



IP FOR START-UPS AND MSMEs

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Foreword



Dr Ramesh Datla

Chairman

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Confederation of Indian Industry (CII) has been closely and actively engaged with the Intellectual Property Rights (IPR) policy making, advocacy, awareness, and services for many years now. In order to create an appreciation for IPR and expand its protection among Indian industry, CII has a National Committee on IPR in place. The CII National Committee of IPR guides, steers, and directs the newer initiatives and efforts towards fostering IP culture in the country. CII has taken many new initiatives in the recent past through its National Committee on IPR. During its ongoing term this year, the CII IP Committee is focusing on the theme of “Business Growth Through IP Intensity”.

The Micro, Small & Medium Enterprises (MSME) and Start-ups are crucial for economic growth and employment, especially in the developing countries. Governments, worldwide, are bringing out schemes and policies to help MSMEs bring their products to wider markets. It is however a global challenge to encourage MSME to utilize their IP extensively and effectively. A need is hence identified for enhancing the awareness of IP creation, protection, and enforcement among MSME and start-ups. This becomes all the more important because the IPR protection plays a very crucial role in promoting the marketing and innovation in product development of MSMEs which is critical for them to compete with global standards and technological challenges. CII firmly believes that IPR should be central in a meaningful manner to compete at the global stage.

CII has been discussing with multiple players and stakeholders the key imperatives to create awareness on IPR among MSMEs and start-ups. This led to CII coming up with this “Book on IP for Start-ups and MSMEs”. The objective was achieved with the help of key members of the CII National Committee on IPR. The book discusses various type of IP risks that MSMEs and start-ups need to be aware of. A small brief has also been included to apprise readers on various government initiatives on IPR front for MSMEs and start-ups.

I hope that CII members will find this book very useful and encourage them to use the hand book to examine the related IPR nuances with due consideration and care. This will also be important for designing the future plans of the MSMEs and startups.

Acknowledgement

Confederation of Indian Industry (CII) would like to thank all the stakeholders who have been associated with this study and have shared their inputs, without which this study could not have been completed.

We'd like to acknowledge the contributions of Mr Munish Sudan, Innovation & IP Management, TATA Steel Ltd.; Mr Navneet Kalia, Managing Director, Alpha TUB; Dr. Vishal Anand, Head of Intellectual Property, Reliance Industries Limited; Dr. Dinesh Kumar, Senior Director & Head IPR, Jubilant Generics Ltd.; Mr Sudeep Chatterjee, Partner, Singh & Singh; and Mr Hemang Shah, India Engineering Lead, Qualcomm Technology Licensing for this book.

We are also grateful to Ms Vidya Vikas, Patents Lead, Tata Consultancy Services for sharing her insights and comments on the draft copy of the book.

We are grateful to Dr Ramesh Datla, Chairman, CII National Committee on IP and Executive Chairman, Elico Ltd for his encouragement during the writing of this book.

The book comes to its final published book after a series of internal reviews within the CII team. The internal reviews were primarily done by Mr R Saha, (Senior Advisor, CII). We thank him for his reviews. We would also like to thank the leadership and members of IPR team of CII - Dr Ashish Mohan, Principal Counsellor, Nabanita Mukherjee, IP Team lead and Anil Pandey, IP Team lead, for their review and contribution during the content development and publication of the book.

It is sincerely envisaged that the book will provide useful information to the MSMEs and Start-ups in IP matters, and contribute to the nurturing and setting up of a robust IP regime in India.

Index

1. Why IP is key to Start-ups and SMEs

- 1.1. Role of IP and Startups in Creative India
- 1.2. Why IP is important for Start-ups and SMEs (operationally as well as strategically).

2. Ideation & Selection

- 2.1. Role of Patent Analytics During Concept Stage.
- 2.2. Gathering intelligence on expired and lapsed patents
- 2.3. Role of Patent as resource during Prototyping and Viability check stages:
- 2.4. IP Strategy approaches – Defensive vs. Offensive
- 2.5. IP Strategy during ROI and Growth phase
- 2.6. Other IP related Considerations during Ideation and Selection Stage

3. Technology Development & Protection

- 3.1. Startup Business model and role of IP
- 3.2. Intellectual Property Framework in Startup
- 3.3. IP Strategy: Process & Key Considerations
- 3.4. Decision on IP Filing
- 3.5. Selecting IP and Technical Expert for Patent Drafting and Filing
- 3.6. Securing IP In Cost-Effective Way
- 3.7. IP Filing and Grant Process Work Flow
- 3.8. Patent Filing Vs Trade-Secret Vs Defensive Publication
- 3.9. Deciding Market of Interest and IP Filing
- 3.10. Avoiding IP Rights Violation

4. Manufacturing & Marketing & Commercialization

- 4.1. Trademark protection for products
- 4.2. Licensing of Technology - (in and out)
- 4.3. Monetization Strategies and expanding the scope beyond India
- 4.4. Patent pools and standard essential patents (FRAND and RAND)
- 4.5. Essential elements of IPR to be kept in mind while engaging in exports

5. Risk Assessment

- 5.1. Types of IP Risks
- 5.2. Sources of IP Risks
- 5.3. IP risk mitigation and practices
- 5.4. NDA signing with partners, Employees, and prospective licensees
- 5.5. Legal remedies available in India for IPR disputes dealing with trademarks, designs, copyrights and patents.
- 5.6. IP Software Protection in start- up

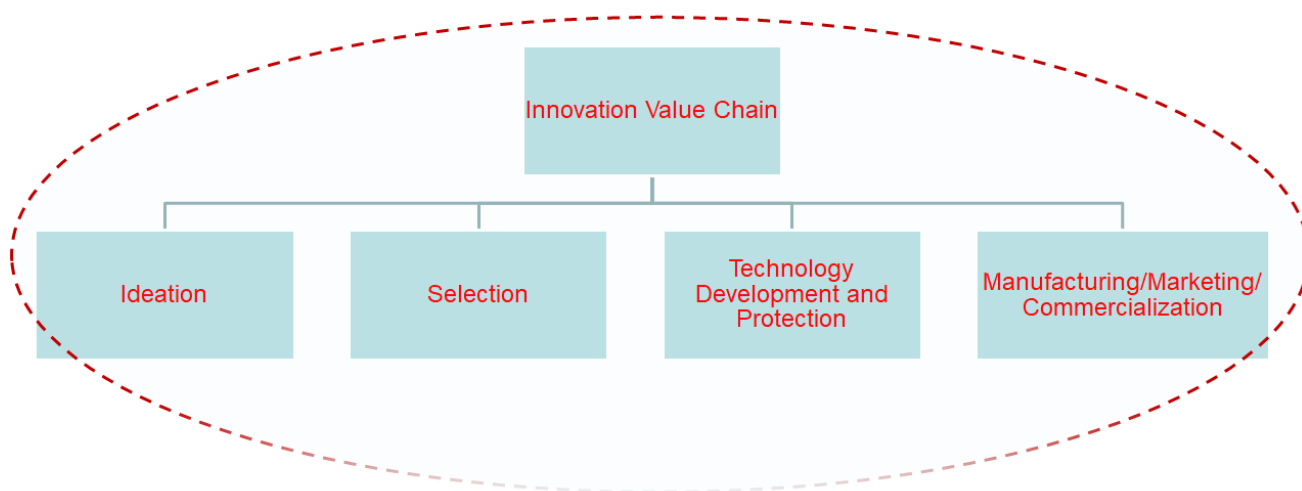
6. Government Initiatives for encouraging IP creation by Start-up and SMEs

- 6.1. Startup India Schemes and Startup India portal
- 6.2. Startups incubated at universities Guidelines
- 6.3. IP Support Program under MeitY
- 6.4. IP Facilitation Centers (IPFCs)

How to read the Current Book:

A start-up or SMEs is a typically an entrepreneurial effort and hence, Innovation remains the differentiating factor for start-up when it comes to competing with incumbents and hence, we have made innovation value chain (as illustrated in the figure below) as the broad basis for developing the content and focusing on how IP has a role at each of the innovation value chain step.

Thereafter, a chapter has been dedicated to understanding various type of IP risks that start-up or a SME needs to be aware of. A small brief has also been included to make readers apprised on various government initiatives on IPR front for SMEs and start-ups.



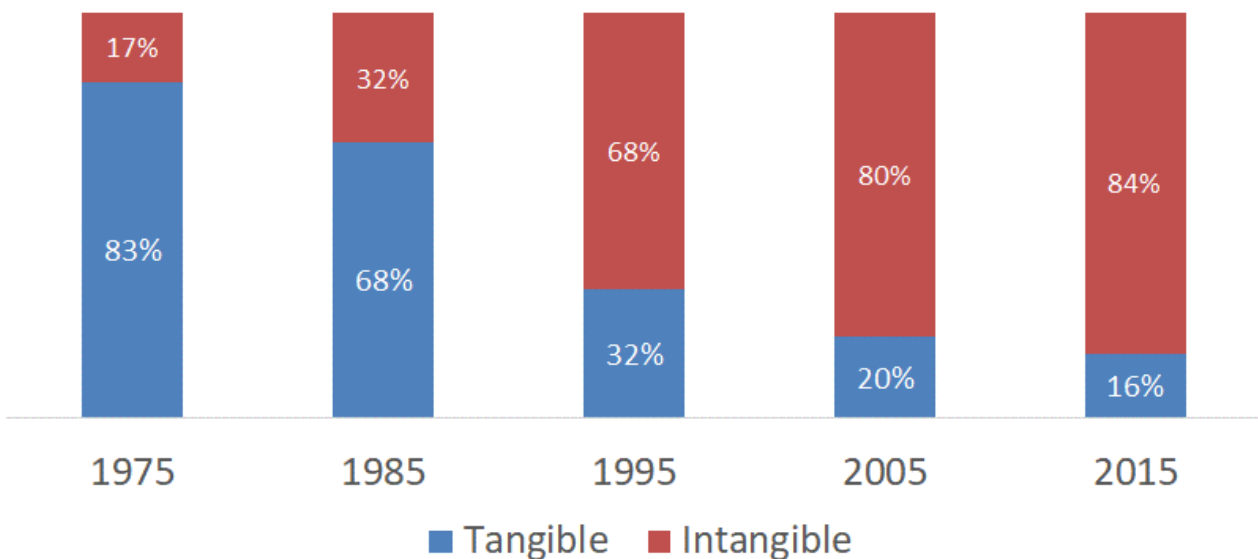
Chapter 1: Why IP is key to Start-ups and SMEs

1.1. Role of IP and Startups in Creative India:

Besides land, labor and capital, Innovation is another key factor for propelling economy of any nation. Essentially Innovation increases productivity for a given unit of land labor and capital resulting in increased overall output. In the fast changing business world, differentiation is key and Innovation is a mean to create the differentiation. Intellectual property provides the necessary tools to ensure that creator of differentiation is benefited and gets the competitive edge in the market. Hence, it is very important to understand the interplay between Innovation and Intellectual Property.

In 1975, the asset distribution of Standard & Poor's 500 companies comprised 83% tangible assets and 17% intangible assets. In 2005, this asset distribution has almost become opposite comprising 84% intangibles and 16% tangibles. This transition is visible across different industries and signifies the importance of Intellectual property. It clearly indicates the need to innovate on a continuous basis and accumulate intellectual capital. Another fact is that there are over 30 companies with revenues over billion dollar that did not exist a decade back. This indicates that Start-ups and SMEs are going to be growth enablers for the nations.

Components of S&P 500 Market Value



Source: Ocean Tomo

As the global economy becomes more integrated, interconnected & interdependent countries there is an increased awareness in our country that policies for protection of intellectual property shall determine the wellbeing of India for years to come.

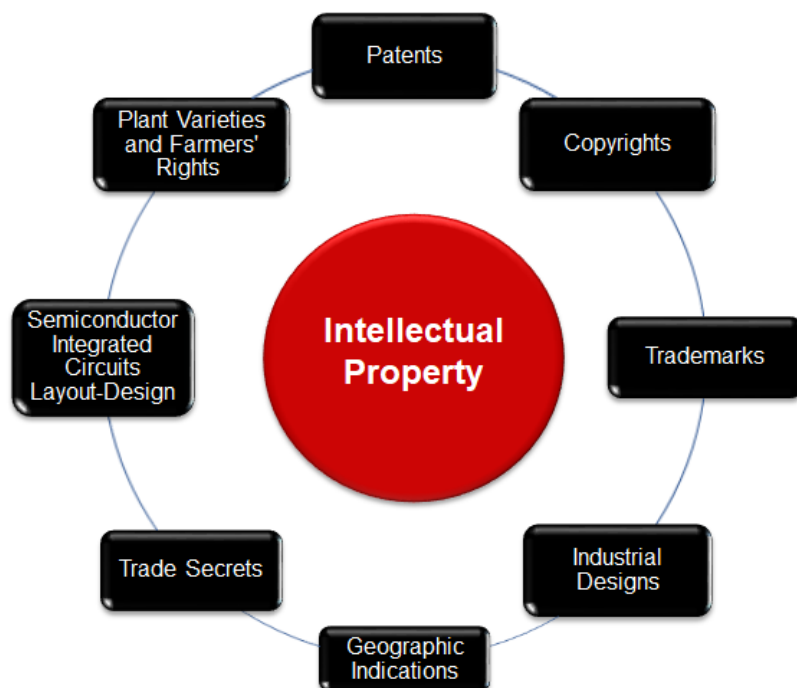
In a hyper-combative global business environment, some countries have been adopting aggressive trade practices thus making a more compelling case for India's innovator to steer the country towards global leadership through innovation. 21st century would be largely driven by knowledge and Innovation and hence, in this new paradigm, IP would be an enabling function in building success stories of the nations and organization.

In recent years there has been a renewed push by Government of India to promote awareness about intellectual property. Further, by engaging with trade bodies such as Confederation of Indian Industries (CII) the Govt of India, continues to leverage the expertise and insights of industry and academia to further strengthen to core foundations for development of IP led ecosystem in India. CII has also constituted an IP Committee for Startups which lends guidance to young entrepreneurs and startups to protect their intellectual property through this IP Book.

1.2. Why IP is important for Start-ups and SMEs

The primary enabler for a startups or SMEs growth is Intellectual Property. Intellectual property refers to creative output of human intellect which can be protected by enacted laws in a country. When it comes to start-up or a SME, innovation becomes very basis of their sustenance and growth and hence, it becomes crucial for them to understand how to maintain the innovation led advantage through use of IP. It becomes imperative for a SME or start-up to integrate its business strategy with IP strategy primarily for two main reasons – first to ensure that organization understands on how to sustain innovation led advantage on continuous basis and secondly, to capitalize on scalability and synergistic properties of intangible assets.

All creations resulting from human intellect or endeavors in various fields of art, literature, science and technology constitute Intellectual Property”. To qualify for protection, IP must fall under one of the following general categories:



| Form of IP | Requirements for Protection |
|---|---|
| Patent | Novelty, Inventive-step and capable of industrial application |
| Copyright | Original |
| Tradeseecret | Not disclosed |
| Design | Original |
| Semiconductor Integrated Circuits Layout-Design | Original, Distinctive, Capable of distinguishing from any other layout design, Have not been commercially exploited anywhere in India or in a convention country. |
| Plant Variety and Farmers Rights | Novelty, distinctness, uniformity and stability. |
| Geographical Indication | Identification of the good and its particular area of geographical origin. Possess qualities or a reputation that are due to that origin |
| Trademark | Distinctive, Non-deceptive |

1. **Patent:** A Patent is a statutory right granted for an invention for a limited period of time (generally 20 years from the date of filing) to the patentee, in exchange of full disclosure of the invention. Patent rights exclude others from making, using, offering for sale, selling or importing infringing products in the country where the patent was granted.
2. **Copyright:** Copyright cover the rights granted to creators of literary, dramatic, musical and artistic works and producers of cinematograph films and sound recordings. The rights include rights to reproduction, communication to the public, adaptation and translation of the work. In a crude sense, Copyright protection protects literary and artistic works from illegal duplication.
3. **Trademark** a sign that individualizes the goods of a given enterprise and distinguishes them from the goods of its competitors. This form of IP right provides rights to exclude others from using the trademark so that others cannot use the trademark for their products/services, Product/service distinction is maintained and brand equity is not diluted for the trademark owner.
4. **Industrial designs** A “Design,” is defined as features of shape, configuration, pattern, ornament or composition of lines or colors applied to any article by any industrial process or means. Design IP Rights exclude others from copying/imitating the design.
5. **Geographical Indications:** “Geographical Indication”, in relation to goods, means an indication which identifies such goods as agricultural goods, natural goods or manufactured goods as originating, or manufactured in the territory of a country, or a region or locality in that territory, where a given quality, reputation or other characteristic of such goods is essentially attributable to its geographical origin and in case where such goods are manufactured goods one of the activities of either the production or of processing or preparation of the goods concerned takes place in such territory, region or locality, as the case may be. Geographical indications are used to protect the identity and reputation of goods with a specific quality. Geographical name conveys an assurance of quality and distinctiveness which is essentially attributable to its geographical locality, region or country.
6. **Trade secrets** Trade secrets essentially refers to proprietary confidential information in the form of secret formulas, processes and methods that may provide the owner of trade secret a competitive advantage. Trade secrets are not awarded any official protection like other forms of IP protection.
7. **Semiconductor Integrated Circuits Layout- Design (SICLD):** A SICLD means a layout of transistors and other circuitry elements and includes lead wires connecting such elements and expressed in any manner in semiconductor integrated circuits.

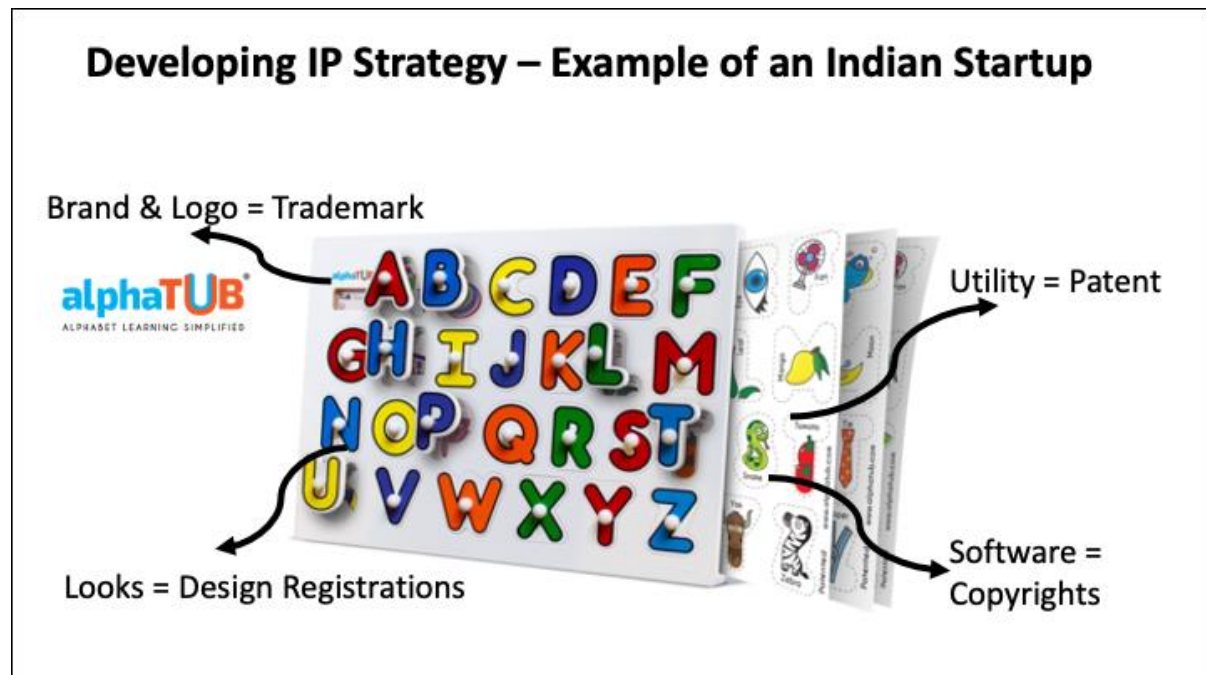
8. **The Plant Variety and Farmers Rights:** The protection on the plant variety means no one can sell, export, import or produce the seed or propagating materials of such protected (registered) plant variety without the registered breeder's (owner's) permission.

To succeed in the competitive work, start-ups and SMEs need to create an IP Strategy encompassing different forms of intellectual property. An IP strategy is strategic approach of an organization towards achieving business goals. The IP role in doing so is by ensuring the competitive advantages for the organization by creating exclusive opportunities in the business areas of the organization's interest.

An effective IP strategy helps a start-up or SME in addressing the two basic strategic considerations:

1. Where to Create Differentiation – via understanding the white space in a domain or creating a niche.
2. How to Exploit the differentiation (once differentiation is created, it is imperative to understand on how to capitalize on it)
 - Maintaining the status quo via preventing competition from copying the IP
 - Managing the IP assets efficiently
 - Extending the differentiation
 - Keeping IP assets aligned with business interests
 - Increasing revenue by licensing, franchising, selling or divesting IP assets
 - Using IP as collateral to raise investments or to get loans

Example of IP Portfolio of an Indian Startup:



A growing number of Indian startups are taking initiative to invest in creating a portfolio of IP. One such example is the IP Portfolio of alphaTUB®, that helped the Indian startup to navigate the

competitive global market and allowed the company to maintain its edge even in the eye of severe competition from global giants. In fact, the presence of IP assets has allowed alphaTUB to maintain its degree of market exclusivity or competitive advantage in lucrative markets like the US, EU and many more. Powered by IP despite being a startup, alphaTUB is a strong emerging branded innovative product from India.

Therefore, that by following a careful and well thought IP strategy, the startups of India can maintain their competitive edge and contribute to attracting more wealth to India. The following sections of this IP Book are designed to help the budding startups and innovators in India.

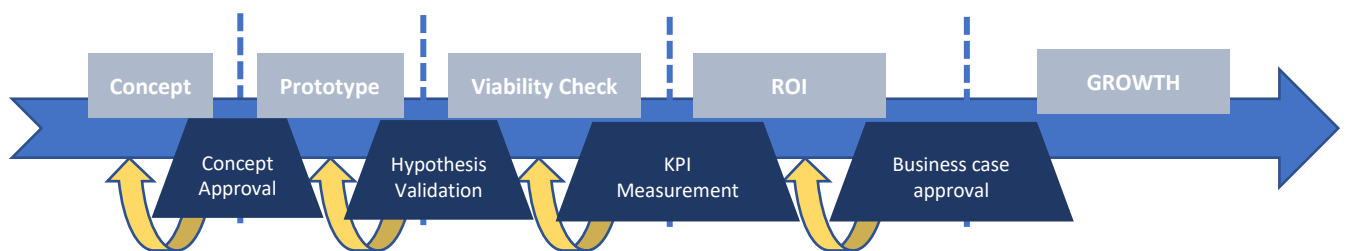
Chapter 2: Ideation and selection

There are umpteen number of examples that how a small idea is translated into a big business idea. How ideas translate to reality and transform into disruptive technological forces can be exemplified by the emergence of Google and Facebook. This started with a humble attempt to ‘organize a big pool of information in easy retrievable form’ and ‘connect people and seamless sharing and expressing’. Therefore, the role of ideation is central to the startup ecosystem. The ideas are delicate if not handled with care they may lose the potential or become redundant if better idea emerges.

For the technology startups, it is very critical to create an idea which helps in achieving the goal of the startup. It also involves selection of suitable idea suitable for the business model. Further, it is also equally important to have good understanding on the strength and weakness of the idea and appropriately create an alternative idea for the proceeding. Most importantly, it is equally essential to avoid reinventing the wheel as there is a possibility of having someone who have already implemented the idea and solved the same problem. This chapter presents a description on the topic of ideation and selection which is inseparable from the working of an innovative startup.

Ideation of Product/Business Model: The Stage Gate Process

The first step in this direction is to create the idea/business model which can sustain the test of the market. “Stage gate”¹ is a known and very well-established product development model which helps in addressing the uncertainties and coming up with a well-defined path forward. “Stage” comprises a specific phase of initiatives and “Gate” is the milestone-cum-filtering tool for identifying the initiatives suitable to promote to the next stage. It is important to note that it is different from conventional waterfall model because every stage gate maintains a feedback loop. It can be termed as an approach for agile innovation which suits the most to the startups.



The above is a high level of representation of the process flow for stage gate, it is an iterative process and each stage involves multiple rounds. Following table highlights the role of IP related activities at various stages:

¹ Links:

| TITLE | LINKS |
|--|---|
| Spiral Development: Lean vs. Stage-Gate | https://www.sopheon.com/blog/spiral-development-lean-vs-stage-gate/ |
| Stage Gate Process (Cooper) | https://www.toolshero.com/innovation/stage-gate-process/ |
| The Stage-Gate® Model: An Overview | https://www.stage-gate.com/wp-content/uploads/2018/06/wp10english.pdf |

| Stages | Name of IP Activity |
|------------------|--|
| Concept | Prior art search, Novelty / landscape search |
| Prototype | Freedom to operate, Patent filings, Trade secret |
| Viability | Additional Patent filing |
| ROI | Leveraging IP portfolio for maximizing value |
| Growth | Patent filing on improvements, Trade secret, IP Management |

As apparent from the above table, one or other IP activities are applicable at each stage of the stage gate process of product development.

Some of the case studies on leveraging IP is available on WIPO website (link: https://www.wipo.int/ipadvantage/en/search.jsp?ins_protection_id=534&focus_id=)

The following section provides a detailed overview of IP related activities useful in ideation and selection phase.

1.3. Role of Patent Analytics During Concept Stage:

1.3.1. *Conducting a comprehensive Technology Landscape*

1.3.1.1. Domain focused technology landscape: Like any other venture, startups need to develop clear understanding about the technology domain in which they are targeting to operate. This comes as proverbial first step towards the journey of setting up a successful startup. A domain focused patent landscape brings valuable insights for R&D and product development teams. It should be accompanied with scientific literature search to ensure comprehensiveness. In a way, this is equivalent to conducting state-of-the-art study on the technologies developed in recent past. It also throws light on the evolution of sub-technology clusters and a contrasting picture can be obtained on the obsolete and active technologies. In a way, the finding of domain focused technology landscape helps in gauging the pace and volume of technical and innovative activities in the domain. This helps in get a sense of expected level of competition one may have to withstand if sets foot in that domain. It also helps in understanding the capability and technology readiness gaps. Once such information is available a better product development plan can be created and executed. It also helps in highlighting the technological gaps or white space present in the technology domain which can be leveraged for building patent portfolio. The clear identification of technological gaps in the domain and technical expertise/competence of the players helps in building collaborations and acquisitions.

1.3.1.2. Company focused technology landscape: This is to get an up and close view of technical capabilities of companies of interest. In this kind of landscape, it is the main focus to profile the companies along the lines of their respective strength and weakness in the technological domain. The findings of this kind of landscape is helpful in identification of potential partners and alliances which are very critical for the startup to expedite its journey towards establishing itself as an established player in the market. It also helps in creating a comparative picture of the technical capabilities of the startup vis-a-vis competitors which can be very useful indicator for any required course correction or for use as a marketing prop to demonstrate the technical superiority over competitor. These landscapes are not only useful at the beginning of startup journey but throughout the course of its evolution.

1.3.1.3. Geography focused technology landscape: Selection of Market is the most critical part of a new company's business model at the beginning, it remains equally important even for a relatively older company trying to grow its market. A geographical snapshot of technology activities can be easily obtainable by doing the patent landscape in a selected country or group of selected countries. This helps in highlighting the market preference and selection by the competitor, which enables identification of less crowded and relatively untapped market for the startups. In a crowded and active geographies, the IP infringement risk levels are higher as compared to less crowded ones, this is a good indicator for a startup which want to avoid early litigations and use the funds on product development. It also allows identifying opportunity to use a technology not patented in a given jurisdiction leading to unfettered use due to absence of enforceability. In nutshell, such landscapes highlight some hidden information and helps in designing a strategy to leverage a favorable market.

1.4. Gathering intelligence on expired and lapsed patents

1.4.1. Scouting for expired and lapsed patents: The expired and lapsed patents present new business opportunities for the startups. A patent holder gets a period of 20 years of exclusivity for manufacturing and selling the patented invention, once the 20 years' period is over, the patent rights get expired, and it becomes freely available for the public to use it. These patents require annual fee payment to remain active for the entire patent term, in event of failure of payment at any stage, the patent gets lapsed and becomes available to public to freely use. The Pharmaceutical industry is the best example of leveraging the expired and lapsed patents for producing medicine at much cheaper price. This can be equally true for other industries as well, however, in order to ensure the success, it requires proactive identification of such expired or lapsed patents by the companies. This is an effective option to leverage available patent expired technologies, it not only saves you from paying licensing fee but also avoiding re-inventing the wheel.

1.4.2. Use of lapsed Patents opens door for competitors: A patent is lapsed/ or cease to exist after its expiry and not renewed, as per patent law, the patent term expires at the end of 20 years from the date of filing and it ceases if the maintenance fee is not paid. The lapsed patent and subject – matter covered in the patent thereafter will come into public domain without any active patent protection. The subject matter of the concerned patent may be used by any person without any kind of fear of infringement. It will make the lapsed patent available to be used by anyone and no longer will be protected or restricted to its originator, and that will create a golden opportunity for competitors to exploit it commercially. Basic patent information can be searched with freely available database such as Google patent, Espacenet, PatentScope etc. Further details can be obtained from patent office website.

1.4.3. Gathering information and using the same for challenging grant of competitors' patent: Patent Opposition is a legitimate provision for challenging the validity of a patent. For the balance of convenience, it offers the option for preventing the grant of a patent application lacking merit, even a granted patent can also be opposed (within a prescribed time window). The details of patent prosecution are publicly available which contains particulars of the patent examiner's objections and patent applicant's defense. If carefully studied, it will highlight the weaker aspects of a target patent. If you see a potential threat from the patent, it is important to seriously considering the option of pre-grant opposition to prevent the competitor from getting a successfully granted patent to block your commercial activities. Similarly, if a granted patent is causing interruptions to any business activity, a post grant opposition procedure can be initiated.

In both the scenario, it is important to ensure a good background search for preparing an opposition package. The effectiveness of opposition package should be evaluated upfront otherwise a failed opposition attempt ends up in validating the strength of target patent. Such close observation on the patenting activities of competition is essential and therefore it should be taken care by a dedicated in-house team or this can be outsourced to a reliable IP service provider. A successful opposition of a competitor's patent not only mitigate a potential IP infringement risk but also opens a new business avenue.

1.5. Role of Patent as resource during Prototyping and Viability check stages:

A. *Identification of viable and potential ideas*

- **Focused Patent and scientific literature search for setting up R&D plan:** Typically, a startup's existence revolves around solving a problem in cost effective or efficient manner. It is important to have series of focused patent and scientific literature searches around a set of problems which a startup wishes to solve. Such searches help in identification of all available solutions which R&D team can consider as reference for improving the effectiveness or ideating a totally different approach for solving the problem.

B. *Identification of ideas requiring IP protection*

- **Conducting patentability evaluation on the ideas lying in pipeline:** At any point in time, startup strewn with ideas and proposed technical solutions. It is critical to identify patentable ideas early on and accord necessary protection to keep it safe. The ideas lying in pipeline requires special care because if leaked or disclosed inadvertently before filing a patent, it will be become a part of public domain and lose its eligibility as a patentable subject matter. It is equally important to have a mechanism to ensure expedited filing of important ideas, it will not only help securing early priority for the patent application but also optimize the potential for timely exploitation of patent value during the term.
- **Planning defensive publication for the non-patentable ideas:** Once the patentable ideas are identified, the residual information can be considered for defensive publication. It is a precautionary step to ensure destruction of patentability of the residual information to avoid any situation where someone erroneously getting a patent on this information and blocking your interest in future.

1.6. IP Strategy approaches

- ### A. **Offensive Approach:** The patent filing is time a critical component where the filing first is the first condition to be met. Following are key scenarios where offensive patent filing approach can be adopted.
- **Patent filing of disruptive technologies:** If the technology in question have the potential to disrupt the market, there should be an aggressive approach in patent filings. The offensive approach means creating a broader and higher wall of patents for the competitors to make

their entry impossible. In terms of geographical coverage, such technologies must be protected in multiple markets and jurisdictions. Also, the patent claims should be enforceable against all player in the technology value chain, it should not be limited to the direct competitor only. Due to this, there may be a requirement of filing multiple patent applications and may increase the overall cost, but it is worth every penny as such disruptive technologies only give you definitive advantage in the long run.

- **Patent filing as first mover and early adopter:** It is important to note that a startup may be the first entrant in a technology domain or market, it may not have a disruptive technology as yet, but many components of technologies might have started emerging. This is the opportune time to ensure the protection for those ideas, howsoever, imperfect or incomplete they may appear. It requires an aggressive filing strategy because as a first entrant you would not like the competition to have easy access in your domain. Under this category, the patent thickets must be built early on to dissuade competitors from having a walk at will in your area.
- **Protection of Core Business IP:** This is the most critical part where the heart and soul of the business model lies, the IP in this area requires special attention. Only patent filings may not be the most effective way of protecting the core business IP, it may require a combination of protection including trade secret, copyright, design, patent and by contractual means etc. It is important to deconstruct the IP to distinct components and identify the applicable mode of protection. This kind of protection requires professional help, and an expert IP attorney should be consulted before finalizing the protection strategy. Some examples of offensive patent filing strategies adopted by companies are provided below:

<https://www.fastscience.tv/insights/startups-aggressive-patent-strategy/>

B. Defensive Approach: This approach is applicable in scenario when we want to keep ourselves risk free on the IP front. This approach plays a good role in mitigating many potential risks for the organization.

- **Designing freedom to operate:** During the product development phase, there are multiple versions of product designs are created. There are many patents of competitor having claims covering some or other features of the product, this may create issue in the launch of the product. Therefore, during the product development it is important to keep an eye on such claimed features for necessary design around at the product development phase itself. This will not only save the effort of product development team but also help in avoiding a potential litigation for patent infringement.
- **Pre-emptive destruction of patentability:** One effective approach could be pre-emptive destruction of patentability by defensive publication. This may be useful for ideas which are not useful for the business but may have potential to get patented or maintained as trade secret by the competitor. Also, it helps in avoiding the patent cost on less important ideas. Over a period of time, it makes difficult for the competitor to file patents for creating unreasonable barriers.

1.7. Role of IP Strategy during ROI and Growth phase

- A. Targeting competitive advantage by creating a niche:** This is a scenario if the startup has a focus on developing a new product or solution or a new technology platform.
- **Creating a niche by collaboration:** In a situation where you want to build a competitive advantage by way of collaboration, intellectual property acts as the currency. The collaborations, alliances and licensing in are very common routes. From the Startup perspective, it is efficient and a tactical move. It is a far effective option for a startup as it not only helps in creating a synergy of competence but also helps in leaving the other competitors behind in the race of technology development.
 - **Creating a niche by creating a new technological platform:** There is only one way of creating niche in this scenario that is by making competition redundant by creation of an alternate technological solution. In the field of IT, such instances have happened and are very much fresh in our minds e.g. creation of Android in response to iOS. It also had a collateral effect on other competing technologies such as Symbian (by Nokia) and Blackberry OS (by Blackberry) eventually leading total elimination from the market. This is not always an easier option because it requires the competence and wherewithal to develop an alternate technology. In this, role of Intellectual property is paramount for maintaining the niche for a longer period.
- B. Targeting aggressive business growth:** This is a scenario where startup wants to diversify its product offerings or expand the customer segments.
- **Growth by collaborating:** There is a possibility of growing for the startups by collaborating with other partner in the value chain. In this process, the focus of startup remains on creating value for the collaborating partners. The growth by collaborating is an organic way of increasing the market share and it make sense for a startup eyeing on quick revenue growth without an upfront need of significant additional investment on R&D.
 - **Growth by excluding competition:** There are situations where a faster and quicker execution by the startups takes the competitor by surprise and helps in gaining additional market share.

1.8. Other IP related Considerations during Ideation and Selection Stage

- A. Establishing IP Policing mechanism:** IP portfolio development and management is continuous process. In order to have optimal value extraction from the IP portfolio, it is important to have a continuous watch and policing on the infringement of your IP by any competitor. If left unattended, it will help the competitor to have the freedom to use our IP for their own advantage. It not only affects the revenue and financial health of the startup but also presents a negative picture of the internal governance framework. This can create a negative perception in investors and customers minds. Therefore, it is an

essential requirement for the startup to design an internal system and process for IP policing.

B. Establishing multi-level pre-commercialization Freedom to Operate clearance mechanism: Freedom to operate analysis is a critical risk identification and mitigation step before commercialization of the product or technology. However, the timing of FTO clearance plays a big role on its effectiveness, if not done at right time, the risk mitigation can get severely compromised. Therefore, it is important to have at least two levels of FTO Clearance, first level of FTO clearance should be done between ‘ideation’ and ‘prototype’ stage. The second or final level of FTO must be done the final version of product/technology. Such practices make the product development process reasonably risk free and there would not be any surprises on IP infringement front.

C. Establishing a “Make vs. Buy” filter for idea selection for research projects: A startup should have an open environment for accepting business ideas from various part of the company. However, it is not possible to consider all ideas as potential R&D project as there are a lot of resource related challenge every company face. Therefore, every idea should be pass through Make vs. buy test. If buying is cost effective the innovation pipeline should be overburdened. Similarly, if making is cost-effective in long term, then the idea should be supported for in-house development and buying decision can be avoided.

In all of the above, Intellectual property plays the role as a currency whether you decide to compete or collaborate. Therefore, it is important to have a keen eye on IP aspects while focusing on the ideation for your startup.

2. CHAPTER 3: Technology Development & Protection

Metaphorically speaking, a Start-up is like a new kid on the block staring at the market filled with heavyweights on one hand and one the other, a flurry of new startups burgeoning on daily basis. While funding is the real fuel to keep the start-up up and running, it may not alone be adequate to win and sustain the dynamics and ever-changing market for a longer time. Therefore, it becomes critical to continuously innovate and maintain the competitive advantage systematically and effectively. This chapter presents an approach for keeping the pace with innovation trend by creating, protecting and managing the IP effectively to steer clear the harsh realities of market.

2.1. Startup Business model and role of IP

Typically, a Startup business model has following components:

1. Value proposition
2. Key stakeholders (partners, investors, customers, vendors etc.)
3. Proprietary technology

4. Financial & Business Critical information

Each one of the above-mentioned components have some inherent connection with the intellectual property and asset. Following table presents the same:

| Components of Start-up business | Applicable IP protection |
|---|--|
| 1. Value proposition | Trade-secret, Trademark, Copyright, patent |
| 2. Key stakeholders | Confidentiality and Definitive agreement |
| 3. Proprietary technology | Trade secret, Confidentiality agreement, patents, copyright etc |
| 4. Financial, Marketing & Business Critical information | Confidentiality agreement, trade secret, Regulatory clearance documents etc. |

This can be easily noticed, how IP is applicable on each individual components of a startup company. Thus, it is important for startups to give equal importance to IP as other aspects of the business.

2.2. Intellectual Property Framework in Startup

Ideally, Intellectual property should be considered as one of building blocks for the startups as it is not only required for remaining competitive in the market but also for initiating a solid legal action in the event of any unauthorized use of company's IP. Not only the legal actions, a strong IP framework of a startup also helps in repulsing an aggressive litigation from any of the big competitors. In addition, robust IP portfolio and management systems attracts good valuation and funding opportunities.

So, it is important to focus on building an intellectual property framework in the organization which takes care of the followings in seamless manner:

- Alignment of organization's policy and business goals with the IP actions
- Replenishing of idea pipeline based on external & internal environment
- Real time capturing of new Intellectual property and determination of protection scope (type of IP and jurisdiction)
- Decision making workflow to translate the business strategy to intellectual property portfolio, it is important to ensure that business strategy and IP portfolio complement each other, therefore, reviewing the current and future context to continuously revise the business/IP strategy is of paramount importance in this VUCA world?
- Cost monitoring and control of IP budget
- IP monetization is a critical area wherein the startup must ensure to generate revenue from the IP portfolio on continuous basis.

It is important to notice that Intellectual property has a ubiquitous and dynamic nature. An agile framework is very critical component to ensure creation, protection and management of intellectual property in the startup.

2.3. IP Strategy: Process & Key Considerations

2.3.1. Key Steps for Aligning IP With Organization's Policy and Business Goals

- **Developing product/business level goals:** To align the IP, it is a pre-requisite to have a clarity on the specific business goals. A product/business wise goals should be stated in clear qualitative/quantitative manner. For instance, to remain exclusive market player in product 'X' or to block competitor from using the most environment friendly process for manufacturing product 'X'. Once such goals are available, the IP counsel can chart a strategy for product/process protection. In example, regarding product X, the most effective mode of protection appears to be patent. In case of any invention related to product 'X' composition, the focus should be filing patents on all possible variations of the compositions of product X, this is one example on how to ensure IP protection is aligned with the business goals.
- **Developing guidelines on privacy and confidentiality:** Early in the journey, the startup should have clear documented guidelines on the matters of privacy and confidentiality as these may have direct or indirect bearing on the Intellectual property ownership. In startups, there is push to rush towards taking the product to market, it may lead to disclosure of many ideas which are still pre-mature for IP protection. Such protection-less IPs once in public domain, the right to protect it effectively is irreversibly damaged. While the business activities require speed and agility, IP matter should not lose the priority. For example, if a sample is needed by any customer or an investor, it must be done with proper execution of Non-disclosure agreement. A startup with such a guideline document will have lesser probability of inadvertent disclosure.
- **Setting up an empowered committee of Business, R&D, manufacturing and IP:** A committee must be setup with composition from Business, R&D, manufacturing and IP to overlook IP related activities. This will ensure alignment of IP action and business goals. The committee members can discuss and deliberate on the type of protection, scope of protection and strategic disclosure etc. Startups do have committees on technical and strategic matters, such committees can also be leveraged for reviewing the IP related actions. This committee can take care of all kinds of IP matters such as Patent, Copyright, Trademark, Design and Trade secret. The committee meetings will provide a forum for the business, R&D, manufacturing and IP to come face to face and take a 360° view on the matter at hand. This will not only help in aligning the IP and business goals but also promoting merit based IP portfolio building. For instance, if an invention needs to be protected through patent filing, the committee can guide about the scope of protection and as well as country coverage of protection. In a startup, such committee are very required to create a channel for shaping the IP portfolio in alignment with the organization's policy, strategy and business goals all together. If such committees are functional in the startup, the monetization and enforcement can also be taken care in steady and continuous manner.

2.3.2. Key Considerations for Replenishing Idea Pipeline Based on External & Internal Environment

- **Patent intelligence-based R&D project selection:** As a startup founder, you must be an agile innovator. It is critical to keep a tab on the market and new entrants. Patent is a good resource to develop an innovation plan for the scientists. It will unearth few hidden activities of the players in the same market which requires actions to remain relevant in the market. A patent intelligence report will help in keeping the focus on external R&D trend and emerging consumer needs and application. A startup may get strategic advantage by knowing about these well in advance. If done periodically, the idea pipeline of the startup will remain significantly filled all the time and the startup will be in sync with the technology and market trends. A healthy idea pipeline is the precursor to a sizeable patent portfolio.
- **Periodic IP audit (know what you have):** It is important to take a stock of Intellectual properties from time to time. This helps in identification of IPs which are lying idle and/or unprotected in the organization. This helps in arranging timely protection and prevention from the leakage of valuable IP. Typically, it is quite common among the bigger organizations, but it can be very useful for startups as well. During the initial days of the founding a startup, there are many ideas (some dropped, some partially worked) which gets dumped, these are potential IP which must be recorded and accorded appropriate protection. Startups being a dynamic and problem-solving unit, they keep generating ideas and solutions, therefore, periodic IP audits becomes very critical. It can be established as a standard process so that at any point the possibility of being blindsided about the true IP potential of the startup. In view of valuation and multiple rounds of funding, such audits are practical requirement for the startups as it can help in increasing the valuation of the company by discovering and adding few more valuable IPs in company's existing portfolio. A startup not having an in-house IP team can take professional services from leading audit firms. Any new IP or idea discovered through this process can be recorded in company's idea pipeline for further processing and actions.

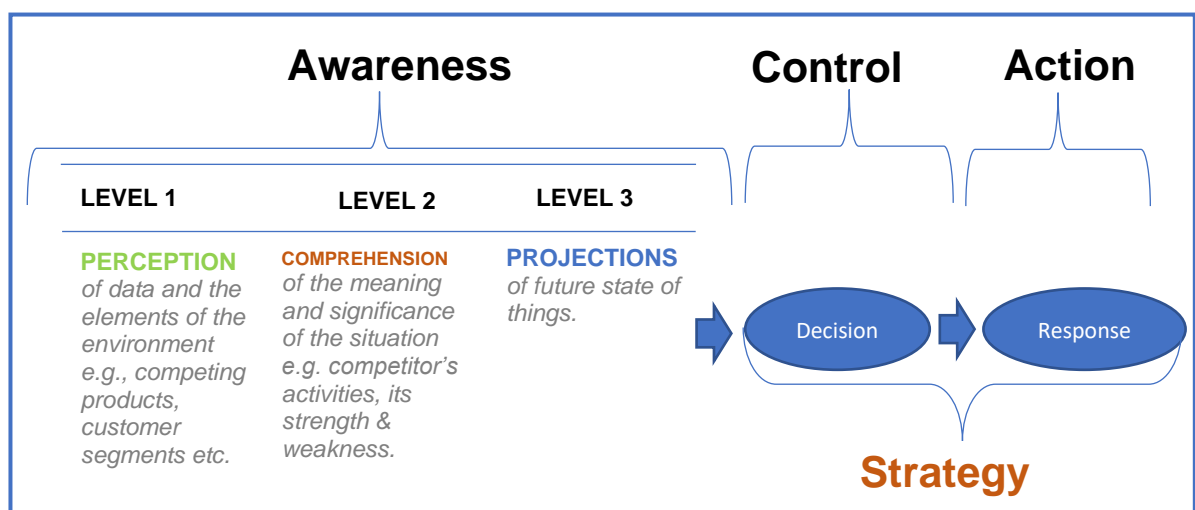
2.3.3. Evaluation of Idea/IP For Portfolio Building

- **Product focused approach:** If a startup is focused on marketing a product in response to unfulfilled demand of the customer then the product development will not be driven primarily from IP but rather other factors play dominant role. Any new development in the product features can be considered for patenting primarily, and each of such development can be reviewed individually and patent application filing can be undertaken if cost seems justified. This is mainly with an aim to enjoy product level exclusivity in the market. In this scenario, mostly the patents with narrow claim scopes would be sufficient. The real value of patenting in such scenario is to discourage the customer from going to other source. There may be a scenario where you might have to file multiple patents, it will further give better control as you will create more barriers for the competitors and extend the exclusivity for your products.
- **Technology focused approach:** A startup which has disrupted the technology domain itself would probably look for broader patents with aim to establish proprietary position in the market to enjoy absolute exclusivity at technology level. In this scenario, you may have to file many more patents to ensure least possibility for any competitor to gain any access to the technology. This may be one of the costliest approaches for patent protection but if the company's strategy

to gain the supremacy in the marketplace it is the most effective strategy. There are other strategic considerations for making this approach relatively cost effective by carefully choosing the geographical coverage and the length of protection out of 20 years of patent term. Very rarely, a patent protected technology enjoys the commercial relevance for entire 20 years of its term, a timely intervention in proactive abandonment of patents can save a lot of cost for the company. The patent portfolio under this category are usually bigger, therefore periodic audit is essential for timely abandonment and cost saving.

- Business Value-addition focused approach:** In this case, the IP portfolio is built to improve businesses by solving technical or financial problems. These are mainly about creating next best versions of processes and products with not so major upgrades or transformations. Such filings are done by companies to establish themselves as a credible and capable player in the market. Such IP portfolios help in forming alliances and doing cross-licensing. A startup having a reasonable number of patents in this category open the possibility for joining hands with bigger and established players. In strategizing such filings, it is important to do a comprehensive study of competitors' IP portfolios to identify gaps which can be filled by filing patents on improvements. Such filings help in creating impressive IP portfolio without starting from scratch at a fraction of R&D cost. This kind of portfolio is certainly unavoidable, as a player in the domain needs to improve the existing solutions to create a favorable financial condition for itself.

2.3.4. Building a high level of situational awareness: It is an important initial step before start developing an IP strategy for the company. High situational awareness helps in understanding the current and potential “opportunities” and “threats” in the market. In simpler words, it is all about understanding the competitors' activities and customers' specific needs. Like in other scenarios, the process flow is more or less is the same, as depicted by following figure:



The above figure is typical flow diagram based on Ensley's situational awareness model with slight modifications to highlight how the strategy can be evolved on the basis of situational awareness. In other words, following can act as effective precursors for building IP strategy:

- Mega technology / market trends in your domain
 - Current competition at marketplace
 - SWOT of your competitors
 - Full awareness of all the activities done by competitors in specific domain
 - Full information about alternate technologies available or being developed by competitors
 - Economic / technical benefits of your product/services/technology over other competition
 - Who owns core technology in your domain.
- **Defining long term and short-term business goals:** The sole objective of designing an IP strategy is to support long and short terms business goals. Therefore, it is very important to have the business goals (long term and short term) as reference point for starting building of IP strategy. For instance, a short-term business goal could be increasing valuation of the company, in such scenario, the strategy should be on boosting the IP portfolio such as number of patents and trade secrets. However, in case of long-term goals, it can be anything from maximizing market share to disrupting the industry by replacing the legacy technology. This requires a broader consideration regarding creation of a strategic IP portfolio consisting of Patent, trade secret, copyright, trademarks etc.
 - **IP strategy on IP Acquisition:** Acquisition of IP is one of the faster routes for strengthening the IP Portfolio. Therefore, the IP strategy must chart out the detailed steps and approaches on managing and enforcing the acquired IPs. This may include modalities related to employee agreements and vendor's agreements in handling such acquired IPs. Also, the IP strategy must outline the agreement practices for ensuring favorable IP ownership issues for the acquired IP. For instance, the ownership rights and use rights must be defined as per the business goals. A strong component of make vs buy in the IP strategy will help in future acquisition of IP.
 - **IP strategy for software patenting:** In view of Sec. 3 (k) of the Patent Act, 2002, computer programs are not patentable per se in India. This brings a huge challenge for software companies to ensure a robust protection for its innovations and core competitive advantages. There is a common approach to mandatorily attach a physical component in the software invention to get patent in India. Though it can be effective for cases, but there will always be a bigger pool of inventions which have a predominant software component and possibility of adding physical component is not there. Therefore, it requires a well-defined strategy which can leverage a combination of copyright, trade-secret, patent and defensive disclosure for robust protection. Now-a-days, most of the technology startups are having IT as one of the integral components of their business model, therefore making it even more critical to have a strategy in place for timely and effective protection of inventions in software domain
 - **IP strategy on exploiting IP:** The IP strategy should have a well-defined course of actions for maximizing the exploitation and monetization of IP. For instance, a granted patent in a jurisdiction of low business interest may be considered for out licensing or out-right sale. Similarly, in the jurisdiction of business interest, a product/business wise strategy can be laid out to take care of future alliances and partnerships on the basis of cross-licensing or royalty sharing. When it comes to exploitation of IP, it is equally applicable to non-patent IPs such as

copyright, trademark, goodwill etc. One approach could be putting a detailed approach for brand and copyright monetization. For instance, YouTube channels, franchise etc. can be covered among other options.

2.4. Decision on IP Filing

IP filing should be based on the following considerations depending upon type of innovation:

- A single invention can be protected by multiple IP tools- Example Coca-Cola is protected by Trademark, trade secret (Formula), copyright law protects packaging art, and trade dress protects Coca-Cola bottle design
- Designs are generally required for devices, machines, apparatus
- Copyright are used for literary work, artistic creations, books, novels, scripts, movies etc.
- Most common combination comprises, utility patents covering product/process, Industrial design patents covering device design and trademark.

| Type | Protection | Term | Infringement |
|--------------|--|---|--|
| Patent | Product/ Process/Technology/Invention | 20 years | Make, Use, Sale, Offer for sale, Import |
| Trademark | Brands, name, word, logo, symbol, image, slogan, sound, smell, Trade dress | 10 years and can be protected indefinitely on payment of maintenance fees | Distribution, Sale, Advertising or to Unauthorized use |
| Trade Secret | Sensitive Technical Confidential Information | Indefinite-Confidentiality | Misappropriation |
| Copyright | Literary, dramatic, musical and artistic works and producers of cinematograph films and sound recordings | 60 Years* | Making, distributing, importation, public exhibition |

- **For original literary, dramatic, musical and artistic works – 60-year period is counted from the year following the death of the author.*
- **For cinematograph films, sound recordings, photographs, posthumous publications, anonymous and pseudonymous publications, works of government and works of international organisations - the 60-year period is counted from the date of publication.*

Applicant must select the most suitable form of IP protection to protect idea or device effectively.

1. Patents- These are the most common type of protection for any product, process or design. To qualify for patent Protection there are three basic requirements:

- a. It must be novel meaning that the invention did not exist previously.
- b. The invention must be non-obvious meaning that invention must be a significant improvement to existing technologies.
- c. Finally, the proposed invention must be useful it should not be granted for illegal or immoral purpose.

- d. Patent can be granted for ‘Patent article’ and ‘Patent process’ means an article or a process in respect of which a patent can be granted under Indian Patent act, the term of patent to be granted shall be 20 years for any kind of patent.

2. Trademarks- Trademark is an important type of intellectual property rights, which is associated with product or a service. Trademark is non-technical IP rights related to appearance of product and/or service which, a customer can recognize from trademark. It can be designated by word, mark, color, slogan, trade-dress and logo. Slogans, Logo and wordmarks are the most common type of trademarks used. It is necessary to register your trademark before others to protect from infringement or unauthorized use. Any unauthorized use of trademark will be considered as infringement. It is advisable to protect the wordmark first and other aspects of the product or service can be protected later. Appropriate searches need to be performed before filing an application for registration of Trademark.

3. Trade Secret Protection- Trade secrets are important techno-legal rights to protect confidential technical information of any product, process or technology. Trade secrets can also be an important tool for protecting any confidential information like composition, formula, process of manufacturing etc. It can be a surviving tool for some companies. There is no direct legislation in India to protect trade secrets However, these can be enforced by courts in case of breach of confidential information or breach of contractual obligations.

When to protect your idea as a trade secret rather than securing a patent?

Patent rights are granted in lieu of technical disclosure to the public by inventors. Patents provide protection for 20 years only and can be utilized by competitors to circumvent any process or product depending on grant of claims. To the contrary, trade secrets are not disclosed to public and can be protected as long as possible. Trade secrets are not advisable for long-term protection or where the product or process can be easily reverse engineered by the competitors. With advancement in analytical technologies, critical steps or components of the trade secret can be reverse engineered by the competitors.

2.5. How to Select IP and Technical Expert for Patent Drafting and Filing

1. Technical domain

- The patent attorney or patent agent or law firm should have expertise in technology in which a patent needs to be filed.
- The attorney should have thorough techno-legal domain knowledge to facilitate the drafting of good quality broad scope patent application covering all critical aspects of the invention.

2. Reputation of the Firm

- In addition to the patent attorney expertise in technical domain, it is important to consider the reputation of the firm in technology based on patents secured, successful patent oppositions, and litigations. Public domain searches (Law firm website, blogs, search on Indian Patent office, Google search) should be performed to validate the same.
- If possible, check with friends/colleagues in the industry about firm reputation before finalizing.

3. Individual Attention

- Another important aspect of attorney and client relationship is that the IP attorney takes the extra time to develop a relationship with the client.
- Individual attention is very important in IP cases because the attorney will ultimately be responsible for explaining the invention to the examiner in a way that others can understand, so he or she must understand the invention's completely (both strengths and weaknesses)
- Check reviews about the firm and lawyer: a) complaints about not accessible b) track record of missing non-extendable statutory deadlines

4. **Technical domain-** The patent attorney or patent agent or law firm should have expertise in the technology in which the patent needs to be filed. He should have thorough knowledge in the domain so that he can draft patent applications as broad as possible while covering key aspects of the invention.
5. **Registered Agent or Attorney-** The agent should be registered patent agent as per Indian Patent Act requirements. Patent attorney is a person having a degree in Law and registered with Bar Council.
6. **Cost-Effectiveness-** The expert or IP attorney should be cost-effective in terms of patent drafting, filing, and prosecution of the filed patent application.
7. **Location of law firm-** The location of law firm should be as near as possible to the institution for ease of discussions and decisions.
8. **Conditions of representation-** The conditions for representing should be well established along with terms of payment, timelines, or others to avoid any future conflicts.

9. Success rate- The number of cases being handled successfully by the expert of the firm should also be considered.

10. Confidentiality- The law firm should maintain the confidentiality of the project.

2.6. Securing IP in Cost-Effective Way

Type of invention: It is important to understand the type of invention for filing a patent application. Section 3 of the Indian Patent Act, 1970 does not allow the grant of patent application for following within the meaning of Act:

(a) an invention which is frivolous, or which claims anything obviously contrary to well established natural laws;

(b) an invention the primary or intended use or commercial exploitation of which could be contrary to public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment.

(c) the mere discovery of a scientific principle or the formulation of an abstract theory or discovery of any living thing or non-living substance occurring in nature;

(d) the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.

Explanation. —For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy;

(e) a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance;

(f) the mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way;

(g) Omitted by the Patents (Amendment) Act, 2002

(h) a method of agriculture or horticulture;

(i) any process for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products.

(j) plants and animals in whole or any part thereof other than micro- organisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals;

(k) a mathematical or business method or a computer programme per se or algorithms;

(l) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions;

(m) a mere scheme or rule or method of performing mental act or method of playing game;

(n) a presentation of information;

(o) topography of integrated circuits;

(p) an invention which in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components.

Section 4 of Indian Patent Act 1970- Does not allow the grant of patent application in respect of an invention relating to atomic energy falling within sub-section (1) of section 20 of the Atomic Energy Act, 1962 (33 of 1962).

<https://ipindia.gov.in/writereaddata/Portal/ev/sections/ps3.html>

To successfully secure Patent rights in India, there is a need to ensure statutory compliance to the above points. Also, refer to examination guidelines by Indian Patent Office which may be helpful in patent drafting and subsequently overcoming objections raised by the Indian Patent Office.

<https://ipindia.gov.in/guidelines-patents.htm>

Country of interest/commercialization and manufacture- One should file a patent application in manufacturing and commercialization country.

Speed- Filing of the patent application at the earliest is important to claim priority of the invention before others file the same.

Number of countries- In case one intends to file a patent application in more than 4-5 countries then one should consider filing PCT application otherwise conventional route can be selected for filing which will save costs.

- Chose international search authority of the most important country of interest, this may increase chances of grant in that country if International Search Report is positive wrt patentability.
- PCT filing also provides an international search report which can be helpful in deciding whether to proceed with national phase filing or not.
- PCT filing provides 30 months' time to take a decision on the national phase filings.

Use Patent Prosecution Highway (PPH) for an early grant based on positive opinion from one country's patent office.

1. If Provisional Application to Be Filed with Technical Data or as Concept

Provisional Application A provisional application can be filed when an idea/invention is at prototype stage. Provisional patent application filing is an important strategy to cover any new technical idea at the concept stage. It is an important tool to claim the priority of a new idea/prototype/invention. Essentially, the complete patent application must be filed within 12 months of provisional patent application filing with adequate technical data to support the scope of the desired claims.

Merits of a provisional patent application

1. **Priority Date**- Claim priority for your invention.
2. **12 months**- Time for filing the complete comprehensive patent application.
3. **Cost**- Provisional filing is economical.
4. **Patent Pending**- The applicant can write “patent pending” after filing a provisional application.

Demerits of a provisional patent application:

1. **Abandonment**: The provisional application is abandoned, if a complete application is not filed within 12 months.
2. **Substantially Similar**- Complete patent application draft should be substantially similar to provisional patent draft.

Filing a complete patent application at a very early stage of the invention may not get fullest potential of the invention, filing provisional application secures priority date and gives enough time to work on invention. It is better to file a patent application with technical data whatever is available with broad specification and examples.

Things to consider when going for Provisional Application:

A provisional application is a scope-defining document: A provisional defines the scope of the invention. The scope of complete patent application should not extend beyond provisional patent application. It is advisable to file claims in the provisional application to avoid any added subject matter-related objections in different jurisdictions during prosecution of the complete patent application. It is advisable to draft provisional, which can cover every technical aspect of the desired invention with broad scope to be covered in the future complete filing. It is important to ensure that all technical aspects are specifically defined in the provisional specification. For drafting a patent application, one can refer to manual of Indian Patent Office Practice and Procedure. [https://ipindia.gov.in/writereaddata/Portal/News/505_1_Draft MANUAL OF PATENT OFFICE PRACTICE AND PROCEDURE_01-03-2019.pdf](https://ipindia.gov.in/writereaddata/Portal/News/505_1_Draft_MANUAL_OF_PATENT_OFFICE_PRACTICE_AND_PROCEDURE_01-03-2019.pdf)

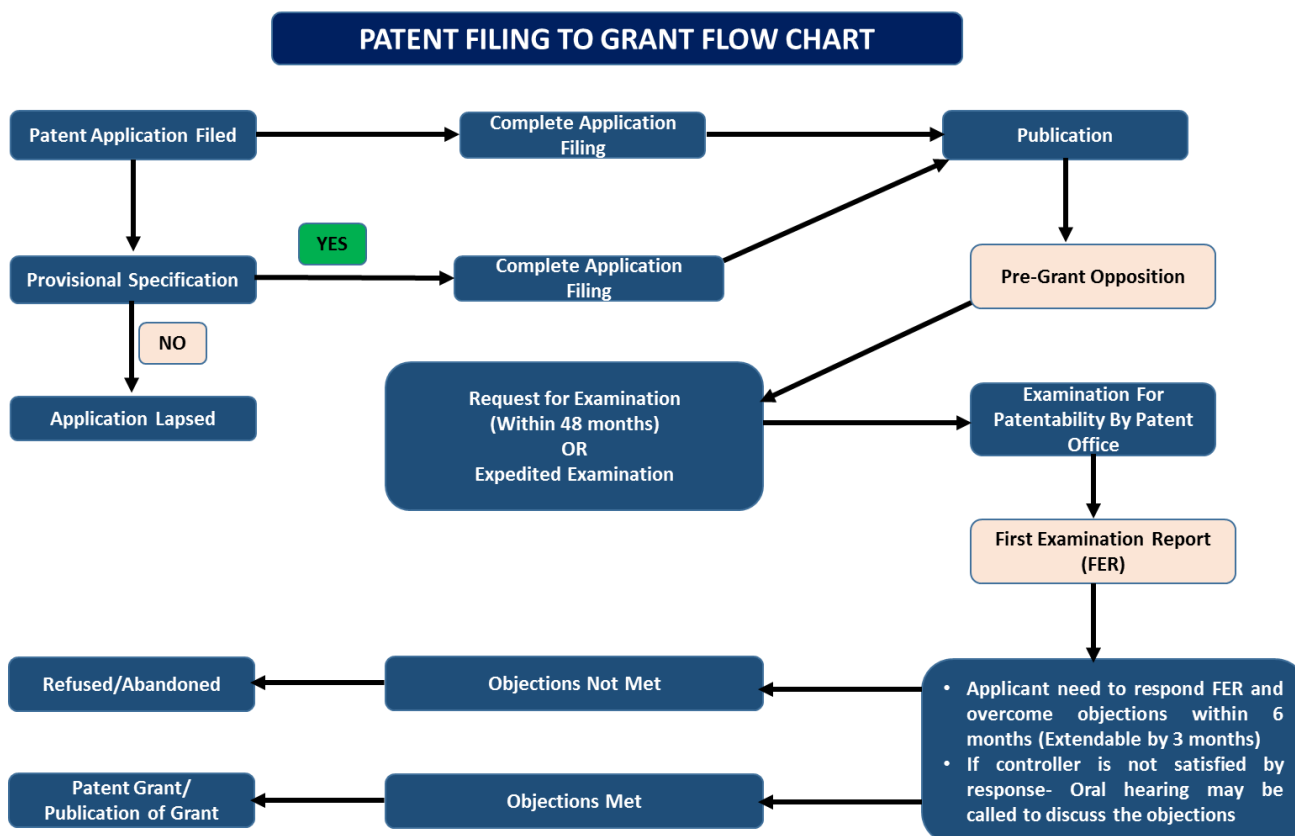
2.7. IP Filing and Grant Process Workflow

Determine the type of Intellectual Property protection as per requirements.

To protect invention, one may need multiple intellectual property assets like patent, trademark, copyright, trade secrets or combination.

- **Determine if invention is patentable-** One need to perform literature searches including patent as well as non-patent literature to find out relevant prior documents, which can be problematic to patentability requirements. Drafting should be done in such a way that it provides a clear understanding, scope, and advantage over the prior arts identified.
- **What type of patent is required?** – One need to decide on what type of patent application need to file.
- **Get ready to apply with the following considerations:**
 - How much is this going to cost?
 - How long will this take?
 - Do you need International protection or local protection?
 - Do you want to file a Provisional or Complete application?
- Prepare and submit your initial application.
- **Publication** - The application gets published after 18 months of period from the date of filing. In case, the patent applicant decides not to proceed, the applications get abandoned and remains unpublished.
- **Patent prosecution-** The applicant is required to satisfy patentability or administrative objections by the patent office within due time. If the examiner determines that the application is in satisfactory condition and meets the requirements, applicant will receive acceptance of the patent application which is then granted. Applicant would be required to pay annuity fees post-grant to maintain the patent in every Jurisdiction. The cost of annuity payments varies from country to country.
- Govt. of India has provided a list of facilitators for start-ups that provide IP help to start-ups with minimal costs.

Patent Filing Flow Chart



https://ipindia.gov.in/writereaddata/Portal/News/237_1_Patent_FlowChart_09June2016.pdf

2.8. Patent Filing Vs Trade-Secret Vs Defensive Publication

Patents- Patents are a form of intellectual property rights that prevents others from use, manufacturing, selling, offer for sale, import of the patented product. A strong patent portfolio may attract investors. They are valid only for a period of 20 years. There is a probability that patent might expire before you secure the amount of money spent on inventing and patenting your invention. Patent protection is territorial and the cost of filing a patent application and maintaining a patent is expensive. Patents are prone to invalidity challenges by the competitors. The inventor needs to disclose his invention in the patent and competitors may design alternatives to that invention with minor tweaking.

Trade Secrets- It is a piece of confidential information that provides a competitive edge to any product, process or formula. Trade secrets are valid as long as they are kept secret. Reverse engineering by competitors for alternatives can be done. Stringent and costly requirements for keeping information as a trade secret. With employees moving from one organization to other trade secret can be lost. A Trade secret cannot be protected once open, it has to be confidential. The patent protects a new and useful invention whereas trade secret protects valuable and secrets information. Trade secret protects

from the misappropriation whereas patent gives protection over so making, selling, using or importing the invention.

Defensive Publications- Some organizations consider defensive publication as a more economical way of protecting information than the filing of a patent application. In defensive publication, an organization or individual publishes the details of an invention in a public domain that is available to the public. This system will establish the idea as a prior art that will prevent others from filing a patent application for the published content or idea in the future. Defensive publications can be filed as research journals, online platforms that are accessible to the public. Defensive publications are inexpensive means of blocking patents which may cause a problem for an organization. They also serve as an immediate alternative to protect any improvements in your already patented technology. After publishing of defensive publication, the invention becomes a prior art for competitors. Timing of filing a defensive publication is important it should not be too late wherein competitors could have already filed a patent. The public domain should be chosen carefully so that it should be accessible to the public and could be considered as prior art.

2.9. Deciding Market of Interest and IP Filing

Link IP strategy to business objectives- Market strategy is the foremost important thing for deciding on patent filing and should be carefully chosen based on the below aspects:

1. **Manufacturing country-** Market of manufacture and prospective marketing, export countries should be covered for IP filing.
2. **Competitors-** Market, where prospective competitors can manufacture, should also be taken into consideration for patent filing.
3. **Type of invention-** Different Jurisdictions have different patentability criteria, therefore patent filing Jurisdiction should be chosen keeping this aspect in mind.
4. **Enforcement-** Until the IP is not enforceable, it is of no use. Therefore, enforceability should also be considered before IP filing in the country of interest.

2.10. Avoiding IP Rights Violation

- **Freedom to Practice (FTP) assessment before commercialization:** Startups are agile and active entities dealing all the time with launch/re-launch of products or services to remain competitive in the market. The focus predominantly remains on the execution which create blind spots for committing IP violations e.g. patent infringement. It is a good practice to make Freedom to practice analysis as a part of overall commercialization project. There are few considerations such as the jurisdiction or nature of subject matter (product/process) must be considered while doing the freedom to operate analysis. Freedom to operate analysis acts as a

step for identification and highlighting of risk in advance. The topic of Freedom to practice is dealt in detail in another chapter of this book which will throw more light.

- **3rd party contractual obligation on use of IP shared under engagement:** It is very common practice for startups to engage multiple partners and associates for executing the project under time and resource constraints. These engagements with associates and partners are based on multitude of contractual obligations, which includes IP and confidentiality obligations. The care needs to be observed while publishing and disclosing any information in the public domain. There have been cases where an unsuspecting employee have shared an information which he and his organization has obligation to keep confidential. This kind of incident not only lead to breaking of ongoing engagement but also raises the probability of potential litigation. In order to prevent this from happening, startup must have a central clearance system for disclosing any information outside of the organization. The process of clearance takes care of screening and filtering of sensitive and confidential information which helps in systematic prevention of violation of agreement.
- **Creation and updating of an IP Risk dashboard:** This requires consistent effort to manage and mitigate IP risk in timely manner. It is a best practice to set up an IP risk dashboard which can capture external and internal IP risk in virtually real-time manner.
- **Loosing Absolute ownership of intellectual property:** The ownership of intellectual property is a sensitive matter; it may get lost if proper care is not taken care at the right moment. Startups work with multiple stakeholders, in this process ideation and problem solving happens on the go. Due to this IP contamination is a continuous threat against absolute ownership of intellectual property. To address this, it is important to have systems and processes in place for timely intervention for establishing clear and absolute ownership for the IP.
- **Not being investor ready on IP front by periodic due diligence:** We all know that IP is not just important for the business but also an effective tool for generating additional funding. Startups should have dedicated central repository for storing all IP related documentation and portfolio at one place otherwise a valuable opportunity may be lost.

In summary, Startup needs Intellectual property as sword and also as shield, while it can use sword (aggressive) with other startups, it can use the IP as shield in case a bigger organization resorts to any arm-twisting or coercive measures. This is possible by systematic building of IP portfolio with higher degree of enforceability.

3. Chapter 4: Manufacturing & Marketing & Commercialization

This chapter explore the importance of intellectual property once a start-up or SME has reached to market stage or manufacturing stage. Essentially, here branding of the product and company itself becomes very critical.

3.1. Different types of trademarks for protection of products in India

Apart from normal trademarks, there are several other kinds of marks which are accorded protection in India.

1. **Service Mark** or trademarks, being the brand name, logo, etc. which distinguish the goods and services of a service provider. For example, Google, FedEx, Nike's phrase Just Do it, Facebook, etc.
2. **Collective Mark** distinguish the goods and services provided by members of an association of persons. For example, CS logo (Institute of Company Secretaries), CA logo (Institute of Chartered Accountants),
3. **Certification trademark** distinguishes the goods or services of a proprietor in terms of certifying the nature, origin, quality, etc. of the goods. For example, ISI, Agmark, BIS, fssai, etc.
4. **Trade dress** is the packaging or the visual and physical representation of the product including colour combination, shape, texture, design, illustrations, etc. Trade Dress can be protected under the Trademarks Act, 1999 as it is an indication of source and also aims are protecting the consumers which may be led into buying the infringing product.

It is not necessary to get a trademark registered as common law rights of passing off are available to the proprietor to prevent misuse of the mark. However, the protection accorded to a mark becomes wider and exclusive. Under Section 28 of the Trademarks Act, 1999 a valid registration gives exclusive rights to the to use the trademark in relation to the goods and services it is registered and obtain relief in respect of infringement of the trademark as provided under the Act. The rights given under the Trademarks Act, 1999 are only valid in India. For protection of a trademark in a foreign country, the trademark will have to be registered in the foreign country according to its laws. In this regard, an application must be filed before the trademark office according to the rules and regulations of the country under the Madrid Protocol and WIPO rules. Similarly, international applications originating for registration of a mark are dealt with the head office of the Trademarks Registry.

3.2. Licensing of Technology

The introduction of property rights to intangibles such as IPR has created a more functional, manageable and lucrative market for IP assets. Licensing of IP assets to third parties basically means authorising third parties to use a part or whole of your IP for a specific purpose such as manufacturing, know-how, etc. for a fee or royalty. As opposed to assignment, licensing does not take away the ownership over the IP. Licensing allows a business to expand its market and range of products into new areas and can become a major source of revenue.

All forms of IP, patents, trademarks, copyright, etc can be licensed. It is important to note that licensing is a contract which carries with its binding obligations and legal repercussions in case of breach by either party. For licensing of technology, it is imperative to conduct due diligence so that its commercial and monetary value can be ascertained.

Licensing Benefits

- Time is money. Licensing helps save the costs for R&D and facilitates constant creation, development of technology.
- Licensing of technology greatly benefits the general public as it creates jobs and puts the manufactured goods in the market.
- License fee or royalty payments generates influx of financial profit for the owner.
- It contributes to expansion of business opportunities.
- It enhances know-how and competitiveness of technology transfer. For instance, companies put in a lot of effort into identifying licenses for idle non-core intellectual property assets as it helps cut costs for initial investment into R&D.
- It especially helps businesses/IP Technology owners to create partnerships where they can mutually benefit from each other. The IP owner retains the ownership but can exploit his IP asset for money and the licensor can save a lot more money and can exploit the IP asset for expansion of his business.

3.3. Other Mechanisms of IP monetisation strategies and expanding scope in India

Sale – Out rightly selling ones IP is the easiest and the quickest way to monetise IPR. Due to lack of resources to put the IP assets into use in terms of manufacture, production and sale, many IP assets remain idle and underutilised or unutilised. Idle IPR assets are now seen as an opportunity by many who specially seek out such IPRs and buy them for their own business. Many platforms have also been set up to facilitate the sale and purchase of IP assets, especially patents which prove to be extremely lucrative.

Sale and Lease Back Model – This method involves sale of the IP asset without completely alienating the IP asset. Under this method, an IP owner sells the ownership of the IP assets and the buyer in turn licenses the IP asset back to the seller to continue using the same for its commercial operations. This creates a lumpsum amount for the IPR owner for immediate use without forfeiting the right to continue using the IP.

Securitisation – Securitisation of IP assets is one of the most recent and major financial innovations which has been gaining traction. IP securitisation essentially enables an IP owner to sell the future profits for a lump sum amount without completely alienating the IPR in the assets. Securitisation offers immediate capital, quick return on R&D and adds additional value to the company. However, the challenges faced for securitisation include valuation, estimating the royalty and lack of resale markets for IP assets.

Collateralisation – IP assets can also be used as a collateral to secure bank loans however, because of its intangible and dynamic nature, the risk is greater. Due to the uncertain nature of IP assets, it still remains an underutilised financial concept. Further, in case of default or breach, it is extremely difficult to liquidate the IP assets. Consequently, giving IP as collateral is imposed with high interest rates.

Setting up new business, its marketing and commercialization through technology transfer

New and small business are imperative to drive innovation and growth in any economy. Technology transfer is a process through which data, inventions, technical know-how, trade secrets, etc can be practically utilised and commercialised through various ways such as joint ventures, assignment, licensing, etc. Technology transfer can greatly assist new businesses to better control its expenses on procurement of IP assets and/or subsequent R&D, manufacturing, etc. and creating a cost-effective business structure and increased efficiency. Transfer of technology enables small businesses to partner with established businesses through joint venture opportunities. Another aspect of technology transfer

is that it enables small and new businesses to partner with research institutes, individuals, and non-profit organisations to combine entrepreneurship with IP inventions.

Many services have also emerged which coordinate between IP technology owners and small scale / new enterprises for commercialisation prospects. Furthermore, there are entities which are also involved in research and discoveries and provide technology to new businesses helping them establish themselves.

India has a mushrooming industry of new small and medium enterprises which are now competing in the global markets. These new businesses include pharmaceuticals, agriculture, dairy, software technology, etc. and the growth of such new businesses has provided an impetus to the government of India to establish Technology Transfer Offices, Universities and institutions, funded through public money dedicated to research an innovation and increase the pace of technology transfer.

3.4. Patent Pools and Standard Essential Patents

Patent pool is an association of two or more companies to cross license their patents to one another or to a third party. Patent pools are often created where complex technology is involved, and it requires complimentary patents for efficient outcomes. Patent pools can be created by two or more patent holders and sharing their IPR to the member or non-member licensees on payment of an amount.

Economically, patent pools are a cost-effective mechanism to develop new products. However, patent pools can also have negative result in terms of anti-competitive behaviour, collusion, and cartelisation and monopolisation of the industry.

Patent Pools, however, have historically resulted in increased innovation, research, collaboration and development of products. For example, in the medical industry, patent pools have helped provide affordable treatments for diseases afflicting the public such as HIV/AIDS.

In India, there is no provision regarding patent pools under the Patent Act, 1970 however, there is no bar against the formation of such patent pools either. The agreements entered into between the parties are governed under various provisions pertaining to transfer of patents through assignment, or licensing along with the restrictions enumerated therein.

The Competition Act, 2002 gives due recognition to IPR. With respect to patent pools, the Competition Commission of India considers patent pool agreement as restrictive trade practices and are thus, regulated under Section 3 of the Competition Act, 2002 which entails provisions pertaining to anti-competitive agreements including reasonable restrictions.

Standard Essential Patents are basically the patents which are important to implement a certain industry standard. The manufacturers are technically required to use one or more patented inventions to comply with the industry standards. Such SEPs are generally used in products such as phones, computers, laptops, etc. An example of SEP is the use of QWERTY keyboard which has no other alternative. On the other hand, it is not necessary for everyone to use a face recognition software to unlock the phone which is a non-SEP. SEPs ultimately assist in interoperability of the products which provides a uniformity in use.

For determining an SEP, a Standards Setting Organisation (SSO) is set up which also licenses the SEPs through Fair, Reasonable and Non-Discriminatory manner (FRAND). In India, Bureau of Indian Standards (BIS), TSDI, Telecommunications Engineering Centre (TEC), Global ICT Standardisation Forum for India (GISFI) and Development Organization of Standards for Telecommunications in the Republic of India (DOSTI), are such SSOs.

3.5. Essential points to be kept in mind while engaging in the Intellectual Property Exports

Exporting IP is one of the mechanisms where IP assets can be monetised expansively however, the importance of IPRs is often realised when it's too late. Either the IPR is copied or stolen or the exporter itself is found to infringe on another's IPR.

In this regard, the important points to keep in mind while engaging in IP exports are as follows:

- It is important on focusing on exclusivity of the product. In this regard firstly, it is essential to properly protect your own IPR not only in the domestic jurisdiction but also in the foreign jurisdiction where the product or service is sought to be exported. It is also relevant to carry out a market research so as to ensure that one's product or service is not infringing on another's product.
- As IPR are territorial, it is important to apply for requisite IPR registrations in the countries one seeks to export. International applications can be filed before the relevant authority under various international conventions including the Berne Convention; Universal Copyright Convention; Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of their Phonograms; Multilateral Convention for the Avoidance of Double Taxation of Copyright Royalties; and Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement.
- Furthermore, one can also apply for registration of IPR in each country by individually applying under their governing laws.
- There are also differing deadlines for applying for IPR in the foreign countries which need to be considered.
- Putting the product in the market to the public without adequate protection can be risky as it can result in loss of novelty and exclusivity.
- Furthermore, IPR owners can also broaden their horizons and cash in on their IP assets by entering into partnerships with foreign entities. IP can be exploited through various routes such as licensing, assignments, franchising, etc.
- While partnering with foreign entities involving IP assets it is important to provide clarity to ownership of the IP in the contractual arrangements.
- Make adequate arrangements for legal enforcement of IPR in the country the product or services are sought to be exported.
- It is also important to take into consideration the issue parallel imports and exhaustion of rights which are applicable to the country in which the product or service is being exported which can affect the export strategies and pricing.

4. Chapter 5: Risk Assessment

Risk is basically the threat to the originality of creation of new inventions, trademarks, trade dress, and trade secrets. It is any kind of Infringement to the Trademark, Design, Patent, Copyright and other part of Intellectual Property. The risks of losing Intellectual Property or the control over it are "IP risks." Risk is any kind of potential of gaining and losing something of value. IP Risks are in fact a common aspect of working life however, many IP owners ignore the threats until it is too late, and they manifest as serious risks to the organization. Some of the predominant types of IP risks include infringement, publication, breach of confidentiality, trade secret misappropriation, IP contamination, IP ownership, IP assignment, etc.

Some examples of IP risks are, trade secrets being stored on mobile phones of the employees; new developments not protected adequately and in a timely manner; ignoring protection in terms of registration or licensing of IP assets; using open-source software which is publicly available and can be easily modified by third parties; outsourcing work; ex-employees misusing IP assets; counterfeiting of one's products; ignoring confidentiality issues; information disseminated during marketing and business development, etc. Most importantly, in today's IP literate world, while it is important to protect one's own IP rights, it is equally imperative to steer clear of infringing the IP rights of third parties.

4.1. Types of Intellectual Property Risks

IP risks can be broadly classified into internal and external. Internal IP risks are the ones which emerge and threaten an organization from within such as breach of confidentiality by employees. External IP risks are which are caused from the outside, such as being faced with legal action due to infringement of third-party IP rights.

Internal IP Risks

Protection of IPR can be time consuming and expensive commitment especially for a business with limited resources. However, what is important to understand that it can help avoid loss of exclusivity and revenue which are not only predominant internal IP risks themselves but a consequence of other internal IP risks as well.

Some of the other types of internal IP risks are:

- Insufficient protection of IPR, missing deadlines for renewals, oppositions, etc.
- Counterfeiting due to insufficient protection of IPR.
- Premature/unauthorized disclosure of information/ trade secrets/ inventions by employees.
- Intentional or unintentional infringement of another's IP.
- Acquired IP risks pursuant to mergers, acquisitions, etc. and insufficient due diligence.
- Lack of Freedom to Operate Analyses i.e., ensuring that no third-party liability will arise during development, production and marketing of the products or services.
- Faulty drafting of contracts, documents, applications etc., lacking important clauses such as confidentiality, enforceability of IPRs, liability, etc.

External IP Risks

A company can be exposed to varied IP risks from external sources the most important being infringement of IPR by third parties. This can lead to a major loss of revenue and loss of goodwill in the market. It is, therefore, extremely important to take strict legal action in a timely manner against infringers to cut future costs and losses.

Some other types of external IP risks are:

- Defense costs in IP litigation.
- Unauthorized activities by external contractors, partners, suppliers, etc.
- Entering into unfavorable licensing agreements.
- Lack of understanding of IPR protection in foreign jurisdictions.

4.2. Sources of IP Related Risks

Employees of the organization – being an internal IP risk, the employees of the organization, either intentionally or unintentionally due to lack of knowledge, cause a major portion of IP risks. It is important to develop internal procedures, awareness programmes and contractual safeguards to minimize such risks.

Entities associated with the organization– Lack of respect and attention by other entities with which information is shared can result in grave IP risks. These entities include outside collaborators, contractors, individuals, etc. which may breach trust and confidentiality resulting in infringement of IPR. Such breach can also either be inadvertent or deliberate.

Competitors – While competition is important factor for businesses to thrive, the environment can also threaten the exclusivity and novelty of a product or service especially if it is the same class. Furthermore, certain competitors can deliberately attempt to undermine and stifle the growth of the business and invalidate IPR through frivolous litigation. There is a rise of entities generally called “trolls” which use the legal system to target small businesses and inventors to either crush them or derive undue financial gains.

Third-parties – A very common IP risk can emerge from independent third parties which could both be legal and illegal. Illegal third parties include IP thieves such as hackers as stealing IP or trade secrets can be a quicker and cheaper route than investing time and money into R&D. Trolls, as mentioned

above, criminal gangs and counterfeiters can also cause unnecessary expenses and losses to the business. Legal third parties include legitimate IP owners the rights of which may unintentionally be infringed for which prior due diligence is extremely necessary.

Statutory – Changing laws and policies, statutory compliances, judicial delays, regulatory bodies, etc. are sometimes unavoidable risks which may end up impacting the business.

4.3. IP Risk Mitigation & Practices - a stitch in time saves nine

Today the value of a business is majorly comprised of its IP which is why the most important mitigating factor is for both the business owners as well as its employees to comprehend the importance of mitigating IP risks as well putting in place procedures which can prove to be extremely cost-effective in the long run. The following can help minimize the various IP risks mentioned before.

Awareness of IPR – As stated, it is extremely important for the persons involved in the business at every level to be aware of the IPRs and the risks involved, especially the risks which can result from their own actions. Furthermore, knowledge of domestic IP laws as well as of foreign jurisdictions where the business is intended to be carried out is relevant for protection of IP.

Valuation of the business and its IP – As stated, IP constitutes a major component of a company's valuation which is why it is important to carry out a proper valuation of the business as well as the IP which needs protection.

Setting up of an IP Protection Team – Protection of IP requires constant effort and long-term dedication. An internal team dedicated to protection of IPR can prove to be more cost-effective and efficient thereby reducing losses occurring from IP risks. Alternatively, IP protection work can also be outsourced to lawyers and prosecution teams who are experts in IP protection and work in a timely and confidential manner.

Due diligence for contractual relationships and employee hires – Prior to hiring employees and entering into contractual relationships with external parties such as vendors, buyers, contractors, experts, etc. it is extremely relevant to carry out due diligence and past performance to eliminate potential IP risks.

Incorporation of IPR violation clause – A comprehensively drafted IPR violation clause must be necessarily incorporated in contracts entered with employees and other parties. The IPR violation clause should include *inter alia* indemnity, risk allocation, warranties, exclusions, limitations, mitigation of losses, penalties, damages and additional protections specific to the industry such as geographical limitations, arbitration/jurisdiction clause, etc.

Do not use unauthorized and open-source software – Unauthorized, unlicensed and open-source software can result in infringement as well as data leaks.

Carrying out periodic checks – Regular checks for IP infringement, valuation of new and old IP, use of unauthorized and unlicensed software, market checks for IP infringement and counterfeiting should be carried out to avoid potential IP risks.

4.4. Non-Disclosure Agreement or Confidentiality Agreement

Simply put, a Non-Disclosure Agreement (NDA) is a legally enforceable contract which prohibits disclosure of confidential and sensitive information to outsiders. NDA serves various purposes. It binds the employees from releasing company information to any third party consequently protecting the business' IP from internal risks. NDA also protects the business from external risks as it can be executed prior to entering negotiations with potential business partners. It can protect sensitive information, data, financial information, marketing strategies, manufacturing processes, trade secrets, names of buyers, vendors, etc. from being misused without approval.

There are generally two types of NDAs:

1. **Unilateral NDAs** – Signed by one party undertaking not to reveal confidential information provided by the disclosing party. Unilateral NDAs are commonly entered with clients or employees.
2. **Mutual NDAs** – Mutual NDAs are usually signed between two parties before venturing into negotiations for future business relationships. Such negotiations involve sharing of confidential and sensitive information which helps them to take decisions and chalk out the terms of the relationship.

A common NDA has the following key ingredients:

- Clear and proper identification of parties signing the NDA.
- Precise definition of what is confidential and protected under the agreement.
- Provisions of exclusions if any such as the information which is already in the public domain; already obtained from a third-party other than the disclosing party; information etc.
- Miscellaneous terms of the NDA such as duration of the agreement, limitation of the purpose for which the information is being shared, etc.
- Jurisdiction in case of dispute which may include an arbitration clause.
- Damages/penalties in case of breach.

NDA's are governed under various laws, the Indian Contract Act 1872. Though the Contract Act does not deal with NDAs specifically, but it has provisions regarding the promise, offer, acceptance, agreement, etc. which basically ensure the binding nature of the contract. There are other laws also which deal with the criminal penalty on the breach of confidentiality of the agreement. Under Section 406 (i) of the Indian Penal Code, 1860, an employee can be held liable for criminal breach of trust if the employee is misusing or discloses the confidential information for his/ her benefit. Under Section 63(ii) of the Indian Copyright Act, 1957 a civil proceeding is maintainable against the infringer.

IP assets and NDAs

Sustaining the business and competitive advantage requires dedication to innovation and constant development of products and services. An NDA enables protection of IP assets without compromising on the confidentiality and growth of the business. Registration is one of the main ways to protect IP and while IP can be utilized without registration as well, its protection requires more efforts. It is important to have a well drafted NDA which can best protect the interests of the IP owner and the IP.

New businesses/ start-ups must involve a limited percentage of resources to IP awareness, development and protection so that informed decisions can be taken to minimize the IP risks. At the beginning it may prove to be difficult from to implement NDAs for new businesses as investors and employees may refuse to sign them. However, avoiding NDAs can have debilitating consequences which may prove fatal to new businesses especially if IP is an important part of the venture.

4.5. Legal Remedies Available in India for IPR Disputes Dealing with Trademarks, Designs, Copyrights and Patents

IP enforcement can be done through court orders, alternative dispute resolutions, negotiations, legal notices or through the enforcement agencies such as police. With limited functioning of the courts on account of covid- I 9 situations, obtaining speedy and effective Court orders may be difficult however, alternative dispute resolutions such as arbitrations, pre-litigation mediations, effective legal notices, take-down methods etc. can be done with equal efficacy. Moreover, with the boom in e-commerce segment, effective dialogue and partnership between brand owners and e-commerce platforms is imperative. IP commercialization is likely to continue with the same level of enthusiasm. Filings for new IP in the form of trademark, design, copyright, patent etc. are all digitized and filed, examined and duly prosecuted online. Hence, with little physical presence required to attain new IP it will not be difficult for a brand owner and their lawyer to develop, register and defend the same. IP being an intangible property, but also one of the most valuable ones, is the right target and fairly easy to copy. Hence, lawyers, investigators and brand owners will be required to be particularly vigilant for infringement, passing off and counterfeiting. In fact, counterfeiting activities will be on a rise. Most counterfeiters are fly-by-night operators and focus on day-to-day maximization of profits till they are caught. Hence, they will try to copy and infringe all products in high demand in a speedy and voluminous manner. Here comes the role of strict vigilance and immediate action, thus brand owners cannot afford to neglect their IP enforcement if they intend to reap commercial benefits of the same.

TRADEMARK REMEDY

For trademarks, an IP owner has two types of remedies for breach – civil and criminal. Apart from statutory rights, under Indian law, a trademark user has common law rights for infringement of his/her trademark which are not codified.

Civil Remedies: Civil remedies are available to a trademark user irrespective of the fact that the trademark is registered or not. In India, if the statutory and common law rights are breached, the civil remedy is provided in Section 29 of the Trademarks Act, 1999 which provides for the infringement of a trademark. In simple words, when the exclusive rights of the owner of a registered trademark are violated by unauthorized use by another. However, certain Acts do not amount to infringement which are enumerated under Section 30 of the Trademarks Act, 1999. Passing off is common law tort, an action for which is available to both registered and unregistered trademarks. Passing off simply means

when one misrepresents his/her products and/or services as that of another. Civil remedies available to a trademark owner pursuant to an action for infringement and/or passing off include injunction, damages and custody of infringing materials, damages or account of profits, delivery of the infringing goods for destruction and cost of the legal proceedings.

Criminal Remedies: Section 103 of the Trademarks Act, 1999 provides the penalty for applying false trademarks, trade description etc. Section 104 of the Act provides the penalty for selling goods or providing services to which false trademark or false trade description is applied. They provide for imprisonment for a term not less than six months which may extend up to three years and fine not less than fifty thousand rupees which may extend up to two lakh rupees in case of the false application of trademark and selling of goods to which false trademark has been applied. Enhanced punishment is provided in Section 105 of the Act.

Section 115 (4) of the Trademarks Act, 1999 gives powers to police for search and seizure of any such products which calls for action against infringement of the trademark. However, for this provision to apply, police officer not below the rank of deputy superintendent of police or equivalent before making any such raids and takeover has to obtain a certificate of opinion from the registrar on the facts of the case and shall abide by the opinion made.

Obtaining the opinion, as mentioned above, from the registrar is a cumbersome and slow process therefore, swifter action can also be taken under the Criminal Procedure Code, 1973 (Cr.P.C.). An offence under the Trademarks Act, 1999 can be investigated and inquired by the police by on registration of an FIR under section 154 of the Cr.P.C. without the adjudication by the Magistrate upon the issue. Pursuant to the registration of the FIR, the police can carry out an investigation without a warrant under section 156(1) of the Cr.P.C. In case the police do not register an FIR, the complainant also has the option to file a complaint before the Magistrate under Section 156(3) Cr.P.C. seeking directions to order an investigation.

PATENTS REMEDY

India has seen increased response from the courts in the recent times with respect to protecting patent owner's rights. There are various reliefs available to the patent owner under several statutes.

Administrative Remedies – Section 11 of the Customs Act 1962 empowers the Central Government to prohibit import or export of goods which violate patents, trademarks, copyrights, designs and geographical indications. The Central Government has also issued notifications under this Section

prohibiting the import of goods intended for sale/use in India that violate the IP rights. Thus, under this administrative procedure, a patent owner can approach the collector of customs to prohibit the import of infringing goods. Judicial decisions have held that the custom officials are competent to decide on the issue of infringement of patents under the IPR (Imported Goods) Enforcement Rules, 2007.

Civil Remedies – Section 48 of the Patents Act, 1970 provides for the rights of the patentees. In case of product patents making, using, offering for sale, selling or importing for these purposes the product in India without the permission of the patentee amounts to infringement. With respect to process patent, using the process, and the act of using, offering for sale, selling, or importing for those purposes the product obtained directly by that process into India amounts to infringement. Upon infringement of his/her rights, a patentee can file a suit for infringement seeking injunction and damages or account of profits, along with seizure, forfeiture and destruction of the infringing goods.

Trade Secrets – There is no statutory protection given to trade secrets however, they can be protected through contractual obligations (such as the NDA). A proprietor or IP owner can on breach of contract file a suit for seeking injunction and damages, along with damages or account of profits, along with seizure, forfeiture and destruction of the infringing goods.

COPYRIGHT REMEDIES

Copyright exists in original literary, dramatic, musical and artistic works, cinematograph films and sound recordings subject to the exclusions provided under the Copyright Act, 1957.

Unauthorized use of copyrighted work amounts to infringement. Section 51 of the Copyright Act provides for when a copyright in a work shall be deemed to be infringed which includes *inter alia* when any person, without a license from the owner of copyright, or in contravention of the permission granted by the copyright owner, does any act, exclusive right to do which is conferred upon the owner of copyright. Broadly speaking there are two types of rights which are protected under the Copyright Act:

- (i) Economic Rights – by which the owner of the copyright can reap financial benefits from the use of his work; and

- (ii) Moral Rights – by which the owner of copyright can take legal action against infringement of his work.

In India it is not mandatory to register one's work with the Copyright Office however, registration accords additional protection under the Copyright Act. The Copyright Act also provides for certain acts which do not amount to infringement under Section 52, which are categorized under the "fair use" doctrine. Some examples of fair use are private and personal use, including research; reporting of current events or currents; performance of a literary, dramatic, or musical work by an amateur club or society to a non-paying audience or for benefit of a religious institution; etc.

Civil Remedies – Civil remedies are provided for in the Copyright Act itself under Section 55, which provides that which are available to a copyright owner on infringement are injunction, damages, accounts, and other remedies as are or may be conferred by law for infringement of a right (which can include seizure, delivery and destruction of infringing products, material, costs, etc.).

Criminal Remedies – Section 63 of the Copyright Act itself provides for criminal remedies against infringement. Under this provision, the copyright holder can initiate criminal proceedings against the infringer, which carries imprisonment of at least six months, which may be extended to 3 years and with a fine of Rs. 50,000, which may extend to 2 lakhs. Furthermore, any police officer, not below the rank of a sub-inspector, may, if he is satisfied that an offence under Section 63 of the Copyright Act has occurred, he can seize the infringing product/copies without a warrant to produce before Magistrate.

Administrative Remedies – Section 74 of the Copyright Act consists of administrative remedies available to a copyright owner. The Registrar of Copyrights has been accorded the powers of a civil court and has substantial powers to summon and enforce the attendance of any person and examine him in oath; discovery and production of documents; take evidence on affidavits; etc. Under Section 75 of the Copyright Act, the orders of the Registrar of Copyrights or copyright board made for payment of money is deemed to be a decree of a civil court.

India is also a member of various international conventions on copyright and neighboring (related) rights to protect the copyright in Indian works in foreign countries. These conventions include:

- (i) Berne Convention for the Protection of Literary and Artistic works;

- (ii) Universal Copyright Convention.
- (iii) Convention for the Protection of Producers of Phonograms against Unauthorized Duplication of their Phonograms;
- (iv) Multilateral Convention for the Avoidance of Double Taxation of Copyright Royalties; and
- (v) Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement.

In addition to the above conventions, the International Copyright Order, 1999 was also passed by the Government of India to protect the work first published in any country which is a member of the Berne Convention for the Protection of Literary and Artistic works or the Universal Copyright Convention or a member of the World Trade Organization. Any such work would be treated in the same manner as if it was first published in India thereby according all the protection under the Indian laws in force for the time being.

DESIGN REMEDIES

According to the Designs Act, 2000 a design means only the features of shape, configuration, pattern, ornament or composition of lines or colours applied to any article whether two dimensional or three dimensional or in both forms, by any industrial process or means, whether manual, mechanical or chemical, separate or combined, which in the finished article appeal to and are judged solely by the eye, but does not include any mode or principle or construction or anything which is in substance a mere mechanical device, and does not include any trade mark or property mark or any artistic work as defined under the Copyright Act.

Furthermore, there are certain pre-requisites for registration of a design:

- (a) It has to be new and original.
- (b) It should not have been publicly disclosed in India or in any other country;
- (c) It should be significantly distinguishable from known designs or combination of known designs;
and
- (d) It should not contain scandalous or obscene matter.

Civil Remedies – Section 11 of the Designs Act accords to the proprietor of the design a copyright in the design for ten years from the date of registration. Read with this provision, Section 22 of the Designs Act which provides for what amounts to piracy of designs and liability for the same. Any person without permission or authorization from the registered proprietor of the design sells an article

on which a registered design or any fraudulent imitation of the design has been applied; or imports for sale any article belonging to the class in which design has been registered and having applied to it the design any fraudulent or obvious imitation of it; or knowingly publishes or cause it to be published or exposed for sale of the article on which a registered design or any fraudulent or obvious imitation has been applied.

Any person found guilty of the above is liable to pay to the registered proprietor of the design a sum not exceeding Rupees Twenty-Five Thousand. In the alternative, the proprietor can also take civil action for recovery of damages and injunction, and the person found guilty of infringement of designs rights shall be liable to pay the amount awarded in damages.

4.6. Software protection under IPR in India

Software, being a collection of instructions, data or programmes through which computers are operated. Section 2(ffc) of the Copyright Act defines a “computer programme” as a set of instructions expressed in words, codes, schemes or in any other form, including a machine readable medium, capable of causing a computer to perform a particular task or achieve a particular result. Section 2(o) includes computer programmes, tables and compilations including computer databases within the ambit of “literary works”.

Copyright protection for a computer program extends to all of the copyrightable expression embodied in the program. However, it does not include functional aspects of a computer program, such as the algorithms, formatting, functions, logic, or system design. Each version of a computer program containing new, copyrightable authorship can be registered with the Copyright Office.

Software piracy, or unauthorized use of copyrighted software including copying, distribution, sharing, selling or use amounts to infringement under the Copyright Act. Using unlicensed software, pre-installation of unlicensed copies on to computer devices, selling of counterfeit software, providing for download online for free, etc are some forms of infringement of copyright in computer software. Therefore, all the remedies available under the Copyright Act can be availed by the owner of the copyrighted software including injunction, seizure and destruction of material, damages, etc.

Software Patent Protection

In India, software cannot be protected under patent laws. Section 3 of the Patents Act, 1970 provides for a list of inventions which are not patentable. Section 3(k) stated that a mathematical or business method or a computer program per se or algorithms as one of the inventions which cannot be patented. However, the Manual of Patent Office Practice and Procedure states that not all computer programs or software innovations fall under Section 3(k) of the Indian Patents Act. Therefore, computer programmes may be accorded protection if the author can qualify the software under the following factors:

- (i) it must consist of patentable subject matter;
- (ii) it must be capable of industrial application;
- (iii) it must be new (novel);
- (iv) it must involve an inventive step (be non-obvious); and
- (v) the disclosure of the invention in the patent application must meet certain formal and substantive standards.

The standard for patentability of a computer software is much higher. The focus is not on the software itself but on the invention or the product of which the software is an essential part. While patenting is a stronger protection for the work however, copyright is the first right which is accorded to an author the moment an original work is created.

5. Chapter 6: Government Initiatives and Fund-Raising Aspects

To encourage innovation and generation of IPR, there are numerous incentives for startups and SMEs. Some of these incentives include rebates on patent filing (domestic as well as foreign filing) and fast tracking of patent applications. In this section, we shall cover a few notable ones.

6.1 Startup India Schemes and Startup India portal

The startup schemes are featured well at the Startup India portal and can be accessed from here:

<https://www.startupindia.gov.in/content/sih/en/startup-scheme.html>

The salient features are:

- **Expedited Movement of Startup Patent Applications:**

- There is special provision provided to expedite patent applications filed by startups and these can be put on fast track mode.
- **Panel of facilitators to assist in filing of IP applications:**
 - The Controller General of Patents, Designs and Trademarks (CGPDTM) has empaneled a panel of “facilitators” for providing general advisory on different intellectually property Matters.
 - The list of facilitators can be accessed here
 - <https://ipindia.gov.in/Facilitators-Patents.htm>
 - https://ipindia.gov.in/writereaddata/Portal/Images/pdf/List_of_Facilitators_for_Patents_Designs_and_Trademarks_under_SIPP_Scheme- newly_added_on_18-02-2020_Patents_NEW.pdf
 - https://ipindia.gov.in/writereaddata/Portal/Images/pdf/List_of_Facilitators_for_Patents_Designs_and_Trademarks_under_SIPP_Scheme- newly_added_on_18-02-2020_Designs_NEW.pdf
- **Rebate on filing of application:** Startups are given 80% rebate from the normal filing fee.
- **Startups incubated at universities Guidelines:** National Innovation mission and startup policy is formulated and provides clear guidelines on IP ownership and commercial exploitation. Institute may take 2% to 9.5% equity/ stake in the startup/ company, based on various factors such as services used from institute, brand used, faculty contribution, support provided and use of institute’s IPR etc.
- https://www.startupindia.gov.in/content/dam/invest-india/Templates/public/AICTE%20Brochure_10.09.19.PDF

6.2 IP Support Program under MeitY

The Ministry of Electronics and Information Technology (MeitY) also maintains a dedicated site for the promotion of IPR. Link: <https://www.meity.gov.in/content/ipr-promotion>

MeitY provides support towards international filing of patents which can go maximum up to INR 15 lakhs per invention or 50 % of the expenses incurred in filing patent, whichever is less. There is no stake claimed in patent application in return to the financial support.

Link:

<https://www.meity.gov.in/content/sip-eit-support-international-patent-protection-eit-sip-eit-%E2%80%93ii-micro-small-and-medium>

6.3 IP Facilitation Centers (IPFCs)

To enable SMEs and startups better understand and identify IPRs, various IP Facilitation Centers have been setup across India. IPFCs are equipped to provide various IP services ranging from IP searching, IP awareness to provide advisory services so that SMEs can take better decisions in their day to day operations.

- **MeitY Centre of Excellence in IPR**

<https://www.meity.gov.in/content/centre-excellence-ipr>

Centre of Excellences in IP set up at DeitY, New Delhi and CDAC Pune

- **CII IP Facilitation Centers (IPFC)**

<https://www.ciiipr.in/ppp-initiatives.php>

- **Other IPFCs in India:**

<http://cipam.gov.in/index.php/ip-assistance-centre/#IP2>

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Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, with over 9000 members from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from 294 national and regional sectoral industry bodies.

For more than 125 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, livelihoods, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

As India marches towards its 75th year of Independence in 2022, CII, with the Theme for 2021-22 as **Building India for a New World: Competitiveness, Growth, Sustainability, Technology**, rededicates itself to meeting the aspirations of citizens for a morally, economically and technologically advanced country in partnership with the Government, Industry and all stakeholders.

With 62 offices, including 10 Centres of Excellence, in India, and 8 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with 394 counterpart organizations in 133 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

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