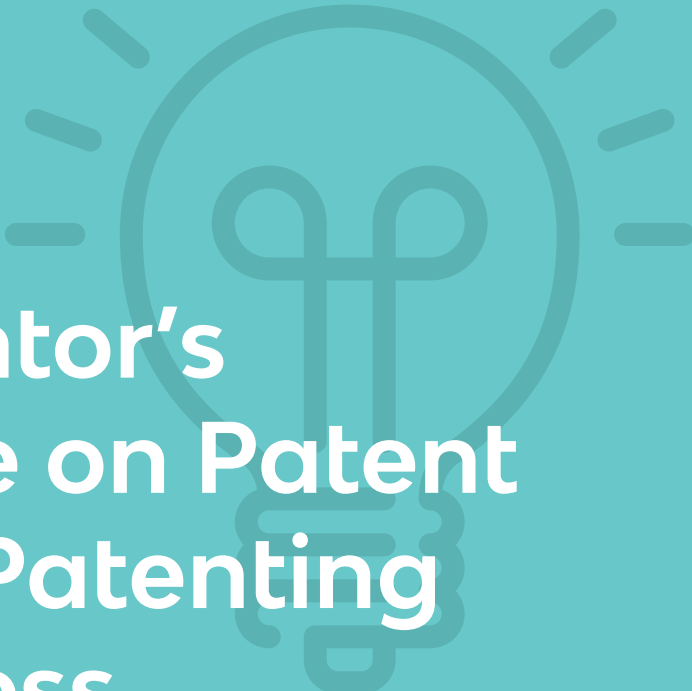


Inventor's guide on Patent and Patenting process





Inventor's guide on Patent and Patenting process

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contents

01	Preface	05
02	Chapters	06
03	Intellectual Property and Patents	11
04	Prior Arts	23
05	Patent Documents	29
06	Patenting Procedures	35
07	Post Patenting Scenarios	39
08	Patent Journey	42
09	References	45
10	Annexure A - Invention Disclosure Form	46

preface

“The patent system secured to the inventor for a limited time exclusive use of his inventions, and thereby added the fuel of interest to the fire of genius in the discovery and production of new and useful things.”

- Abraham Lincoln

We are now in an era of innovation and technology driven economy. Ideas lead to rapid innovation, that ultimately results in an influx of inventions. Something better is born every second. With intense competition in every field, it is required to protect your invention.

In the age of information, where you can find anything at the tap of a finger, isn't it time for you to safeguard your intellectual property from theft and misuse? After all, intellectual property theft is no lesser than the theft of physical property.

Protecting one's intellectual property can bring more opportunities, provide protection against competitors and bring other positive outcomes for all the years of hard work and research put into its innovation and creation.

We're here to guide you along the way as you foray into the world of science, where you unfold the potential of being a patent owner.

chapters

chapter 01 — Intellectual Property and Patents

An invention born out of unique intelligence, technology and research is more than a regular finding. What makes it an exceptional entity called Intellectual Property (IP).

a. What is Intellectual property?

All about patents, from what they are, how to make an investment to how essential they can be in the promotion and growth of your recognition and business.

- a. Why are patents important?
- b. Can all inventions be patented?
- c. How can you obtain patents?
- d. When should an invention be patented?
- e. What happens if an invention is not patented?
- f. Who is the owner of an invention?

chapter 02 — Prior Arts

How to avoid confusion during your patenting processes? Earn knowledge about existing patent literature in the same fields following some simple steps.

- a. What is Prior Art ?
- b. How can you search for Prior arts?

chapter 03 — Patent Documents

What should you dive into and understand beforehand and what should you seek out, take a peek into all the documents concerning your patent.

- a. What are the typical parts of a patent document?
- b. What information does patent document contain?

chapter 04 — Patenting Procedures

The journey is long but we are here to guide you through, roads unknown or roads familiar.

- a. Domestic Application
- b. Are patented inventions protected worldwide?
- c. International Applications

chapter 05 — Post Patenting Scenarios

Your work is not complete after creating an invention, not even after you have protected the innovation, but when your invention is used in the market and society. Make the most of your patent, financially and otherwise, learn how.

- a. How can you exploit patented invention?

Patent Journey

References

Annexure

Annexure A : Invention Disclosure Form



The life of an INVENTION



Idea Patent Research

- utility/design/plant
- trademark/ copyrighting

Invention conceived

- record conception
- build + testing

Invention documented

- trade secret
- invention has some protection rights
- Patent Application Filing Fee to PTO

Invention conceived

- Patent Application Issue Fee to PTO

Patent Pending (1-3 years)

- Manufacture product

Patent Issued

- in-Force period from the date until 20 years
- become public record/publication. "Prior Art"
- maintenance fees Only for Utility Patent

Patent Expired

- no future rights

Chapter - 1

- # Intellectual Property and Patents



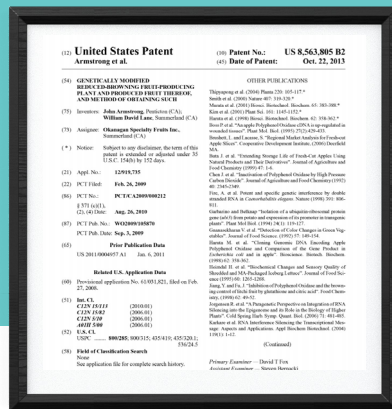


What is Intellectual Property (IP)?

Intellectual Property (IP) is the name given to patents, trademarks, copyrights, industrial designs and other types of intangible property that arise from creations of the mind and in their broadest sense have no physical form.

What are Patents?

A patent is an official legal document given to an inventor by a government. This document generally gives inventors the exclusive right to control the use of an invention, as set forth in the patent's claims, within a limited area and time by stopping others from, among other things, making, using or selling the invention without authorization. Patents are a part of Intellectual Property, which is a legal way to protect all creations of the human mind.



Tip



A patent provides a negative right which means, it does not give its owner the right to manufacture a product protected by the patent, rather, it allows the owner to say who cannot practice the invention protected by the patent

A. Why are patents important?



Inventions are the result of hard work. It may only take a moment of inspiration to think of a good idea but it takes a lot of research and experimentation to turn the idea into a useful and working invention.



Inventors deserve a recognition and reward for the amount of time and resources they spend developing their ideas. They also need the security of knowing that if they share the invention with the rest of the world, nobody will steal it, use it or copy it without their permission.



Patents provide rewards and protection for inventors but they also benefit society. In return for patent protection, inventors agree to reveal all the technical information and know-hows about their invention. This information is available to everyone in public domain and has enough details so anyone with basic knowledge in the domain can practice the invention and create new innovations.

IICT pact with Sun Pharma to net ₹240 crore



SPECIAL CORRESPONDENT

HYDERABAD, AUGUST 16, 2019 22:11 IST

UPDATED: AUGUST 17, 2019 07:34 IST

SHARE ARTICLE



PRINT



To out-licence patents on New Chemical Entity

CSIR-Indian Institute of Chemical Technology (IICT) would get the biggest pay check ever of about ₹240 crore from pharmaceutical giant Sun Pharma towards 'out-licencing' of patents on a New Chemical Entity (NCE) which can be developed into drugs for multiple ailments.



B. Can all inventions get a patent?

In order to be eligible for patent protection, an invention must fall within the scope of patentable subject matter. Patentable subject matter is established by law and statute, and certain subject matters of inventions are excluded from patentability. Some jurisdictions have a long list of exclusions. In India non-patentable inventions are given in Section 3 of the Indian Patent Act, 1970.



The following are not inventions for Indian Patent purposes:

- An invention which is frivolous or which claims anything obviously contrary to well established natural laws;
- An invention whose 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;
- 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;
- 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;
- 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;
- The mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way;
- A method of agriculture or horticulture;
- 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;
- 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;
- A mathematical or business method or a computer programme per se or algorithms;
- A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions;
- A mere scheme or rule or method of performing mental act or method of playing game;
- A presentation of information;
- Topography of integrated circuits;
- An invention which in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components.

C. How can you obtain patents?

Inventors obtain patents for their inventions by submitting a patent application to their national patent office. This application includes a detailed description and diagram of the invention and how it works. Patent application forms and other patenting procedures can be complicated. Hence, many inventors engage a patent attorney to help them through the process.

Inventions can be as simple as a paperclip or as complicated as a robotics device but they must meet certain conditions of patentability before they can be patented.

These conditions are



Novelty – Meaning that the invention must have a new characteristic that is not part of the current knowledge in its technical field. In other words, the invention must not be in public use or known by others. In the application, the inventor must describe the invention in detail and compare it with previous existing technologies in the same field in order to demonstrate its newness. Novelty is one of the most important patentability requirements. It lies at the heart of the patent system. A prior patent or publication of the same invention will defeat novelty.



Inventive Step (Non-obviousness) – Meaning that the new characteristic of your invention could not have been easily deduced by a person with average knowledge of that particular technical field. Non-obviousness requires that an invention must not have been obvious to one of ordinary skill “in the art” (the scientific/technical field of the invention). Basically, obviousness means that something cannot be patentable when any person of average skill in the relevant scientific/technical field could put together different pieces of known information and from them arrive at the same result.



Industrial Applicability (Utility) – Meaning that the invention can be made or used in any kind of industry, or must have a practical use; it cannot be just an idea or a theory. If the invention is for a product, someone must be able to make that product. If the invention is for a process, then it must be possible to carry out that process. Utility requires that an invention performs the functions specified and achieves some minimally-beneficial results. An invention does not typically need to demonstrate commercial viability in order to satisfy the utility or industrial applicability requirement.

D. When should an invention be patented ?

When deciding whether or not to patent an invention, the first thing inventors need to do is to find out if their inventions meet the above-mentioned conditions of patentability. Next, inventors should try to find out how interested other people are in their inventions and if customers would be willing to buy them. The patenting process can be long and expensive so inventors should make sure that once they have the patents they will be able to sell/license or market their inventions and recover the cost involved in patenting, innovation creation and production.

Tip



- Before inventors apply for a patent, they are strongly encouraged to research the technical fields of their inventions to make sure that no one else has already applied for a patent for the same invention. It is not easy to conduct a thorough patent search and may require the help of professionals.
- A patent application must be filed before publicly disclosing any important research results that may lead to a valuable product or technology. This caution especially applies to research institutions where the necessity for publishing academic works can easily be accommodated by examination of patentable novelty.



E. What happens if an invention is not patented?

Inventions that are not patented can be copied, sold, used and distributed by anybody. This means that without a patent, inventors may miss out on the money they could have earned from their inventions. If the inventions are successful and many people want to buy them, there would be nothing to prevent copycat agencies from selling the same inventions. Such competition would decrease the sales and profits that inventors could make from their own inventions.

In addition, without a patent, it is more difficult to license an invention to investors, manufacturers or distributors. This means that if inventors want to make money from their unlicensed inventions, they have to take care of all the investment, production, distribution and sales by themselves.

It is also often the case that when inventors don't patent their inventions or share them with the public, at some point another inventor may think of the same invention and patent it. Once again, the original inventor would not receive any of the credit or financial rewards from the sale of this invention.

Finally, when inventors do not patent their inventions, the new knowledge or technological information which led to those particular inventions sometimes does not get shared more widely. In some cases, this can slow down the advancement of science and technology by limiting the availability of important information that could be used by other scientists and inventors.



F. Who is the owner of an invention?

Ownership of Invention

Your Invention is likely owned by your **EMPLOYER** if...

- ☒ Subject matter is related to your job description.
- ☒ Created while working on the job.
- ☒ Used company equipment/tools have been used to develop/produce your invention.
- ☒ Employer asked you to develop or research the invention Topic/Subject.

Your Invention is likely owned by **YOU** if...

- ☒ Topic/Subject is NOT related to your job description.
- ☒ Created while NOT working at the job or on-site.
- ☒ Development/Conception did NOT happen using employers' equipment or resources.
- ☒ Employer did NOT ask you to develop or research your invention subject.

**"Live to Your Purpose! Protect & Bring to Market
Your Visionary Idea Today!"**

Chapter - 2

- # Prior Arts



What is Prior Art?

Prior art refers to scientific and technical information that exists before the effective date of a given patent application. Prior art may be found in any public documents such as patents, technical publications, conference papers, marketing brochures, products, devices, equipment, processes and materials. Prior arts are a good way to get information on developments in the field of invention. A prior art search refers to an organized review of prior art contained in public documents. A prior art patentability search may be conducted before the filing of a patent application to gauge the prospects of obtaining broad claim coverage. The purpose of conducting such a search is to find references related to the claimed invention in order to make an assessment of its patentability.

How can you search Prior Art?

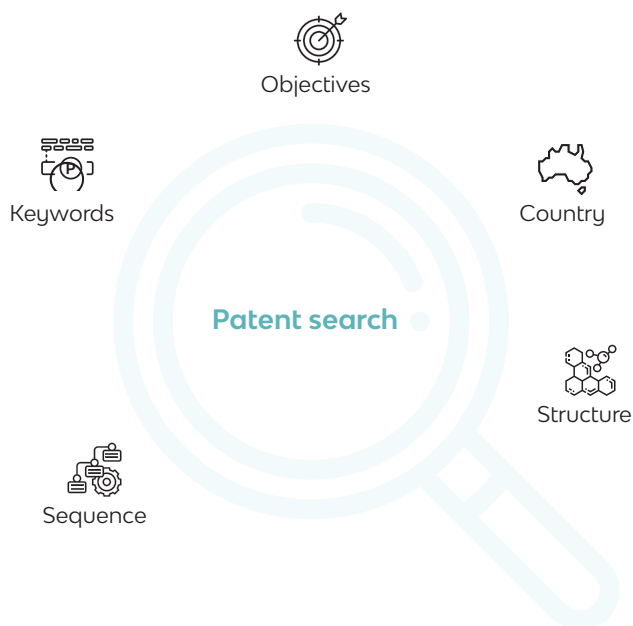
The prior art can be searched by conducting research just as similar to research on any other topic. You can also review existing patents by using public databases published Online. An Online prior art search can be done either as a keyword search or a field search.

a. keyword search

Before beginning a search based on keywords, start listing the keywords you would use to describe the invention. Think of all possible aspects of the invention and choose keywords that describe each of such aspect. The quality of a keyword search will largely depend on the appropriateness of keywords selected.

b. field search

A field search might be used to refine the results of the keyword search. Once the keyword search has been conducted, use the field search to narrow the results down to the field in which the invention at hand operates.



PATENT SEARCH FIELDS

PATENT NUMBER

ASSIGNEE

DATES

TEXT

INVENTOR

PATENT CLASSIFICATION CODES



TEXT

Title
Abstract
Claims
Description



DATES

Filing Date
Publication Date
Priority Date
Grant Date



CODES

IPC
CPC
USC
F-Term

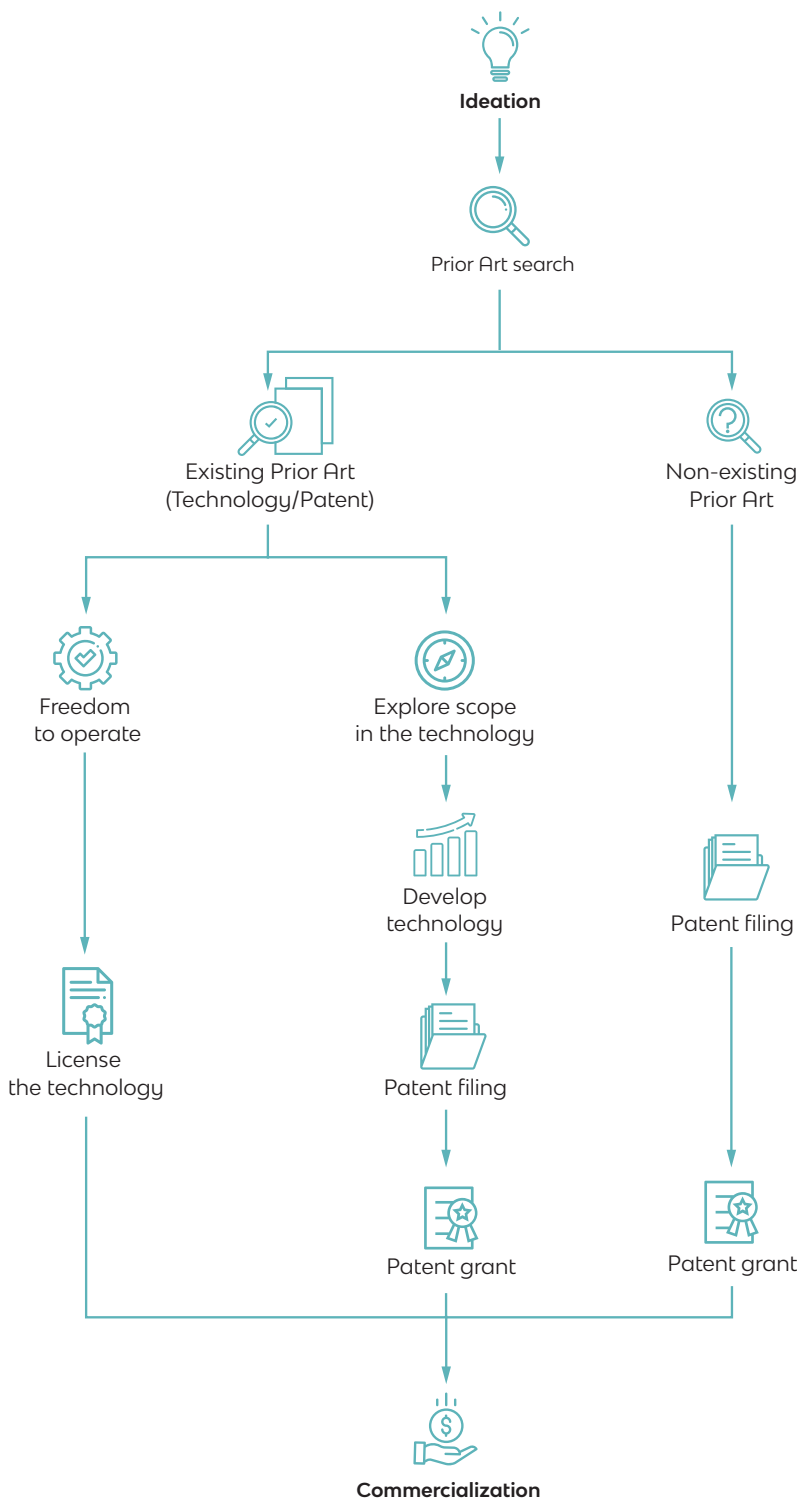
PATENT DATABASES

Databases from National Patent Offices

- Espacenet
- USPTO
- inPASS
- JPO
- SIPO
- KIPRIS

Subscription Based Databases

- Orbit
- Derwent Innovation
- Total Patent
- Patbase
- STN



Chapter - 3

- # Patent Documents



A. What are the typical parts of Patent Document?

The structure and format of a patent document is governed by concerned national patent law.

The parts of the document are generally:

- Background
- Detailed description (or Specification)
- Drawings
- Summary
- Claims
- Abstract

Tip



- The claims are the legally-operative part of a patent application; everything revolves around the claims.
- The claims mark the boundaries and outer limits of the protection provided by a patent, just as a physical boundary such as a fence, marks the limits of a parcel of real property.
- The claims must be supported by the specification and drawings, and there must be a basis in the description for the subject matter of every claim.
- A claim may “read on” prior art or an accused product or process. Claims are read on prior art to evaluate patentability or validity of the claims. During litigation, claims are read on an accused product or process to evaluate infringement.

B. What information does patent documents contain?

Patent information includes

1. Technical information from the description and drawings of the invention;
2. Legal information from the patent claims defining the scope of the patent and from its legal status;

In particular, this information refers to the following:

Applicant - Name of the individual or company applying to have a particular invention protected;

Inventor - Name of the person or persons who invented the new technology and developed the invention;

Description - Clear and concise explanation of known existing technologies related to the new invention and explanation of how this invention could be applied to solve problems not addressed by the existing technologies; specific embodiments of the new technology are also usually given;

Claims - Legal definition of the subject matter for which protection is sought or granted; each claim is a single sentence in a legalistic form that defines an invention and its unique technical features; claims must be clear and concise and fully supported by the description;

Priority filing - Original first filing on the basis of which further successive national, regional or international filings can be made within the priority period of one year;¹

Priority date - Date of the first filing from which the one-year priority period for further applications starts;

Filing date - Date of submitting an individual patent application at a particular patent office;

Designated states - If the application is regional or international, the countries to which the rights may be extended;

Legal status - Indicates whether the patent has been granted or not; if granted, the countries or regions in which the patent has been granted; and whether it is still valid or has expired or been invalidated in a particular country or region;

Citations and references - Certain patent documents also include references to related technology information uncovered by the applicant or by a patent examiner during the patent granting procedure; these references and citations include both patent and non-patent documents;

Bibliographic data - Refers generally to the various data appearing on the front page of a patent document or the corresponding applications and may comprise document identification data, domestic filing data, priority data, publication data, classification data, and other concise data relating to the technical content of the document;

Bibliographic data - Refers generally to the various data appearing on the front page of a patent document or the corresponding applications and may comprise document identification data, domestic filing data, priority data, publication data, classification data, and other concise data relating to the technical content of the document;

Document kind codes - Used to distinguish published patent documents according to the type and status;

INID code - ("Internationally agreed Numbers for the Identification of [bibliographic] Data").

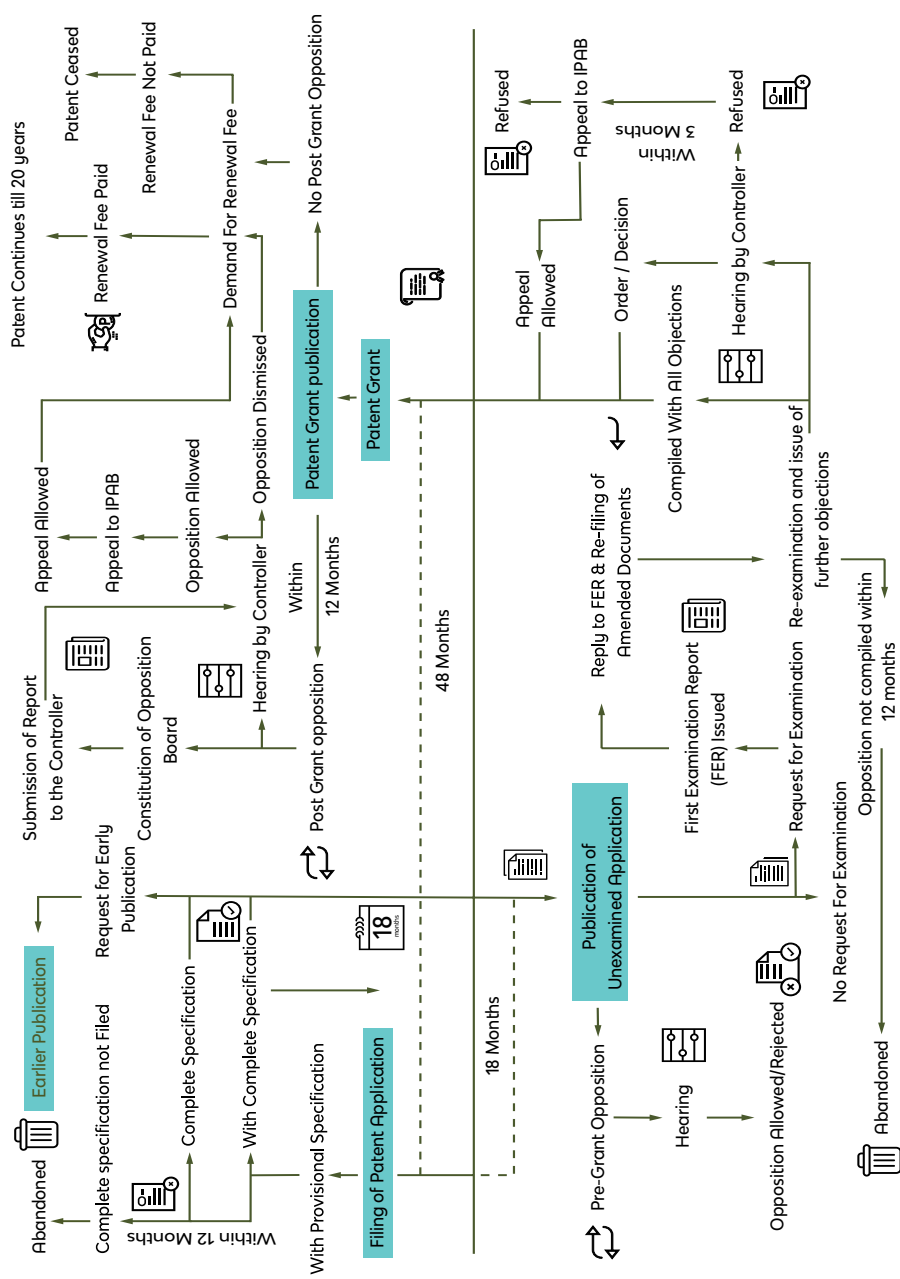
Country codes - Specify different countries by a unique two-letter country code for example, the code "WO" indicates the International Bureau of WIPO. **31**

Chapter - 4

- # Patenting Procedures



A. Domestic Application

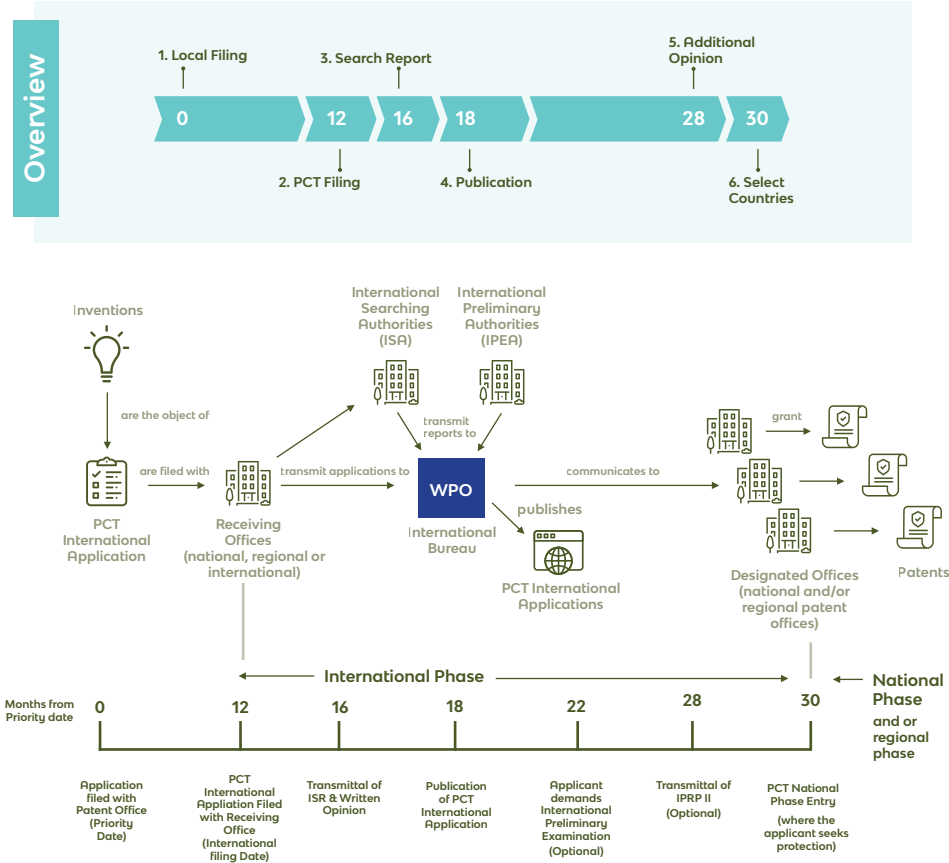


B. Are patented inventions protected worldwide?

Patent protection is only valid in the country that granted the patent. For example, if you are granted a patent in country A and your invention is not protected in country B, then anyone in country B can copy, use, distribute and sell your invention without your permission. In order to protect your invention in country B, you would have to obtain a patent from the government of country B.

It is now faster and easier for people and ideas to travel around the world. Because of this, it is no longer enough for inventors to protect their ideas in only one country. Obtaining patents can be a long and expensive process. However, under the Patent Cooperation Treaty (PCT) inventors can submit just one International Application which is valid in any or all of the more than 140 countries that are members of this Treaty. Inventors can decide if they want to apply for a patent in all of these countries or select a group of specific countries. Details of PCT are available at: <http://www.wipo.int/>

C. International Patent Application



Chapter - 5

- # Post Patenting Scenarios





MISCELLANEOUS
WRITINGS
ON
SLAVERY
WILLIAM JAY.

DIXON'S
REMEDY
FOR THE
SLAVE TRADE

KIEBE'S
MILITARY
PLOTS

DIE
LIB
COMI

E. B.
LON

The background of the page is a photograph of a bookshelf. On the left side, several old, leather-bound books are visible, their spines showing intricate gold tooling. The books are arranged on wooden shelves. The lighting is warm and slightly dim, creating a scholarly or historical atmosphere. The right side of the image is mostly obscured by a white rectangular area containing text.

How can you exploit the Patented Invention?

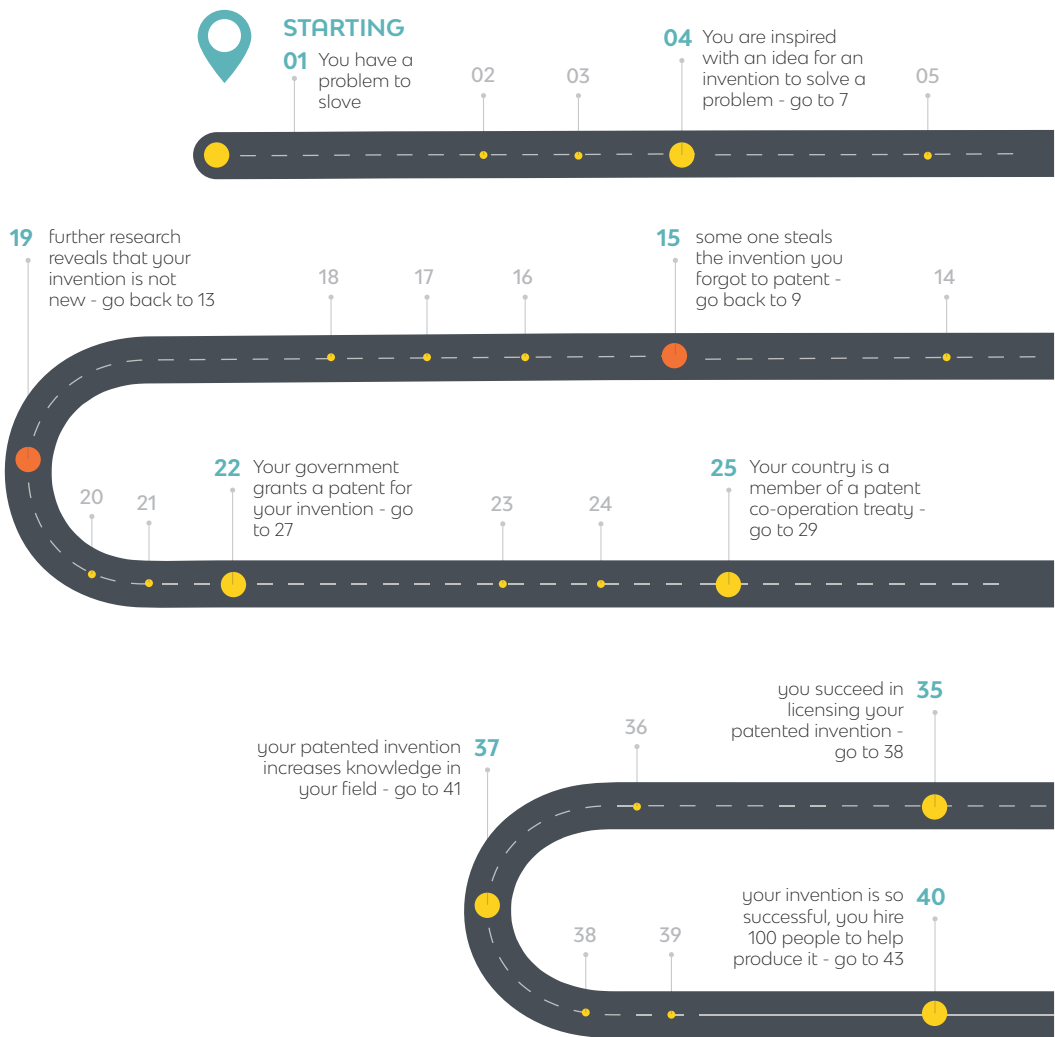
It is not enough to create an invention; the inventor should also discover whether there is an adequate market for the product/process covered by her/his invention. Who will buy the product? How many people make up the potential market?

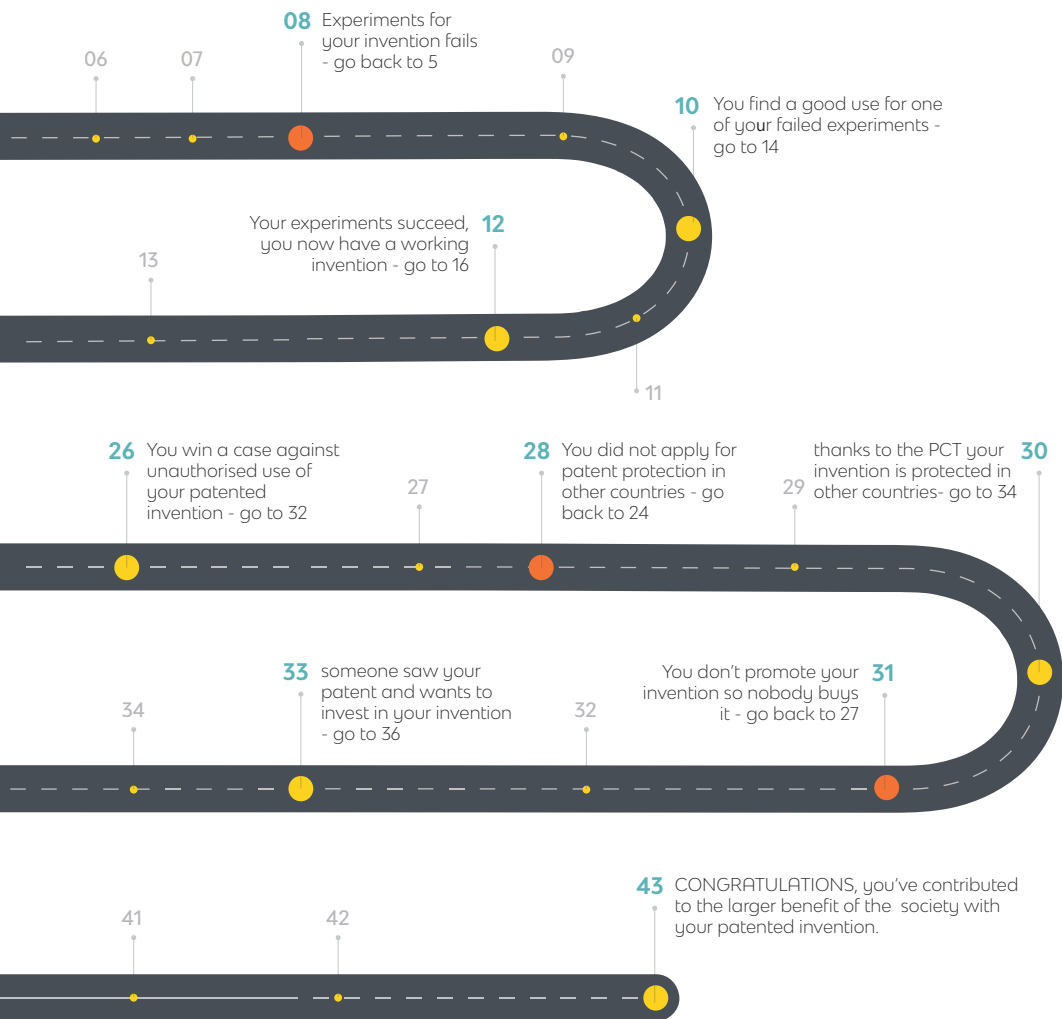
A patent is looked upon as any other type of property, and so it may be disposed off like any other property right – it may be sold, licensed, mortgaged, assigned or transferred, given away, or simply abandoned.

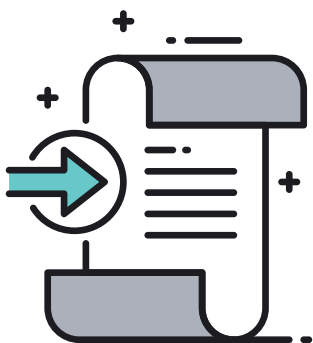
Basically, there are two common methods the inventor can use to get her/his idea into the market. He/She can sell/assign or license the patented invention to a company equipped to manufacture it. Alternatively, he/she can become a manufacturer, either establishing a factory or contracting out production to a job, as appropriate.

Intellectual Property (IP) licensing is a frequently used means of exploitation of IP, including in the process of commercialization of research results. A patent may be sold by the inventor to another party, or it may be licensed for other people's use with a license agreement. In a license agreement, the holder of the patent holds on to all rights of ownership and the licensee has the right to use or exploit the invention in return for paying a fee.

Patent Journey







References

1. WIPO Patent Drafting Manual.
2. Learn from the Past, Create the Future: Inventions and Patents, 2007: WIPO
Publication No. 925E, September 2010 edition.
3. Guidelines for Preparing Patent Landscape Reports, 2015: WIPO Publication No. 946E.
4. WIPO Guide to Using Patent Information, 2015: WIPO Publication No. L434/3E.
5. WIPO PCT Applicant's Guide – International Phase.
6. WIPO PCT Applicant's Guide – National Phase
7. <https://www.wipo.int>
8. <http://www.ipindia.nic.in>
9. <https://www.uspto.gov>
10. <https://www.epo.org>

Disclaimer

The information enclosed in this training material has been compiled from various information resources. We do not own any information.

The main purpose of this document is to provide basic knowledge and information for academics purpose only, it is not meant as a substitute for professional legal advice or commercial purposes.

ANNEXURE 'A'

INVENTION DISCLOSURE FORM (CONFIDENTIAL)

Title of the invention: -----

Brief description of the invention: (How does this invention relate to new processes, systems, machines, compositions of matter, chemical and physical nature etc?)

Please cover the following points:

(a) State of prior art:

(i) Prevailing state of the art? (Including source of idea/concept) -----

(ii) Literature search relating to this invention? (Please include copies of any resulting documentation.) -----

(iii) Prior art/Patent search relating to this invention? (Please include copies or Number / citation of any resulting documentation.) -----

(b) Description: (Describe the invention so that IP attorney can evaluate its technical and commercial merits. Give all the technical details including flow charts, tables, diagrams, drawing etc) -----

(c) Novelty: (Highlight the features described above that make the invention novel / new) ---

(d) Inventiveness: (Are the novel features inventive based on (a) above (prior arts); and, if so, how?) -----

Describe problems in the prior art and how your invention has overcome / solved the problem.
Modifications in physical and chemical properties with compared to prior arts.

(e) Advantages: (What are the advantages of the described invention over (a) above (prior arts)? -----

Also give following information:

Commercial Potential:

What are the:

1. Possible uses/application areas and/or products you feel may improve the aspects of your technology and
2. Possible end-users
3. Potential marketability including commercial suggestions viz.
 - Input required
 - Production capacity where applicable
 - Raw material / equipment requirement
 - Transfer form
 - Target companies and countries,
 - Economic data
 - Potential long-term commercial interest.

(Please provide as much information as possible; attach extra sheets if required)

(f) Testing: (Has the invention been tested experimentally? If so details of experimental data to be supplied) -----

(PLEASE USE ADDITIONAL SHEETS TO ELABORATE AND TO ATTACH SKETCHES, DRAWINGS, PHOTOGRAPHS AND OTHER MATERIALS THAT HELP ILLUSTRATE THE DESCRIPTION.)

Development stage:

Give your opinion on the current stage of development of the invention:

Embryonic (needs substantial work to bring to market)/

Partially developed (could be brought to market with significant investment)/

Off-the-shelf (could be brought to market with nominal investment)

Do you know of any other inventions that are congruent with this invention?

If yes, give details (including brand name, manufacturing/marketing agency and product details) -----

INVENTOR/S DETAILS:

Name: -----

Designation (if any): -----

Address and Contact details: -----

Funding and support:

Was the invention supported by external funding agency /contract funds from external sources (Public / Private)?

☐ Yes

☐ No

If YES please give details:

- 1. Sponsor/Contractor details: (Address, IP Sharing agreement/clause etc)
- 2. Principal investigator and co-investigator(s) if any: (even if they are not inventors within the purview of this document and will not share the credit and royalties):
- 3. Has the sponsor been informed of the invention? :
- 4. Was the work done under any other agreement?

DESCRIPTION	DATE	REFERENCES/ COMMENTS
Date of conception of the invention. Has this date been documented? If so, where and how?		
Has this been presented at seminars / discussions / conference / exhibition		If yes, attach copy of presentation
Please provide the anticipated date of submission for publication or communication for presentation at seminar/conference/exhibition etc.		
Has the invention been reduced to practice?		
Has the invention been disclosed to industry representatives or third parties?		

Declaration: I/we declare that all statements made herein are true to the best of my/our knowledge.

Inventor’s Signature

Date

Place

Intellectual Property Facilitation Cell (IPFC)

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Hyderabad, Telangana.
Email: ipfc.icrisat@cgiar.org
contact : +91-9154038099

Research and Innovation Circle of Hyderabad (RICH)

3rd floor t-hub, Catalyst Building,
IIIT-Hyderabad, Gachibowli,
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E-mail: dir-fa-rich@telangana.gov.in;
bm-rich@telangana.gov.in