was created at various assemblies held in Vienna and Europe. In Paris Convention in the year 1883, Industrial Property Protection was created. Under the Industrial Property Protection, patents, trademarks and industrial designs are protected. Various countries became members of Paris Convention, subsequently special unions and arrangements were created which made the beginning of protection of international trademarks as well-known marks internationally. Special unions and arrangements are created for the countries who are the members of Paris Convention. Madrid agreement is an agreement represented in Paris Convention with vital principles for the regulation of the trademarks. In Berne Convention in the year 1886, International Copyright Act was passed. Under International Copyright Act, literary and artistic works are protected.

In United Nations (UN) Conference, General Agreement on Tariffs and Trade (GATT) was conveyed on Trade and Employment. Due to failure, Governments created the International Trade Organization (ITO). GATT was formed in the year 1949 and lasted until 1993; subsequently, it was replaced by the World Trade Organization in the year 1995 [2].

World Intellectual Property Organization (WIPO) was started in the year 1960 based on the rules and regulations of Paris Convention and Berne Convention. Later, World Intellectual

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Property Organization (WIPO) was established in the year 1967 based on these conventions. World Trade Organization (WTO) was made in the year 1977. This organization becomes an important international organization for development and understanding of Intellectual Property Rights (IPR) [1].

The great discrepancy between the developed and developing countries related to international market and multinational corporations, United Nations Conference on Trade and Development, was made. Later, in the year 1964, United Nations Conference on Trade and Development was established to make available an opportunity to discuss their problems related to economic development in the developing countries. Trading, investment and developing the opportunities are the main aim of this organization in the developing countries and also support for their efforts towards the world economy as an equitable basis [3].

In the year 1960, world trade was initiated to expand dramatically. This dramatic expansion made the realization by various national governments to set rules/regulations and standards to harmonize the national and regional regulations. In the year 1966, United Nations General Assembly established the United Nations Commission on International Trade Law (UNCITRAL). The main aim of the law is to promote the liberal harmonization and association of international trade law [4].

Generally, in various industries, IPR is made a part of their intentional preferences in the regular activities. Various corporations, in order to ensure their sustained growth, enhanced profits and leadership in the market they intended their project management system based on:

- Optimized use of inter/intra knowledge base
- Strategic management of IPR
- External channels for knowledge and inventions as inputs
- Internal expertise to manage research and collaborations
- Clarity on knowledge ownership issues through mutually beneficial licenses
- Pooling of IPR as in the case of several companies who have formed patent pools of their DVD patents for mutual benefits [5]

1.2. New dimensions and issues for resolution

Recent exploration in the technology towards new dimension and path, IPR system helps to ensure and encourage new innovation and sharing the acquired knowledge during the innovation globally. Various IPR issues are:

- Domain names and trademarks: Copyright in cyberspace
- Rights on traditional knowledge, prior art, material transfer agreement and bio-prospecting
- Software and patents
- Biotechnological inventions and moral issues and patents

- Compulsory licensing options, border measures and parallel imports and exhaustion of IPR
- Government control on export of technology [6]

1.3. IPR in developing countries

IPR in developing countries is based on the potential significance and its intensity of the technological activity. Most of the developing countries followed TRIPS agreement for agricultural and cloth markets considering they can get the additional access in rich nation related to various technology transfers and innovations. The growth effects of IPR in different parts of the world in different time durations vary significantly, which affect the poor countries in the long term.

1.4. Impact of stronger IPR in developing countries

When granting the monopoly rights for an innovation, organization can gain the following paybacks, they are:

- The primary social benefits of IPR are the motivation for inventions
- The enhancement of productive activity is based on the use of new knowledge
- The enhanced dissemination of acquired knowledge to other agents
- The motivation for innovations by other enterprises [7–10]

1.4.1. Category of intellectual property

Based on the TRIPIS agreement, intellectual property is categorized into the following areas. They are:

- Patents
- Copyrights and related rights
- Trademarks
- Geographical indications
- Industrial designs
- Layout designs of integrated circuits
- Protection of undisclosed information (Trade Secrets)
- Plant varieties

Intellectual Property Rights are allocated into two main areas:

1. Copyright and rights-related copyright
2. Industrial property

1.4.1.1. Copyright and rights-related copyright

Copyright and rights-related copyrights are the rights of authors for their artistic and literary work, which include books and other writings, musical compositions, paintings, sculpture, computer programs and films protected for a period of 50 years after the death of the author under this copyright.

Rights related to copyright is referred as neighbouring rights, which includes the rights of performers such as actors, musicians, singers, phonograms and broadcasting. Copyright and rights-related copyright can encourage and reward for their creative work.

1.4.1.2. Industrial property

Industrial property is categorized into two main areas:

1. Protection of distinctive signs

The main aim of the protection of distinctive signs is to ensure the fair completion and protect consumers for various goods and services by making knowledgeable adoptions of its distinctive signs.

Protection of distinctive signs includes:

(i) Trademarks—distinguish the goods or services from other goods or services

(ii) Geographical indications—It is an identity for a goods or product having an essential characteristic attributable one originating from a geographical place of origin

2. Motivate innovation, design and the creation of new technology

The main aim of this category is to protect their investment related to development of new techniques; its results subsequently provide incentives by means of finance research and activities related to development. The duration of the protection period is given for a fixed term; during the term, the inventor can facilitate the foreign investment directly in the form of technology, licensing and joint venture for the new innovation or creation or new technology development. Patents, industrial designs and trade secrets are protected under this category.

1.5. Categories of intellectual property

1.5.1. Patents

Patents are rights under Intellectual Property Rights related to an invention for which patent has been given by the Government/statute to the patentee in exchange of full disclosure of their invention either an individual or a company/organization. Patent has been given as exclusive right for a limited period to exclude others, from making, using, selling and importing the patented product or process producing that product. The patent rights are enjoyable without any insight to the invention place, field of technology and the products either imported or produced locally.

The main aim in IPR system other than encouraging the inventions is the application and promotion so as to develop the industries, subsequently that contributes to technological innovation, distribution and transfer of technology.

1.5.2. Copyright

Copyrights are rights under Intellectual Property Rights related to computer programs protected under Berne Convention, which outline the literary works and databases protected for a period of not less than 50 years. This copyright covers rental rights and expands internationally. In public, the authors have the right to prohibit the commercial rental of their copyright works like computer programme and sound recording procedures. Films also have this copyright as an exclusive right, where commercial rental has managed to be widespread. Under this copyright protection, reproduction of recording and broadcast of live performance are protected for performers.

1.5.3. Trademark

Trademarks are rights under Intellectual Property Rights related to sign or any combination of sign for any goods or services to make a distinguishing mark. Any distinguishing mark can be made registration and the registered trade mark get protection for 10 years and it can be renewed every 10 years indefinitely. Under this trademark, compulsory license provision is not permitted.

1.5.4. Geographical indications

Geographical indications are rights in the aspect of industrial property under Intellectual Property Rights related to geographical indication situated being the country or place or the origin of that product. The geographical indication products are originated from a specific geographical location, which has definite qualities and reputation for its quality due to its place of origin. Under this category, place name generally indicates where the product has been made as product identification. Consumers can be misled and make unfair completion by using the place name for the product, which has been made elsewhere or does not meet the specific quality or character for those particular products.

1.5.5. Industrial design

Industrial designs are rights under Intellectual Property Rights related to any ornamental or aesthetic which have any three-dimensional features such as the shape or surface of the article or any two-dimensional features such as patterns, lines or colour.

Industrial design are rights that can be applied to a wide variety of products made from industry or handicraft which include watches, jewellery, fashion, other luxury items, house ware, furniture, electrical appliances, architectural structures, practical goods, textile designs to leisure items, such as toys and pet accessories.

1.5.6. Layout designs of integrated circuits

Layout designs of integrated circuits are rights under Intellectual Property Rights related to interconnections of an integrated circuit or three-dimensional disposition prepared for an integrated circuit intended for manufacture. Under this layout designs of integrated circuits right of reproduction, right of importation, sale and other distribution for commercial purposes are prevented.

1.5.7. Protection of undisclosed information

Protection of undisclosed information is rights under Intellectual Property Right related to protection of information that is applied as trade secret, which has commercial value. The protection of undisclosed information cannot be considered or treated as a form of intellectual property. Protection of undisclosed information requires, that the information must have prevention to disclose, learnt or using the same by others without his or her permission/consent for commercial purpose.

1.5.8. Plant varieties

Plant varieties are rights under Intellectual Property Rights related to the protection of new plant varieties. Plant variety protection is given to the breeders as an exclusive right for a limited period to the breeders to acknowledge the achievements of new plant varieties with the satisfaction of specific criteria. New plant variety is defined as a plant grouping within a single botanical taxon of the lowest known rank provided that the plant/herb should be new or novel, distinct, uniform, stable and have a satisfactory denomination [11–15].

1.6. Patents

Patents are rights under Intellectual Property Rights related to an invention for which patent has been given by the Government/statute to the patentee in exchange of full disclosure of their invention either an individual or a company/organization. Patent has been given as exclusive right for a limited period to exclude others from making, using, selling and importing the patented product or process producing that product. The patent rights are enjoyable without any insight to the invention place, field of technology and the products either imported or produced locally. Compulsory licensing is a condition made fairly liberal based on the concept of 'license of right' for patents related to drugs, pharmaceuticals and foods [12–20].

1.6.1. Categories of patents

Patents are categorized into following types:

1. Ordinary patents
2. Patents of addition

3. Convention applications with priority date, claiming on the basis of filing in convention countries
4. National phase applications under PCT

1.7. Patentable invention

An invention means 'a new product or process which involves an inventive step and able to be used in the industry' can be patentable under the Patent Act. In short, patentable invention should have technical nature and meet the basic common features:

1. Novelty
2. Utility
3. Inventive step/non-obviousness [12, 13]

1.8. Novelty

Under this basic feature, the patentable invention must be new by the original inventor at the time of invention, and it should not be known to the public or public domain or any part of the existing state of the art. Novelty of an invention is justified based on the comparison between his/her embodiment and the materials available in the public domain.

1.9. Utility

The next basic feature of the patentable invention is utility. Under utility, the invention must be capable of having an industrial application to provide positive benefit to society. The industrial application under utility, need not to have any superior to existing products or processes, but it must secure the intended result even small degree of utility is sufficient.

1.10. Inventive step/non-obviousness

The next basic feature of the patentable invention is inventive step/non-obviousness.

An invention can be patented until it satisfies the non-obviousness criteria, even an invention has novelty and utility. The non-obvious clause is applicable to those who are skilled in that art [12, 13].

1.11. Not-patentable inventions

The following are non-patentable inventions within the meaning of the Patent Act:

- Any invention that is against the established natural law
- Any invention that leads to commercial exploitation or harms any life, whether animal, plant or human, or the environment
- Any discovery that already exists or scientific principle

- The mere discovery of any new use for a known substance or any unexpected property or just use of a known process, machine or apparatus unless such known process leads to a new product or employs at least one new reactant
- Any product obtained in just mixing any two substances
- A method of agriculture or horticulture
- Treatment to patients for medicinal, surgical, curative, prophylactic purpose to render them free of disease
- Plants, animals in whole or any part thereof other than microorganisms
- A mathematical or business method or a computer programme per se or algorithms
- A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions
- A divulging of information
- Topography of integrated circuits
- An invention which, in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components
- Atomic energy and prejudicial to the defence of India [12, 15]

1.12. Inventions and discoveries

The terms inventions and discoveries are two different applications. The term invention is new and useful solution, which is invented through practical analysis for some technical problems; whereas the term discovery is not the result of creation.

1.13. Patent application

To get patent protection for an invention, the inventor has to provide the specification in the patent application.

1. A patent application can be made by any of the following persons.

(a) Any person claiming to be the true and first inventor of the invention

(b) Any person being the assignee of the person claiming to be the true and first inventor in respect of the right to make such an application

(c) The legal representative of any deceased person who immediately before his death can be entitled to make such an application

2. An application under subsection can be made by any of the persons referred to therein either alone or jointly with any other person [12, 15, 21].

1.14. Form of application

1. Every patent application is made in the prescribed form for only one invention and filed in the patent office.
2. Applying for the patentable invention, the applicant should furnish the details within specified period and submit the proof of the right to make the application is valuable.
3. Application should state that the applicant's name will be claiming to be the true and first inventor; if the person is not the applicant or one of the applicant of the claiming, a declaration might be obtained from the applicant stating that the applicant believes the person so named to be the true and first inventor.
4. Each application should be accompanied by a provisional or a complete specification [12, 15, 21].

1.15. Types of patent specification

The specification of the patent application should meet the three fundamental principles:

1. Written description
2. Enablement
3. Best mode

1.15.1. Provisional specification

Provisional application describes the nature of the invention or the process involved in the invention. Provisional application provides a fair indication of the art or the subject to which the invention relates if required with drawing and not necessary to include any claim of the inventions.

1.15.2. Complete specification

The complete specification is an important document subsequently filed after the provisional specification in the patent application procedure. The complete specification should be written in detail with clarity if any drawing is required and disclosing the claim/claims in a best mode to protect their invention. The complete specification should be written in detail such a way that any person in the relevant field with the ordinary skill can be understand the invention and its invention pertains [12, 13].

1.15.3. Components of specification

Components of the provisional and complete specifications are different. The components of the specification are given in **Table 1** [12, 15, 21].

Provisional specification	Complete specification
1. To get the priority date at the earliest and need not contain any claims.	1. This establishes the date of patent, if sealed.
2. When the invention is at the intangible stage, a lot of fine tuning has to be done in the subsequent application.	2. When the invention is ready to utilize in the market or invention information is known.
3. The nature of invention is disclosed at the core of it.	3. The invention is disclosed in best manner, that is, if the invention has been given to a person skilled in the art can be able to perform without further clarification of the invention
4. It need not have detail related to the invention.	4. It needs to have detail related to the invention.
5. The format in the provisional specification: **a.** Area of invention **b.** Status of PRIOR ART, that is, what is already known to the industry **c.** Problems with the prior art **d.** How this invention solves the problems **e.** Description of the drawing (optional, if required)	5. Format as in provisional, but it also includes: **a.** Statement of invention **b.** Claims **c.** Drawings

Table 1. Components of provisional and complete specification.

1.16. Contents of specification

1. Specifications, either provisional or complete, should sufficiently indicate the subject matter of the invention-related information in title.
2. If any subject matter in the form of drawing is made under the Patent Act, it should be submitted along with specification either provisional or complete wherever necessary.
3. In any circumstance, if any model or sample exemplify the invention, it should be submitted in the part of the specification.
4. If, in any particular case, the controller considers that an application should be further supplemented by a model or sample of anything illustrating the invention or alleged to constitute an invention, such model or sample as he may require shall be furnished, but such model or sample shall not be deemed to form part of the specification.

Each complete specification must contain:

- Depict the invention, operation and its procedure in full detail
- Express the performance of the invention and the claim protection in the best method
- Explaining the scope of the invention for which the protection is claimed
- Provide the technical information about the invention in the abstract

5. In complete specification, the claim or claims should be clear and concise to relate a single invention or a group of inventions linked so as to form a single inventive concept.

6. Inventorship of the invention should be furnished in the prescribed form along with the complete specification.
7. Complete specification can include in the claims any developments or additions to the invention which were not mentioned in the provisional specification [12, 21].

1.17. Procedure for obtaining patents

1.17.1. Publication and examination of patent applications

1.17.1.1. Publication

Publication of the patent applications is the first process in the procedure for obtaining patents. The publication of the patents includes date of application number, name and address of the applicant along with the abstract. Patent application will not be opened for public inspection before publication. After the date of publication of the patent application, the applicant must give a written request in the prescribed format to the concerned authority to inspect the complete specification along with provisional and drawing (if any) and abstract.

1.17.1.2. Request for examination

Patent application will not be examined until the request is made by the applicant in the prescribed format along with the prescribed fee within a specific time duration. If any applicant has not requested against the patent application within the prescribed time period, the abovementioned application will be treated as withdrawn and hereinafter the application cannot be revived.

1.17.1.3. Examination

When a request is made by the applicant within the prescribed time, the application will be examined strictly based on the serial number of the request received in the prescribed format. After examination of the patent application, the objections/requirements are communicated to the applicant as First Examination Report (FER). Based on the objections/requirements of the patent application, applicant shall submit the reply within the specified period of time. No further extension will be given if the application for amendment is not received within a period of specified time. If any application meets the acceptance criteria, it will be notified to the concerned authority.

1.17.1.4. Search for anticipation by previous publication and by prior claim

When a patent application is examined by an examiner (whom the patent application is referred to), he/she will be responsible to investigate whether the invention, as far as claimed in any claim of the complete specification, has been anticipated by any publication before the date of filling of the complete specification by the applicant.

1.17.1.5. Opposition proceedings to grant of patents

1. During publication of the patent application but before granting of patent, any interested person can oppose in writing against the grant of patent to the concerned authority.
2. At any time of patent grant, but before the expiry of a period, any interested person can represent and give notice of opposition against the grant of patent to the concerned authority in the prescribed format.
3. If any notice of opposition is received by the concerned authority, they will notify the same to the patentee. The concerned authority will constitute a board namely Opposition Board having such officers. The notice of opposition along with the documents will be submitted to the Board for examination. Once examination is complete, the opposition board submits their comments (recommendation) to the concerned authority for further process.
4. On receipt of the recommendation from Opposition Board and from patentee, an opportunity will be given to the opponent to propose his/her opposition being heard. Based on the results, the concerned authority shall order either to maintain or to revise or to cancel the patent.

1.17.1.6. Grant of patents

1. When the patent application is found to be in order, patent will be granted.
2. The concerned authority of patents shall publish the fact that the patent has been granted and thereupon the application, specification and other documents related thereto shall be open for public inspection on the grant of patent.

1.17.1.7. Grant of patents to be subjected to certain conditions

The grants of patent to be subjected in certain conditions under the Patent Act are:

1. Any article, machine or apparatus in respect of which the patent is granted may be imported or made by on behalf of the Government for the purpose merely of its own use.
2. For Government use in respect of which the patent is granted.
3. Any article, machine or apparatus in respect of which the patent is granted may be used by any person, for academic/education purpose.
4. Import of drugs by Government for hospital purpose or for distribution in any dispensary.

1.17.2. Rights of patentee

1. When a patent is granted for a product, an exclusive right to prevent third parties for making, using, offering for sale, selling or importing for those purpose that product.
2. When a patent is granted for a process, an exclusive right to prevent third parties for using, offering for sale, selling or importing for those purposes the product obtained directly by that process.

1.17.3. Register of patents

Particular of the patent will be entered in the register of patent; it includes the names, addresses of grantees of patents, notifications of assignments, transmissions of patents, licenses under patents, amendments, extension and revocations of patents.

1.17.4. Renewal fee

In order to keep the patent in force, every year renewal fee is needed to be paid. Within the specific time period, if the patent has not been issued, the renewal fees will be accumulated and paid immediately after the patent is sealed or within specific time period of its record in register of patents. The patent will end and have no effect if the renewal is not paid within the prescribed time.

1.17.5. Restoration

An application is to be filed to the appropriate office according to the jurisdiction within the specific time period for restoration of a patent that lapses due to non-payment of renewal fees [12, 15, 21, 22].

1.17.6. Drafting of patent specification in patent application

The principles of construction of details summarized as follows[6]:

The general rules of construction of details in the patent specification are:

- The complete specification must have all the related details towards the invention without favour to subsequent infringement or conduct of the patentee. In some cases, the priority date is preferred.
- The claimed part is mostly legal with what is not claimed is disclaimed. After patented, it is not permissible to change any references mentioned in the claim.
- The specification should be constructed, that is, it should not be obvious to the person skilled in the art of the invention. The specification should not construe the claims by reference to the subjective thoughts, intentions, purposes and opinions of the patentee.
- The specification content should not be a literal one, and it should be a purposive construction.
- Documents subsequent to the complete specification are prohibited.
- The claim in patent must be constructed keeping in mind the infringement and invalidation purpose also.

1.17.7. Parts of the complete specification

Each specification should have the following parts.

- Title of the invention
- Opening description of the invention

- Prior art description
- Objects of the invention
- Statement of invention (optional)
- Detailed description of the invention
- Claims

1.17.7.1. Title

In drafting the complete specification, the first step is to define the scope of the invention or forming a mental picture of what is to be claimed. Converting the mental picture into suitable words is the second step. While framing the title, attention has been taken to incorporate the entire scenario about the invention.

1.17.7.2. Opening description of the invention

The opening description of the complete specification provides more details about the invention. Some of the applicant may prefer to draft the full set of claims first; in general, the main claim will be derived from the title of the invention, then the rest of the specification will be drafted followed by claims of the invention. Procedure for the invention to be carried out can be described in the opening description of the specification.

1.17.7.3. Prior art references

Relevant prior art references of the invention are provided subsequent to the opening description. The prior art references provide the disclosed or known details of their invention. To increase the credibility of the invention; discuss the prior art reference/invention, its drawbacks individually and mention the advantages of invention related to the prior art invention.

1.17.7.4. Objects of the invention

The objects of the invention should be briefly stated. In general, the main object or essential object is mentioned in the invention, followed by additional objects of the invention either separately or subsequent to the essential object.

1.17.7.5. Statement of invention

If the application contains one or more collective claims, the applicant should provide supporting statement of the invention. The applicant is not incorporating any collective claims; then the applicant need not provide any statements of the invention.

1.17.7.6. Detailed description of the invention

In this section, the applicant should describe in detail about the information related to invention. The applicant should keep it in mind that the specification of the invention is not

addressed to any general public or a layman but to a skilled person in the art. The patent will be invalid, if the description of the invention in the specification is not sufficient to allow a person having average skill in, and average knowledge of, the art to which the invention relates, to work the invention.

Description of the invention is assessed based on the two criteria:

1. A detailed specification must describe the embodiment of the invention specified in each and every claim.
2. Description of the invention must be fair.

The written description requirement is essentially a requirement that each claim should be fairly based on the disclosure.

1.17.7.6.1. How to make the specification

The specification detail of the invention must facilitate the skilled person in the art to read, understand and to make the invention which is claimed in the specification.

1.17.7.6.2. How to use

The invention should have the utility and meet the scope of the invention claimed. In some field, there is no need to disclose specifically about the utility of a claimed product. If the invention claims other than pharmaceutical, there is no need to provide prior art compounds' comparative data.

1.17.7.6.3. Best mode

The applicant should disclose the invention in best possible method in the specification. In short, three expressions are needed to be kept in mind by the applicant during the preparation of patent specification in the patent office. The three expressions are:

1. Sufficiently and fairly describe the invention
2. Sufficiently and clearly describe the invention
3. Fully and particularly describe the invention

The procedure for carrying out the invention is best known by the inventor, it should be given in each description of the invention in the patent specification.

If any illustration or drawing directed to machines, articles of manufacture and certain processes are part of the invention, it should be included in the application. Dimensions or spatial relationships are needed to be included in the invention. Addition of tables, graphs and charts are advisable for disclosing the patent invention in the application. If any tables, graphs, charts, figures and drawing are included in the application, it should be arranged serially. If any description is included in the specification, it should support each and every claim of the invention.

If the invention is related to mechanical device/apparatus, its connections or interconnections between the parts of the mechanical device and its function, the invention details need to be described clearly in the specification.

If the invention related to chemical process, the process details like starting materials, key process steps, its parameters, and the description of the end product details are need to be described clearly in the specification.

1.17.7.7. Claims

The patent invention for which the patentee expect the exclusive right are should be clearly described in the claim or claims of the complete specification.

1.17.7.7.1. General philosophies in the interpretation of claims

- Claims are always a question of law and it should be mentioned unambiguously.
- Whatever unclaimed in an invention may be interpreted as a matter of law not owned by the inventor!
- Extrinsic evidence by means of expert testimony may be adduced, if the meaning of a term of art in the claims is disputed, but the decision in a question of law is to be made by the court.
- Factors, if any, in the claims should be considered.

1.17.7.7.2. Function of claims

The patent invention should be clearly defined in the claim. The main purpose of the claim is to define the scope of the subject matter that is to be protected under the patent. The claim of the patent should be drafted in such way that any competitor does not infringe the patent and the claim should be interpreted literally. The patent claims are not interpreted alone, instead it should be written in clear and concise manner in the description of the specification itself. Thus, the description of the specification not only provides the basis of the claim but also the claims are restricted with respect to the prior art.

1.17.7.7.3. Categories of claim

In patent, the claims are broadly classified in two categories:

1. Product patent which includes any mechanical device, a machine, an electronic circuit, any chemical compound and chemical formulation.
2. Process patent which includes any method of making, using or testing procedures.

The patent invention related to chemical product, the claims can include chemical substance itself may be useful or itself may be used as intermediates for the production of other substances/compounds. If the invention related to chemical process, the claims can include

process of synthesis, isolation, purification and extraction of chemical substances, testing and assay methods, subsequently its medicinal use. In general, different types of claims can be included in the specification of the patent application, but it should provide the useful protection for the main claim.

1.17.7.7.4. Independent and dependent claims

Independent and dependent claims are two types of claims. Either independent/dependent claim or both can be included in the specification of the patent application. Claim can be included as independent claim in the specification; it is just a form of shorthand to avoid writing out an entire definition many times over. If the claim can be included as true dependent claim in the specification, all the limitations need to be considered.

1.17.7.7.5. Number of claims

Number of claims depends upon the invention. Normally in the patent specification, the main claim corresponds to the patent invention. If any specification of the patent application contains large number of claims, it will be discouraged in several patent offices. Additional fees are to be paid for the claims in excess of a particular number.

1.17.7.7.6. Form of claims

The meaning of claims in the specification must be definite, precise, clear and understandable by any skilled reader. Wording such as 'preferably' or 'for example' should not be included in part of the claims. In describing the claims, avoid internal codes or names, or trademarks without a generic description. Consistent language and vocabulary are to be used throughout the specification and in the description of claims. General abbreviation terms can be used in the specification of the patent application. If the invention utilizes different components, precautions need to be taken while describing the claims and specifying the essential components related to the invention.

1.17.7.7.7. The scope of the claims

Every patent practitioner has responsibility to protect his/her client and to provide best possible protection for their inventions. In general, claims of the invention should be too broad rather than too narrow. Taking into consideration the known prior art references, technical feasibility and its limitations, the claims of the invention should be broadly written in the specification. Therefore, statements of claims are the serious active part of the specification of any patent application, and it should be expressed in legal term about the invention that is to be protected.

The statements of the claims are not necessary to be limited to a claim. Based on the common idea, more than one can be included in the specification of the patent application. The specification may contain any number of claims, but the entire claim must focus towards only one invention that is to be protected. In an invention claiming various features independent of one another, applicant may file different patent application for each feature separately.

1.18. Length of text

Length of the patent specification should be kept as short as possible with sufficient disclosed information about the invention that is to be protected. The reason to keep the specification text content as short as possible is the cost to be paid towards the length of the text of the specification content. In general, if the specification is written very clearly in concise aspects, it is likely to give an enforceable patent to the invention [12, 15, 21–28].

2. Conclusion

To achieve economic, social and technological advancement, IPR is the only key element to protect the ideas, stimulate the innovation, design and help the creation of technology. Various types are IPR are designed to provide benefit in the aspects of sharing the developed knowledge as a new invention leads to give a wealth creation. This IPR can facilitate the transfer the invention as technology transfer in the form of licensing through any joint ventures. The main purpose of IPR is to give protection for their investment as incentives and also to encourage further developments in their research. Among the various IPR system, patent are rights related to an invention given by the Government/statute in exchange of full disclosure of their invention by the patentee. Invention for which the patentee expect exclusive right, it should be clearly described in the patent application as specification. Specification is a statement constructed based on the knowledge acquired during the invention and the prior art information with the drawbacks, it should clearly define the invention as claim or claims in best possible method by applicant to get exclusive rights. The claims in the specification must be expressed legally; the invention as definite, precise, clear and understandable by any skilled reader and any competitor does not infringe the invention. The main purpose of the claim is to protect the subject matter that is to be protected under the patent. Number of claims depends upon the invention, and the length of the specification should be kept as short as possible to reduce the processing charge of the patent application.

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