Intellectual Property Rights
Patents

DR. (MS.) SONALI CORREA

MSC, PH.D.

Tangible properties, be, movable or immovable, have a physical structure and presence.

- Tangible personal property includes equipment, supplies, and any other property (including information technology systems) other than that is defined as an intangible property. It does not include copyrights, patents, and other intellectual property that is generated or developed (rather than acquired) under an award.
- In law, tangible property is literally anything that can be touched, and includes both real property and personal property, and stands in distinction to intangible property

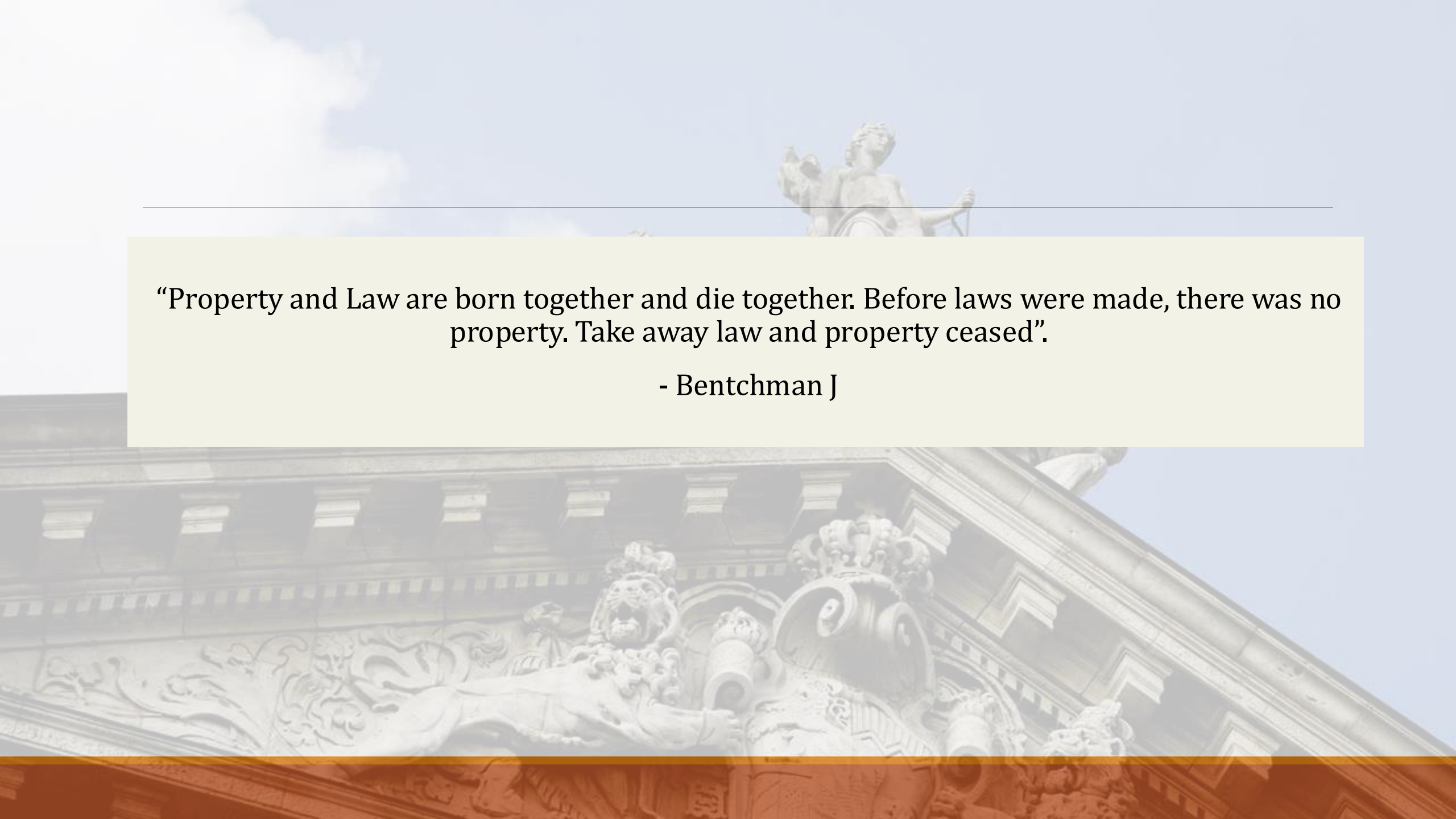
They have been recognized as goods since time immemorial.

Conversely, intangible properties have only been recognized as properties in the recent past, let alone affording protection to them under IP Rights.

- Intangible property, also known as incorporeal property, is something that a person or corporation can have ownership of and can transfer ownership to another person or corporation, but has no physical substance, for example brand identity or knowledge/intellectual property.

A brand has a plethora of Intellectual Property Rights (IPR) built around it.

Example SMARTPHONE



"Property and Law are born together and die together. Before laws were made, there was no property. Take away law and property ceased".

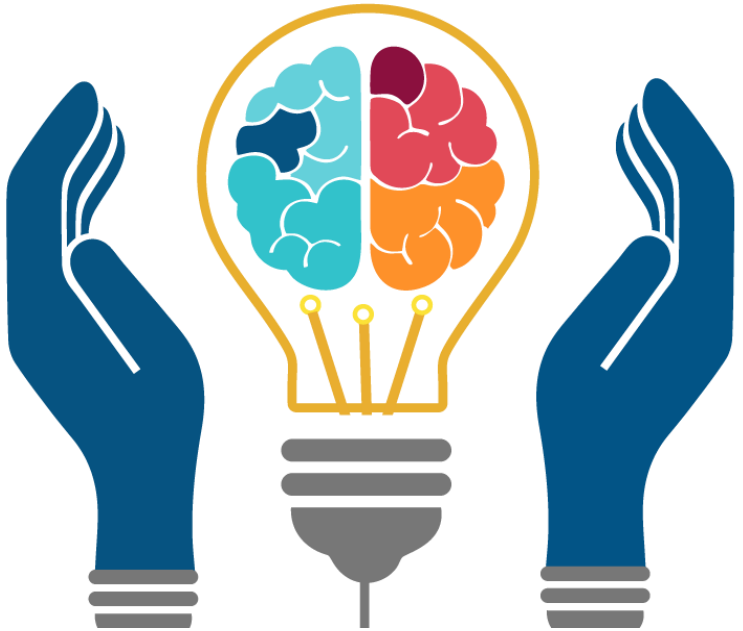
- Bentchman J

Intellectual Property

Intellectual property refers to creations of the mind i.e. inventions, industrial designs for articles & literary works. It is a product of the intellect that has commercial viability and importance.

According to World Intellectual Property Organization (WIPO),

"Intellectual Property refers to literary, artistic and scientific works, Performances, Broadcast, Videos, Computer games, Computer Programmes, Images, Logos, Trademarks and all other products resulting from intellectual activity"



Intellectual Property refers to

Inventions,

Innovative designs,

Products of human creativity,

Identifiers of organizations or their products and services or

Unique products that have a geographical attribute.

As per Oxford Dictionary:

- An Intellectual Property is an intangible property that is the result of creativity.

According to World Intellectual Property Organization (WIPO), the global forum for intellectual property, 'Intellectual Property (IP) refers to the creations of mind, such as inventions; literary and artistic works; designs; and symbols, names, and images used in commerce'.

Intellectual Property Rights

Intellectual property rights (IPR) have been defined as ideas, inventions, and creative expressions based on which there is a **public willingness to bestow the status of property.**

IPR provide certain **Exclusive Rights** to the inventors or creators of that property, in order to enable them **to reap commercial benefits from their creative efforts or reputation.**

IPR **is prerequisite for better identification, planning, commercialization, rendering, and thereby protection** of invention or creativity.

Saha CN, Bhattacharya S. Intellectual property rights: An overview and implications in pharmaceutical industry. *J Adv Pharm Technol Res*. 2011;2(2):88-93. doi:10.4103/2231-4040.82952

IPR as World Trade Organisation (WTO)

As per Intellectual property rights are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time

However, an IPR is not just a right to exclude others from using, selling or producing the protected asset.

It is also designated to provide the holder with the right to assign or license the rights for commercial or other bonafide uses. This includes the right to reproduce, distribute and sell the asset.

Significance of IP

- Intellectual Property Rights have a significant influence on economic progress
- Enhance research by disseminating information on advances in technology
- Promote the innovation process
- Facilitate licensing and technology transfer
- Encourage high risk investments which lead to industrialisation
- Avoid duplication of invention / investment in R&D
- Reduce cost of production

Types of IP

There are three primary types of Intellectual Property:

Patents (Innovations)

Copyrights (literary and artistic works)

Trademarks (distinction of Identity of goods & services)

Industrial designs

Geographical indications

Plant variety rights

in INDIAN IPR

Development of Intellectual Property Law in India

Protected innovation Right (IPR) in India was imported from the west.

The Indian Trade and Merchandise Marks Act 1884, was the main Indian Law with respect to an IPR.

The law on patents in Indian was sanctioned in 1856 followed by a progression of Acts being passed.

The Indian Patents and Designs Act in 1911 and the Indian Copyright Act in 1914 had sanctioned. Indian Trade, Merchandise Marks Act, and Indian Copyright Act have been changed by the Trade and Merchandise Marks Act 1958 and Copyright Act 1957 individually.

In 1948, the Indian Government selected the first board of trustees to survey the overall Patents and Design law. In 1957, the Government established a Justice Rajagobala Ayyangar Committee (RAC) to revise the Patent Law.

Rajagobala Ayyangar Committee presented its first report in the year 1959, the report tried to adjust the established assurance of financial and social equity cherished in the preface of the constitution. This report gave the procedure to the Patenting of medications and medical drugs.

This report laid out the approach behind the Indian Patent system.

The theory on which the patent system depends on, i.e., a chance of securing elite rights in development, inventions and creation are specialized procedure in four different ways.

1. Supports exploration and innovation.

2. Initiates a designer to unveil his designs.

3. Offers grant for the costs of innovations.

4. Gives a prompting to put capital in new lines of innovation which probably won't seem beneficial.

In view of the Rajagobala Ayyangar Committee report, a Bill was presented in the year 1965 and the bill was passed in the Lok Sabha however it lapsed in the Rajya Sabha and again lapsed in Lok Sabha in the year 1966 because of the disintegration of Lok Sabha.

In any case, it was reintroduced in 1967 and went in 1970; the draft rules were consolidated in Patent Act and passed in the year 1971.

The accompanying advances are being recommended with specific reference to the circumstance in India in regards to IPR in the national strategy making.

IPR management strategy

Integrate national innovation arranging with IPR and patterns in global innovation exchange;

Implement a conventional national IPR education crucial;

Set-up IPR preparing organizations to get ready actually qualified lawyers;

Introduce an empowering national tax assessment strategy to energize advancement, working of IPR portfolio and its use in innovation move and exchange;

Urgently modernize the IPR authoritative structures in the nation;

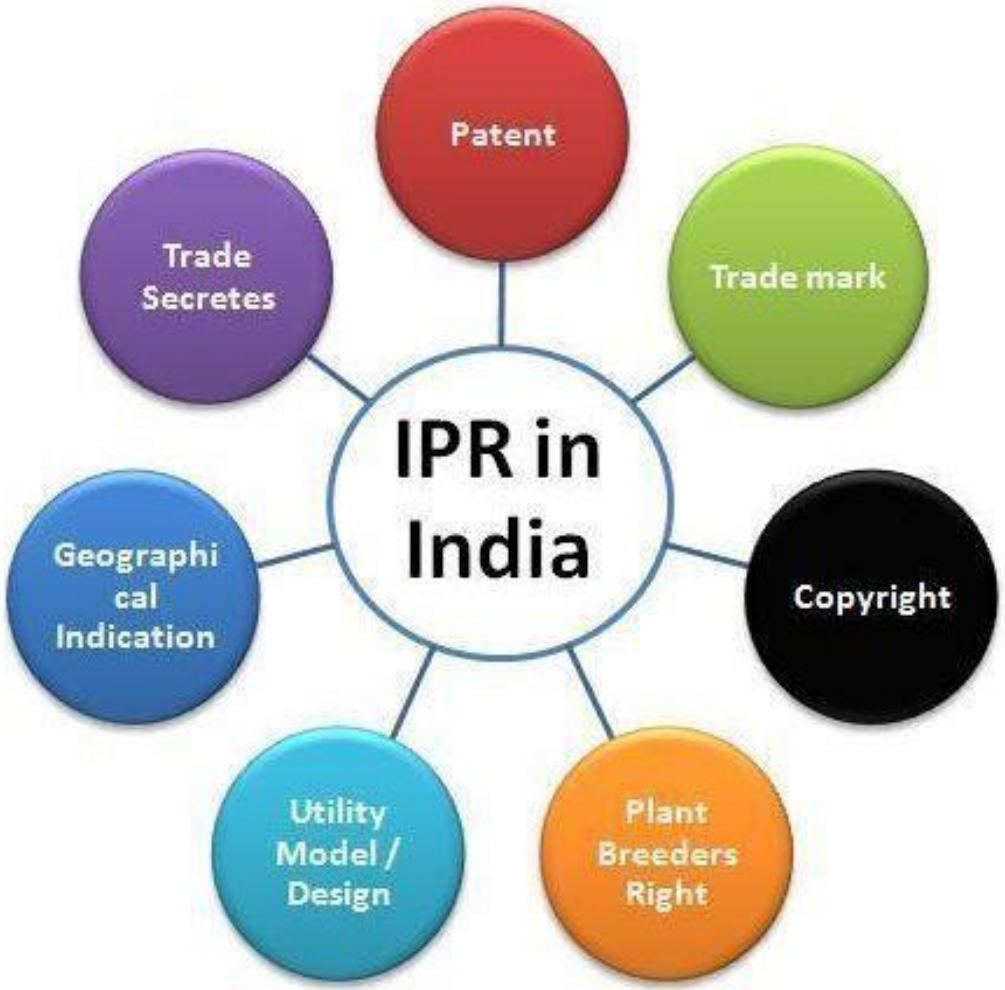
Improve the system forget to and successful utilization of IPR data. There is a pressing need to blend the patent characterization system to ease and enhance forms in patent looking;

Re-structure the legal executive and requirement hardware for expert and expedient reaction to IPR issues;

Training of corporate and institutional chiefs on viable administration of IPR;

Standardize models for valuation and review of IPR;

Evolve national tax assessment policies of improvement, use, and exchanges connected to IPR.


IPR in India
Patent
Trade mark
Copyright
Plant Breeders Right
Utility Model / Design
Geographical Indication
Trade Secretes

Evaluation of an International Intellectual Property System

The establishment of International Intellectual Property Protection was made in the nineteenth century at different Congresses in Vienna and the remainder of Europe. The assurance of Industrial Property was made in Paris Convention in the year 1883.

Licenses, Trade Marks and Industrial plans were the three primary properties that were conceded security in this show. In 1998, India turned into an individual from the Paris Convention.

The establishment of International Intellectual Property Protection was made in the nineteenth century at different Congresses in Vienna and the remainder of Europe.

The assurance of Industrial Property was made in Paris Convention in the year 1883. Licenses, Trade Marks and Industrial plans were the three primary properties that were conceded security in this show. In 1998, India turned into an individual from the Paris Convention.

In 1886, International Copyright Act was passed (bringing about the encircling of the Berne Convention for the assurance of scholarly and aesthetic works).

The Paris Convention denoted the start of the International Trade Marks Protection laws and presented the idea of a notable imprint. Extraordinary associations and game plans have been made for the nations who are individuals from the Paris Convention.

Madrid understanding is one exceptional game plan that was made to normalize the trademarks. Madrid understanding exemplifies the basic standards delineated in the Paris Convention.

The importance of intellectual property in India is entrenched at all levels-legal, regulatory and legal. India sanctioned the understanding setting up the World Trade Organization (WTO).

This Agreement, intra-alia, contains an Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) which came into power from first January 1995.

It sets out the base principles for security and authorization of licensed innovation rights in part nations which are required to advance viable and sufficient insurance of protected innovation rights with the end goal of lessening mutilations and hindrances to worldwide exchange.

The commitments under the TRIPS Agreement identify with arrangement of least principles of insurance inside the part nations lawful frameworks and practices.

The IPR scene in India has experienced a sensational change since 1995 with the formation of different instruments of Intellectual Property.

WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

WORLD TRADE
ORGANIZATION

TRIPS
Trade Related Intellectual Property Rights

Benefits of IPR

Optimized utilization of inter/intra information base.

Strategic administration of IPR.

External channels for information and creations as sources of info.

Internal aptitude to oversee exploration and coordinated efforts.

Clarity on information proprietorship issues through commonly gainful licenses.

Pooling of IPR as on account of a few organizations that have framed patent pools of their licenses for shared advantages

New Dimensions and Issues for Resolution of intellectual property

As innovation investigates more up to date measurements and unknown ways in the coming decades, IPR will expect favourable structures to support advancement and information partaking in a serious system. The interlaced issues in IPR such as:

Domain names and trademarks: Copyright in the internet.

Rights on customary information, earlier workmanship, material exchange understanding and bio-prospecting.

Software and patents

Biotechnological developments and good issues and patents.

Compulsory permitting alternatives, outskirt measures and equal imports and depletion of IPR.

Government control on fare of innovation.

Effect of stronger IPR in developing nations

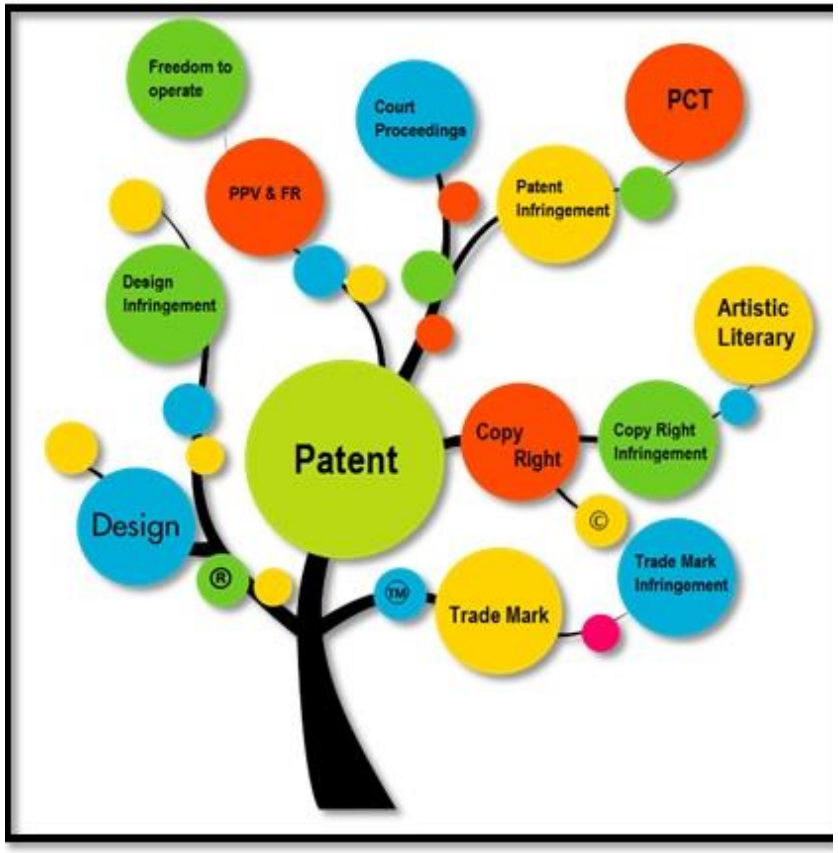
Society receives the accompanying four benefits from allowing such restraining infrastructure rights to inventions:

The incitement of new inventions by private specialists, the essential social advantages of IPR.

The utilization of new information in beneficial activity.

The more prominent dispersal of new information to different operators.

The incitement of inventions and innovation by different undertakings.



WIPO

The World Intellectual Property Organization (WIPO; French: Organisation mondiale de la propriété intellectuelle (OMPI)) is one of the 15 specialized agencies of the United Nations (UN).

Pursuant to the 1967 Convention Establishing the World Intellectual Property Organization, WIPO was created to promote and protect intellectual property (IP) across the world by cooperating with countries as well as international organizations.

Purpose

WIPO's two main objectives are
(i) to promote the protection of intellectual property worldwide;
(ii) to ensure administrative cooperation among the intellectual property Unions established by the treaties that WIPO administers.

WIPO has currently 193 member states

WIPO administers 26 treaties including the WIPO Convention.

HQ is in Geneva, Switzerland

WIPO is an intergovernmental organization which became one of the specialized agencies of the United Nations system of organizations on 26 April 1974

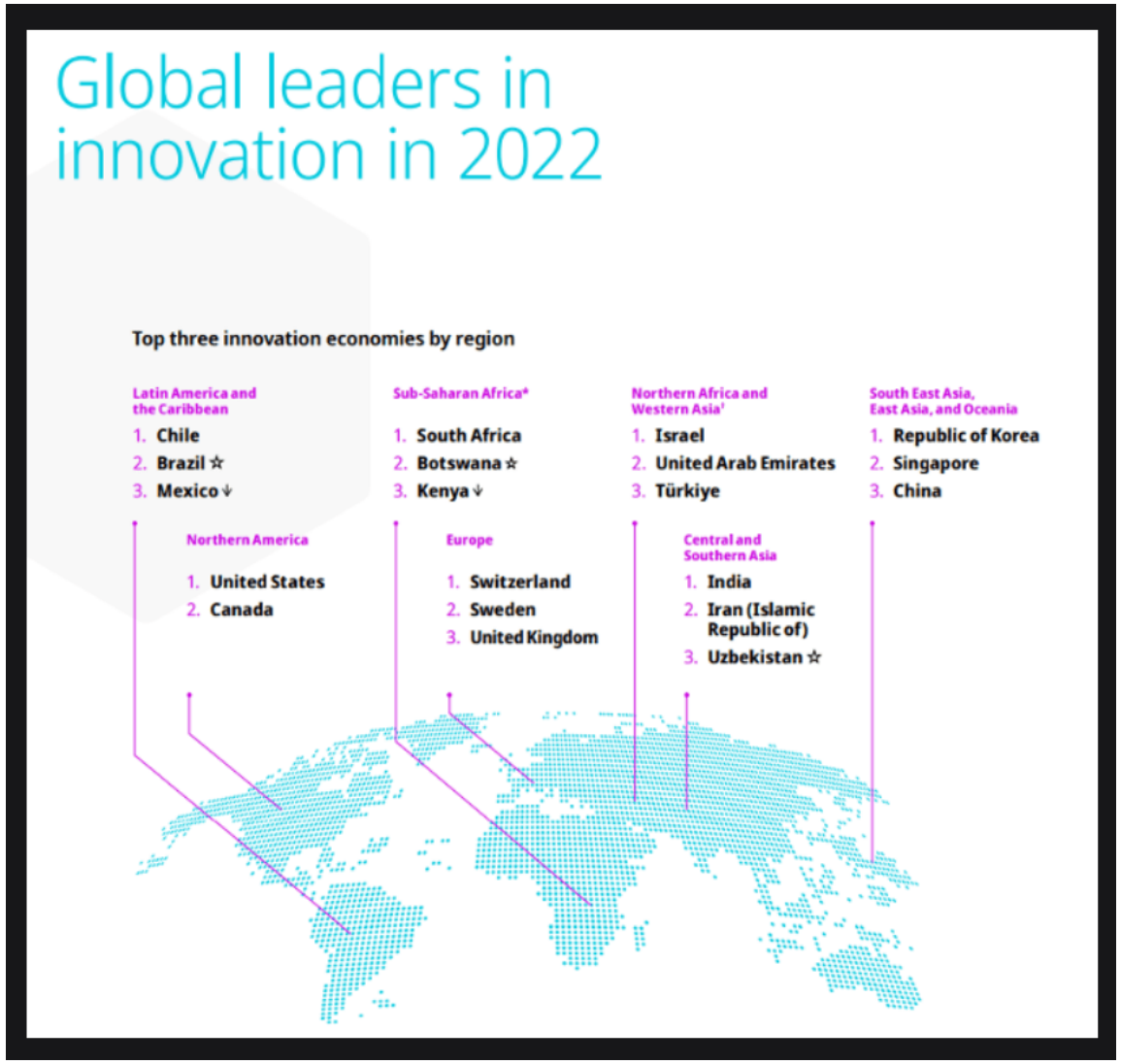
The current Director General is Singaporean Daren Tang, former head of the Intellectual Property Office of Singapore, who began his term on 1 October 2020

Agreement between UN & WIPO

Article 1

Recognition

The United Nations recognizes the World Intellectual Property Organization (hereinafter called the " Organization ") as a specialized agency and as being responsible for taking appropriate action in accordance with its basic instrument, treaties and agreements administered by it, inter alia, *for promoting creative intellectual activity and for facilitating the transfer of technology related to industrial property to the developing countries in order to accelerate economic, social and cultural development, subject to the competence and responsibilities of the United Nations and its organs, particularly the United Nations Conference on Trade and Development, the United Nations Development Programme and the United Nations Industrial Development Organization, as well as of the United Nations Educational, Scientific and Cultural Organization and of other agencies within the United Nations system.*



WIPO has significant financial resources independent from the contributions from its member states

In December 2011, WIPO published its first world IP report on the changing face of innovations, the first such report of the new economist office of Chief economist

WIPO is a co-publisher of the Global Innovation Index (GII)

India jumped from 81st position in 2015 to 40th position in 2022

Services

WIPO services provide efficient and cost-effective solutions across the entire intellectual property lifecycle, helping you to:

– protect inventions, trademarks, designs and geographical indications internationally;

– resolve intellectual property and domain name disputes; and

– access global intellectual property data.

These services can help innovators and creators protect their inventions, trademarks and designs in multiple countries, and resolve their IP disputes, through free global databases of IP information, highly efficient and cost-effective global IP protection services, and neutral non-profit dispute resolution services.

INFO NETWORK

WIPO's Standing Committee on Information Technologies endorsed measures to establish the WIPO Global Information Network (known as the WIPONET)

The Standing Committee, comprised of the member States of WIPO and certain international governmental and non-governmental organizations, agreed that a suitable contractor to implement the technical aspects of the project should be identified through an international tendering procedure that will commence in December 1998, and that a Task Force of technical experts should be formed, during the second half of 1998, to assist WIPO in determining the technical requirements of this major project.

This is the first global project to be undertaken by the WIPO using information technology.

WIPONET is designed to make optimal use of recent technological developments and existing communications infrastructures to provide network services to each participating intellectual property office

WIPONET

WIPONET will play two major roles.

To serve to strengthen the collective efforts of Member States to create high-quality, high-value information collections which are easily, yet securely, accessible on the network via Intellectual Property Digital Libraries (IPDLs).

Serve as an important vehicle for the dissemination of published intellectual property information to previously unserved communities such as the public, universities, research and development institutions, and copyright users.

WIPONET will provide three key services.

the provision of data through Intellectual Property Digital Libraries.

- A prototype IPDL, which provides a comprehensive search facility enabling users to access selected data relating to international applications published under the Patent Cooperation Treaty (PCT), came into operation earlier this year.

Electronic filing by the public of international patent applications filed under the PCT.

- This facility will provide for the secured transmission of confidential text and image data contained in international patent applications.

Third, distance learning facilities offered under the WIPO global training program (known as the WIPO Worldwide Academy) for intellectual property offices and the intellectual property community.

- It is foreseen that major improvements to WIPO's services in the field of cooperation for development will be generated as a result of the establishment of a coordinated Internet-based communications network incorporating new distance learning, collaborative development and video-conferencing technologies.
- These services will be particularly useful in distributing information and services to developing countries.

Functions of WIPO

Assisting	Assisting campaigns development to improve IP protection all over the world and to harmonize national legislation in this field,
Signing	Signing the international agreements on IP protection,
Applying	Applying the administrative functions of the Paris and Berne Unions,
Rendering	Rendering technical and legal assistance in the field of IP,
Collecting and disseminating	collecting and disseminating the information, conducting researches and publishing their results,
Ensuring	ensuring the work of the services facilitating the international IP protection,
Applying	applying any other appropriate actions.

Goals of WIPO

Strategic Goals of WIPO

to use IP assets to advance research and development(R&D) for neglected tropical diseases(NTDs), malaria, and TB through collaboration. The implementing activities for the same goal include establishing and maintaining the Special Programme for Research and Training in Tropical Diseases and others and this work shall be done in collaboration.

is to accelerate the advancement of promising compounds or leads. The implementing activities for this include assisting collaborators for obtaining grants for donor agencies, this will help to accelerate the progress.

is to enhance global capacity for IP management and biomedical R&D. The implementing activities include supporting the capacity development of member organisations, providing them research fellowships at leading research centres for the same.

is to communicate the beneficial role of IP in innovation for NTDs, malaria, and TB.

GATT

GATT (General Agreement of Tariffs and Trade) was a legal agreement to minimize barriers to international trade by removing tariffs, subsidies, and quotas while preserving significant regulations.

This agreement was signed on 30 October 1947 by 23 countries.

The prohibition of quantitative trade restrictions is the driving principle of GATT.

The only exception to this principle could be exercised if the country faced issues related to the balance of payments.

Purpose

GATT is a legal agreement between many countries, whose overall purpose was to promote international trade by reducing or eliminating trade barriers such as tariffs or quotas.

According to its preamble, its purpose was the *"substantial reduction of tariffs and other trade barriers and the elimination of preferences, on a reciprocal and mutually advantageous basis."*

GATT to WTO

The General Agreement on Tariffs and Trade (GATT) traces its origins to the 1944 Bretton Woods Conference, which laid the foundations for the post-World War II financial system and established two key institutions, the International Monetary Fund and the World Bank.

The conference delegates also recommended the establishment of a complementary institution to be known as the International Trade Organization (ITO), which they envisioned as the third leg of the system.

The United States and the United Kingdom spearheaded the initiative at the newly formed United Nations to draft a charter for the proposed ITO. These negotiations concluded with the signing of the Havana Charter in March of 1948.

The Uruguay Round, conducted from 1987 to 1994, culminated in the Marrakesh Agreement, which established the World Trade Organization (WTO).

The WTO incorporates the principles of the GATT and provides a more enduring institutional framework for implementing and extending them.

GATT was an international treaty with a temporary international existence, whereas the World Trade Organization is a permanent body whose authority has been ratified by its many member nations.

GATT dispute settlement was generally slower and less effective than dispute settlement under the WTO.

GATT was set up to eliminate protectionism, get countries trading freely among themselves, and help restore economic prosperity following the devastation of World War II.

Membership GATT

On 1 January 1995, the WTO replaced GATT, which had been in existence since 1947, as the organization overseeing the multilateral trading system. The governments that had signed GATT were officially known as “GATT contracting parties”.

Upon signing the new WTO agreements (which include the updated GATT, known as GATT 1994), they officially became known as “WTO members”.\

TRIPS Agreement

The TRIPS Agreement accommodates standards and principles in regard of following territories of intellectual property
Patents
Copyrights and related rights
Trade Marks
Geographical Indications
Trade Marks
Layout diagram of Integrated Circuits
Industrial Designs
Trade Secrets
Varieties of plants.

TRIPS

Trade Related Aspects of Intellectual Property Right (TRIPS) is an agreement on international IP rights.

TRIPS came into force in 1995, as part of the agreement that established the World Trade Organisation (WTO).

TRIPS establishes minimum standards for the availability, scope, and use of seven forms of intellectual property namely, trademarks, copyrights, geographical indications, patents, industrial designs, layout designs for integrated circuits, and undisclosed information or trade secrets.

It applies basic international trade principles regarding intellectual property to member states.

It is applicable to all WTO members.

TRIPS Agreement lays down the permissible exceptions and limitations for balancing the interests of intellectual property with the interests of public health and economic development.

TRIPS is the most comprehensive international agreement on IP and it has a major role in enabling trade in creativity and knowledge, in resolving trade disputes over intellectual property, and in assuring WTO members the latitude to achieve their domestic policy objectives.

It frames the IP system in terms of innovation, technology transfer and public welfare.

The TRIPS Council is responsible for administering and monitoring the operation of the TRIPS Agreement.

TRIPS was negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) in 1986–1994.

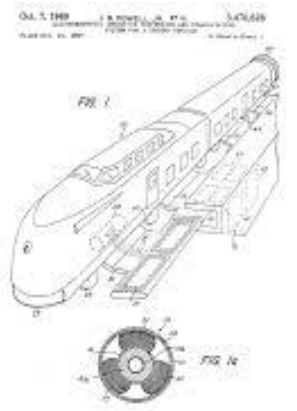
The TRIPS Agreement is also described as a “Berne and Paris-plus” Agree

TRIPs Agreement Covers Seven Categories of Intellectual Property Rights

Important trade related aspects of intellectual property rights (TRIPs) are as follows:

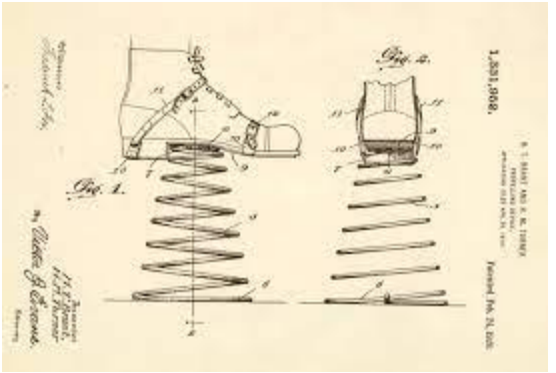
- Copyright
- Trademarks
- Geographical Indications
- Industrial Designs
- Patents
- Integrated Circuits
- Trade Secrets.

Patent



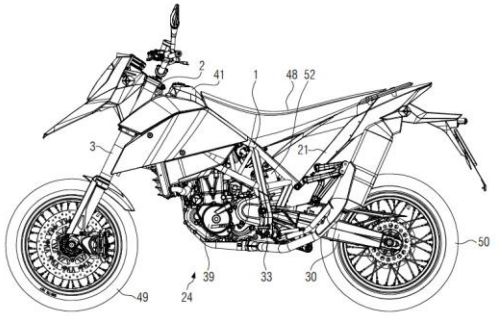
What is a patent?

A patent is an intellectual property **exclusive right** granted for **an invention**, which is a **product or a process** that provides, in general, a new way of doing something, or offers a new technical solution to a problem.



The patent is presented as a legal certificate that ensures that the inventor are the sole benefactor of their invention.

, the inventor can use their invention to gain commercial benefits – whether it's licensing their idea or leveraging it for their business



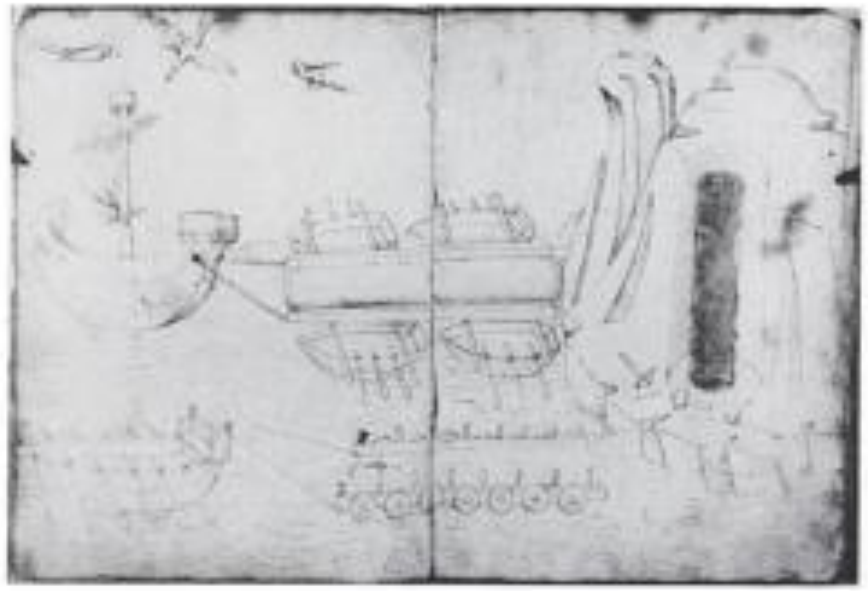
The patent also allows the inventor to take legal action against entities reproducing or using their invention without your permission.

To get a patent, technical information about the invention must be disclosed to the public in a patent application.

Origin of Patents

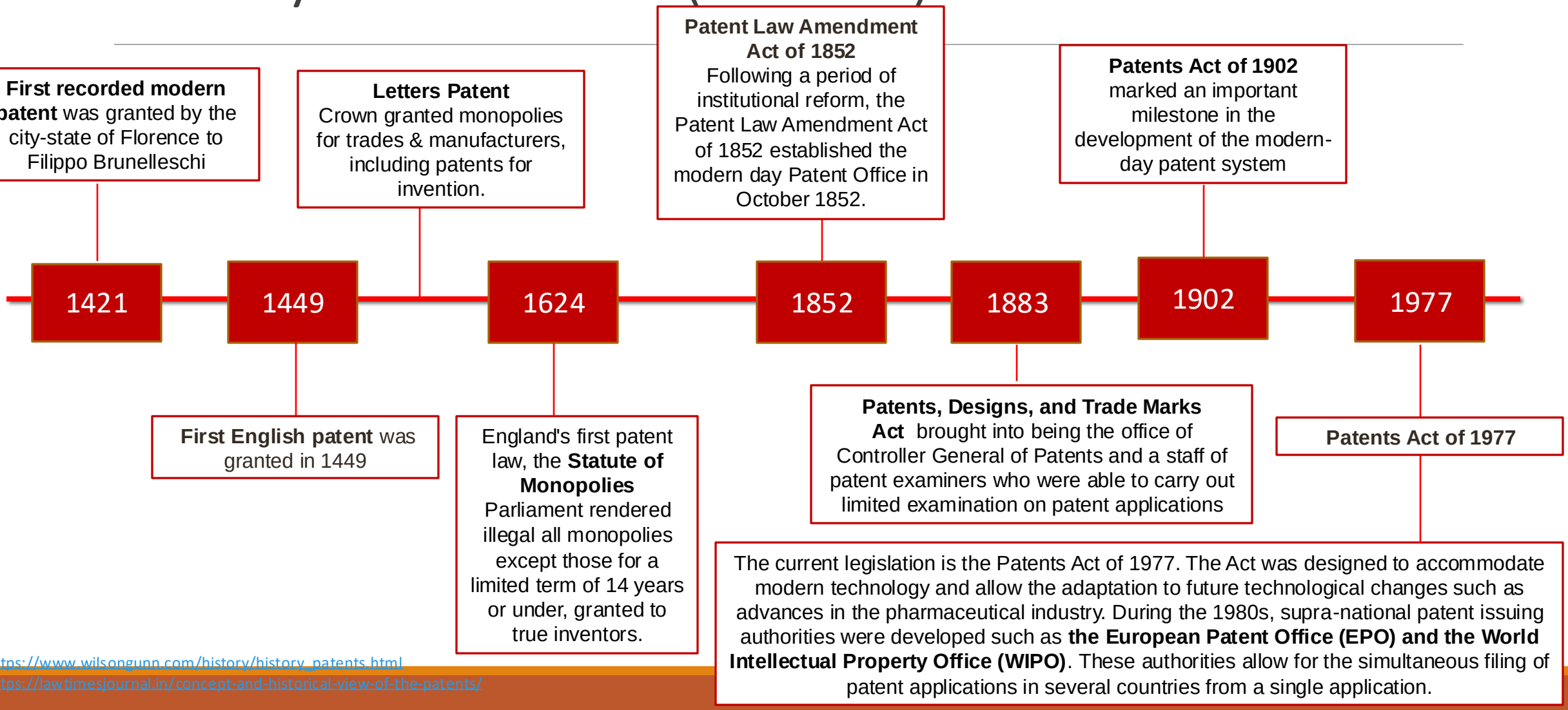
Where did the concept originate?

1421 in Florence, Filippo Brunelleschi, an architect and engineer, was the first person to be granted a patent giving him a three-year monopoly for inventing a means **of conveying heavy loads (specifically, large slabs of marble) up the Arno River for the construction of the Florence cathedral.**



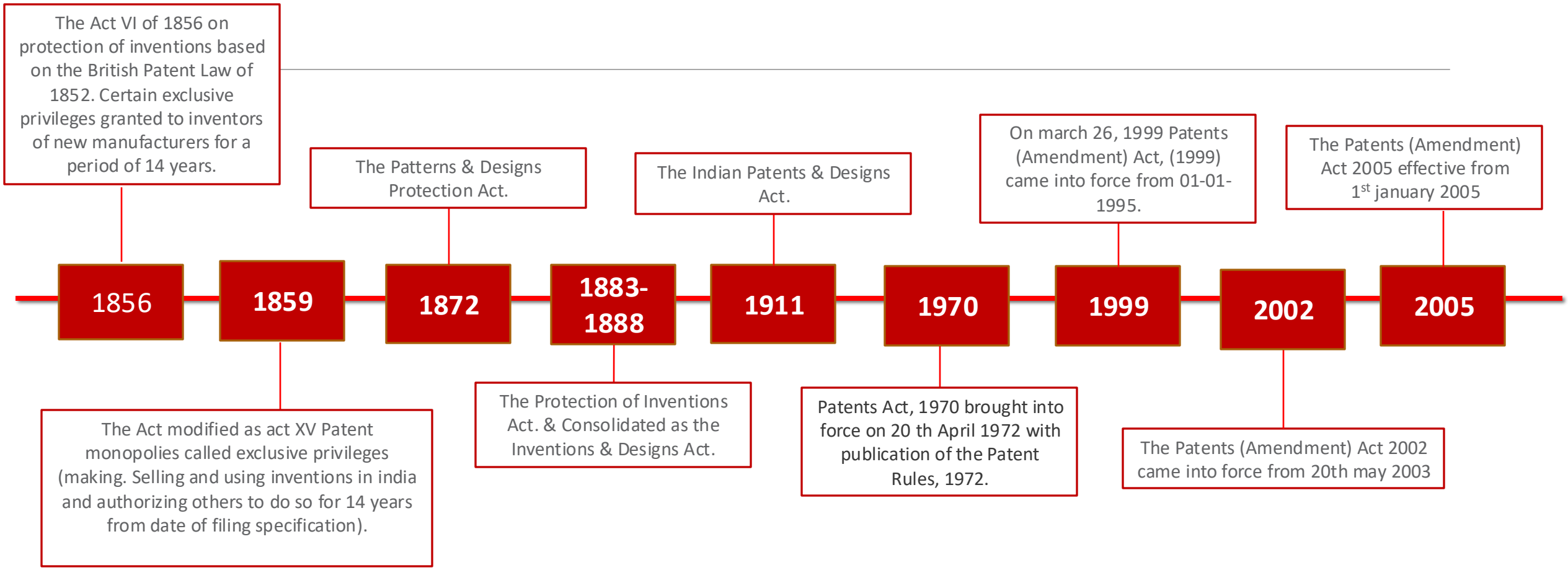
Brunelleschi's 'Il Badalone', taken from the book *De Ingenis* by Taccola

History of Patents (Global)



https://www.wilsongunn.com/history/history_patents.html
https://lawtimesjournal.in/concept-and-historical-view-of-the-patents/

History of Patents (India)



Reference: https://ipindia.gov.in/history-of-indian-patent-system.htm

Patentability

To qualify for a Patent the invention/innovation must meet the following criteria:

It must be **NOVEL**, meaning the invention does not previously exist.

The invention must be **ORIGINAL AND NON-OBVIOUS**, which means that the invention must be a significant improvement to the existing technology, Simple changes to previously known invention do not comprise for patentability

The invention must be **USEFUL**. Legal experts commonly interpret this to mean that no patent will be granted for inventions that only can be used for an illegal or immoral purpose.

Patentability

What can be patented?

- Nearly anything can be patented from
  - **Machines, medicines, computer programs, articles made by machines, compositions, chemicals, biogenetic materials, and processes**

- **Process Patents:** process patent, the patent is granted for a particular manufacturing process, and not for the product itself.

- **Product Patent:** it is an exclusive right given to the original inventor of a product. This means that **no other manufacturer** can provide the same product through the same or any other process.

- Trade-Related Aspects of Intellectual Property Rights (TRIPs) follow the product patent regime.
- India's 1970 Patent Act allowed only process patent before it was amended in 2005 to comply with WTO's TRIPs provisions

Types of Patents

3 Different Types of Patents

Design

Protects the design or exterior look of an invention.

Utility

Protects inventions such as machines, processes, or systems.

Plant

Protects the invention of new plant variants.

Utility Patent

The most common types of patent applications received by the Patent Offices across the world. Such a patent covers various processes, machines, compositions of matter, and manufactures which are novel and useful to humankind in general.

Processes: Processes are defined as any method or act of doing something, typically involving technical or industrial processes.

Compositions of matter: A composition of matter utility patent type refers to the chemical compositions, including a mixture of ingredients and substances or new chemical compounds.

Manufactures: A manufacture is any product that requires undergoing a manufacturing process.

Machine: A machines utility patent includes anything that is primarily regarded as a machine – for instance, computers, refrigerators, air conditioners, etc.

LecturePatent_22\US2704802_microwave patent.pdf

Obtain a utility patent for a new invention, one may also file for this kind of patent if they are making new and useful improvements or enhancement to any existing processes, machines, matter, compositions or manufactures.

Examples: microwave oven, genetically engineered bacteria for cleaning up oil spills, a computerized method of running cash management accounts, and a method for curing rubber.

Example: a laptop is essentially a mobile computer, and is considered an improvement of an existing computer. That said, it should be noted that India does not offer utility patents currently.

As an Indian innovator looking to file a utility patent, you can apply for utility patents in countries such as Australia, UAE, China, Germany, France and several other countries in the European Union.

Design Patent

With reference to patents, the design is the “surface ornamentation” of the object.

The design patent should include details such as the shape and configuration of the object invented or enhanced.

To be eligible to obtain a design patent protection, one must ensure that the product’s design is inseparable from the object.

And while the object and design should be in sync, the design patent is only granted for, and thus only protects, the appearance of the object.

However, if one wishes to protect both the functional and the structural features of the object invented, they can also file for a utility patent.

LecturePatent_22\USD896487_design patent.pdf

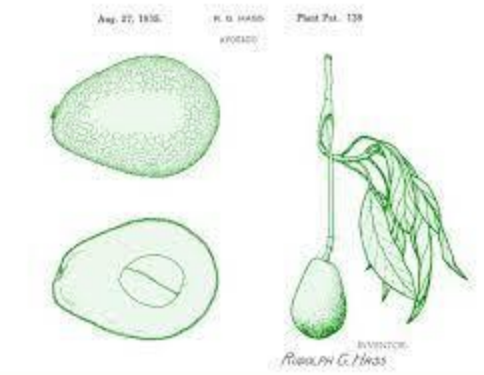
Plant patent

Although, **plant patents are not allowed in India directly**, through patenting the process for genetic modification of the plant, patent holder can indirectly claim patent rights on the GM plant

A person can obtain a plant patent if he/she invents them and asexually reproduces any new type of plant, including cultivated sports, mutants, hybrids combination, and newly found seedlings, other than a tuber produced plant or a plant found in an uncultivated state. It must be sexually reproduced.

Types of patentable plants: Mutant, hybrid, and transformation-aware plants are the most organic types of plants that are eligible for patents. One of two sources—either one that is made or discovered naturally—causes a mutant plant to develop. Bacteria do not qualify as a plant; however, an alga or a macrofungus may.

A plant patent is an intellectual property right that prevents an original or individual plant's key features from being copied, sold, exchanged or used by others. A plant patent can assist an inventor to acquire higher profits during the patent protection period by preventing opponents from using the plant. Tubers such as potatoes are also not eligible for plant patents, or for plants that are unique only because of growing conditions of soil fertility.



Working of a plant patent

A patentable plant can be natural, bred or somatic which is created from non-reproductive cells of the plant. It can be created, invented or discovered, but a plant patent will only be given to a discovered plant if the discovery is done in a cultivated area.

Benefits of Plant Patent

Patenting a plant gives you the right to stop others from manufacturing, selling or importing your plant without your permission.

Additionally, you will get protection for a predetermined period, allowing you to keep competitors at bay. You can then utilize your invention by yourself.

Alternatively, you can license your patent for others to practice it or you can sell it. This can provide important revenue for your business.

Indeed, some businesses exist only to assemble the authorities they have licensed perhaps in sequence with a registered design including trademark.

Patent Application

A patent application is a plea for the grant of a patent for the invention described and claimed by the applicant.

An application for this purpose generally comprises of a

- Description of the invention
- Added with official forms
- Correspondence relevant to the application

Patent applications are of several types, and each one of them caters to a unique purpose.

Types of Patent Applications

1. **Provisional Application**
2. Ordinary or Non-Provisional Application
3. Convention Application
4. PCT International Application
5. PCT National Phase Application
6. Patent of Addition
7. Divisional Application

Provisional Application

Also known as a temporary application, is filed when an invention is under experimentation and isn't finalized.

It is a preliminary application which is filed before **the patent office for claiming priority**, as the Indian Patent Office follows the **'First to File'**

In technical terms, early filing of an invention will prevent the occurrence of any other related inventions from being designated as prior art to the inventor's application.

If an application is supported by a provisional specification, the applicant is necessitated to file a complete specification within **twelve months from the date of filing** a provisional application

Application must include a **brief explanation of the invention** and must be **drafted in a meticulous manner so as to ensure that the priority rights are secured for the invention**.

Types of Patent Applications

1. Provisional Application
2. **Ordinary or Non-Provisional Application**
3. Convention Application
4. PCT International Application
5. PCT National Phase Application
6. Patent of Addition
7. Divisional Application

Ordinary or Non-Provisional Application

This type of application is filed if the applicant doesn't have any priority to claim or if the application is not filed in pursuance of any preceding convention application. It must be supported by a complete specification, the likes of which must depict the invention in detail.

- **Direct Filing** – wherein complete specification is initially filed with the Indian Patent Office without filing any corresponding provisional specification.
- **Subsequent Filing** – wherein complete specification is filed subsequent to the filing of the corresponding provisional specification and claiming priority from the filed provisional specification.

Title

A preamble to the invention.

The technical field of the invention.

Background of the invention.

Objects of the invention.

Statement of the invention.

A brief description of the drawings

A detailed description of the invention.

Claims

Abstract

The main differences between provisional and non-provisional patent applications are:

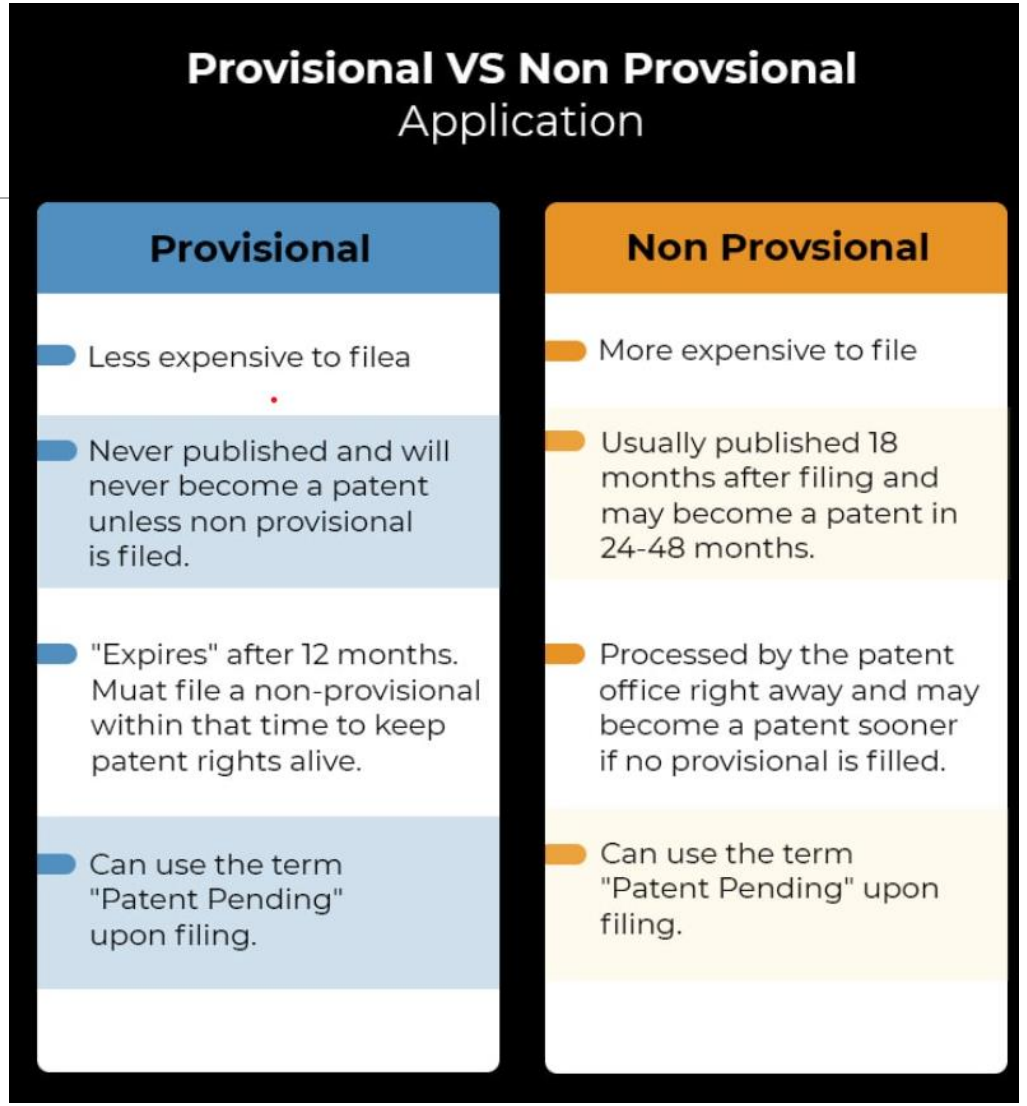
•Purpose
A provisional patent application is a preliminary step to establish a US filing date for an invention, while a non-provisional patent application is the standard route to get a patent from the USPTO.

•Review
A provisional application is not reviewed, while a non-provisional application is reviewed by a patent examiner.

•Duration
A provisional application is valid for 12 months, while a non-provisional patent can provide up to 20 years of protection.

•Format
A provisional application has fewer formal requirements, while a non-provisional application must meet strict USPTO guidelines.

•Claims
A provisional application does not require claims, while a non-provisional application must include at least one claim.



- Cost
  A provisional application is quick and inexpensive, while a non-provisional application can cost at least $6,600.

- Route
  A provisional application is a two-step process, while a non-provisional application is a one-step process.

- Flexibility
  A provisional application can help inventors anticipate different ways of practicing their invention, which can help them write a good non-provisional patent.

- Market testing
  Inventors can conduct market testing during the provisional period to identify and address patent infringement issues.

Types of Patent Applications

1. Provisional Application
2. Ordinary or Non-Provisional Application
3. **Convention Application**
4. PCT International Application
5. PCT National Phase Application
6. Patent of Addition
7. Divisional Application

Convention Application

A convention application entitles the applicant to claim priority in all the convention countries

A convention application is filed for claiming a priority date based on the same or substantially similar application filed in any of the convention countries.

To avail a status of convention, an applicant is required to file an application in the Indian Patent Office **within a year from the date of the initial filing of a similar application in the convention country**.

Types of Patent Applications

1. Provisional Application
2. Ordinary or Non-Provisional Application
3. Convention Application
4. **PCT International Application**
5. PCT National Phase Application
6. Patent of Addition
7. Divisional Application

PCT International Application

PCT Application is an international application.

Though the application does not provide for the grant of an international patent, it paves the way for a streamlined patent application process in many countries at one go.

It is governed by the **Patent Corporation Treaty** and can be validated in up to **142 countries**.

Filing this application would protect an invention from being replicated in these designated countries.

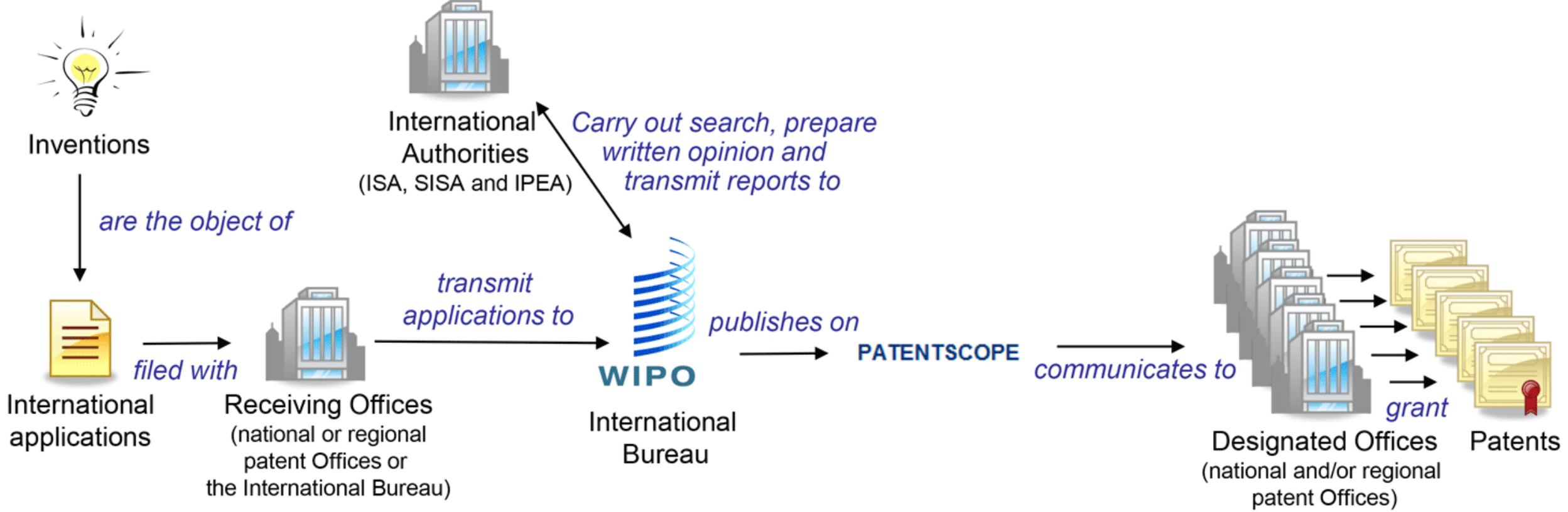
It renders a time-frame of **30-31 months to enter into various countries** from the international filing date or the priority date, thereby affording the applicant with additional time to access the viability of the invention.

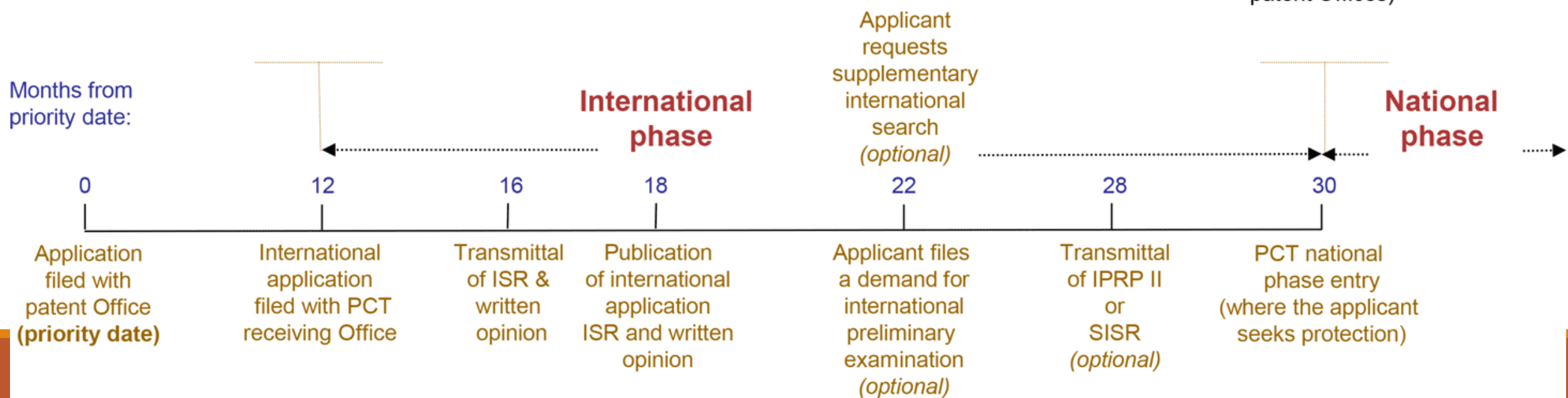
Apart from this, it renders the following other benefits:

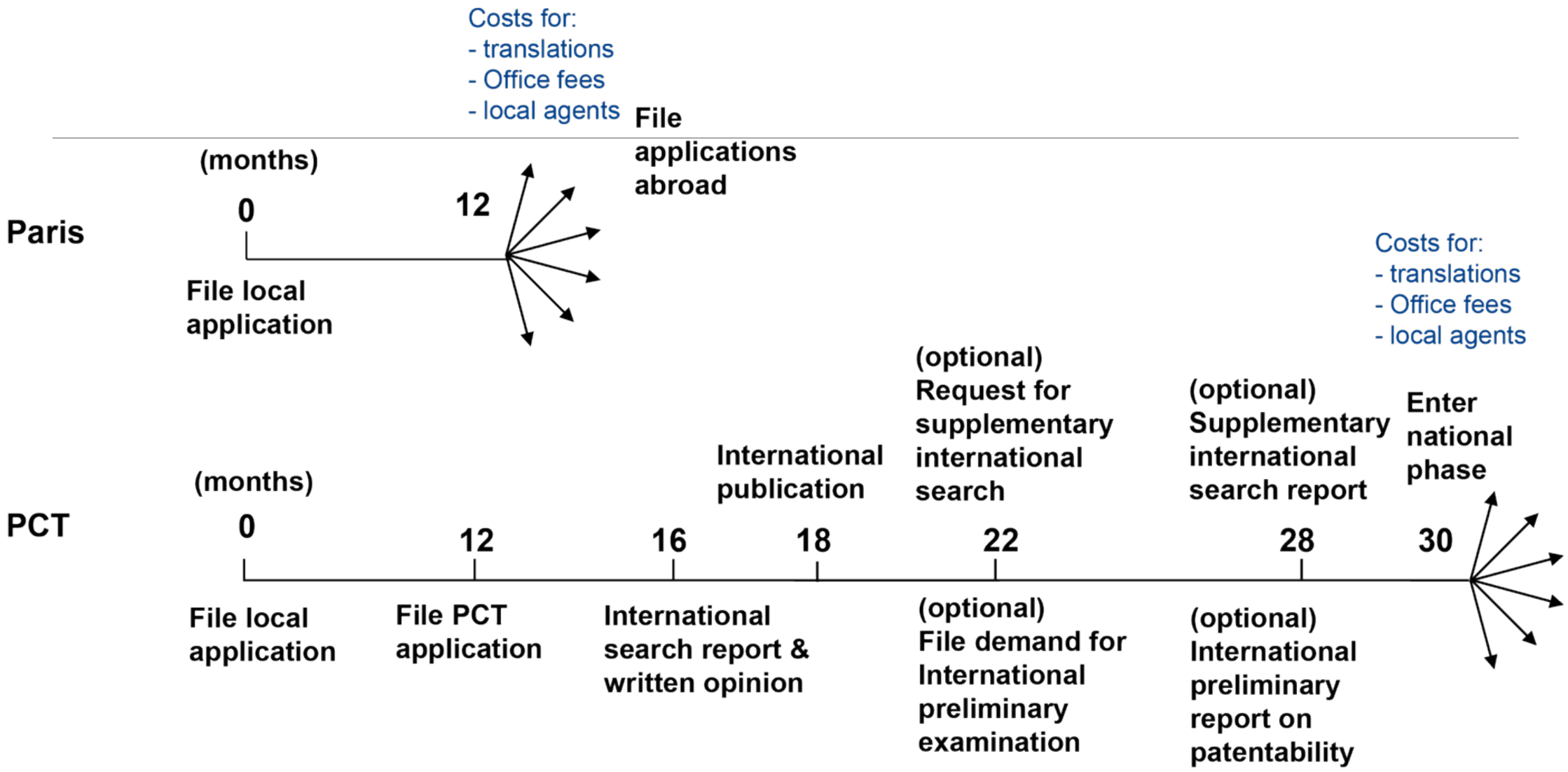
- Provides an **International Search Report** citing prior art, which discloses whether or not the invention is novel.
- It provides an option for **requesting an International Preliminary Examination Report,** which is a report that contains an option on the patentability of the invention.
- Facilitates the applicant to make more informed choices early in the patent process, as he/she can amend the application to deal with any conflicting material.
- Also, the applicant would receive a glimpse of the patentability of the invention before incurring charges for filing and prosecuting the application in each country.

An applicant from India can file this application at:

- The **Indian Patent Office (IPO),** which acts as the receiving office.
- The **International Bureau of WIPO**, either after availing a foreign filing permit from IPO or **after six weeks and 12 months of filing an application in India**.


Inventions
are the object of
International applications
filed with
Receiving Offices
(national or regional patent Offices or the International Bureau)
transmit applications to
International Authorities
(ISA, SISA and IPEA)
Carry out search, prepare written opinion and transmit reports to
WIPO
International Bureau
publishes on
PATENTSCOPE
communicates to
Designated Offices
(national and/or regional patent Offices)
grant
Patents


Months from priority date:
International phase
Applicant requests supplementary international search (optional)
National phase
0
12
16
18
22
28
30
Application filed with patent Office (priority date)
International application filed with PCT receiving Office
Transmittal of ISR & written opinion
Publication of international application ISR and written opinion
Applicant files a demand for international preliminary examination (optional)
Transmittal of IPRP II or SISR (optional)
PCT national phase entry (where the applicant seeks protection)


Costs for:
- translations
- Office fees
- local agents
File applications abroad
(months)
Paris
0
12
File local application
Costs for:
- translations
- Office fees
- local agents
(optional) Request for supplementary international search
(optional) Supplementary international search report
Enter national phase
International publication
(months)
PCT
0
12
16
18
22
28
30
File local application
File PCT application
International search report & written opinion
(optional) File demand for International preliminary examination
(optional) International preliminary report on patentability

Types of Patent Applications

1. Provisional Application
2. Ordinary or Non-Provisional Application
3. Convention Application
4. PCT International Application
5. **PCT National Phase Application**
6. Patent of Addition
7. Divisional Application

PCT National Phase Application

a one-time submission to apply for a patent through member states of the Patent Cooperation Treaty (PCT).

It is considered essential for an applicant to file a **national phase** application in each of the country wherein they would like to protect their invention

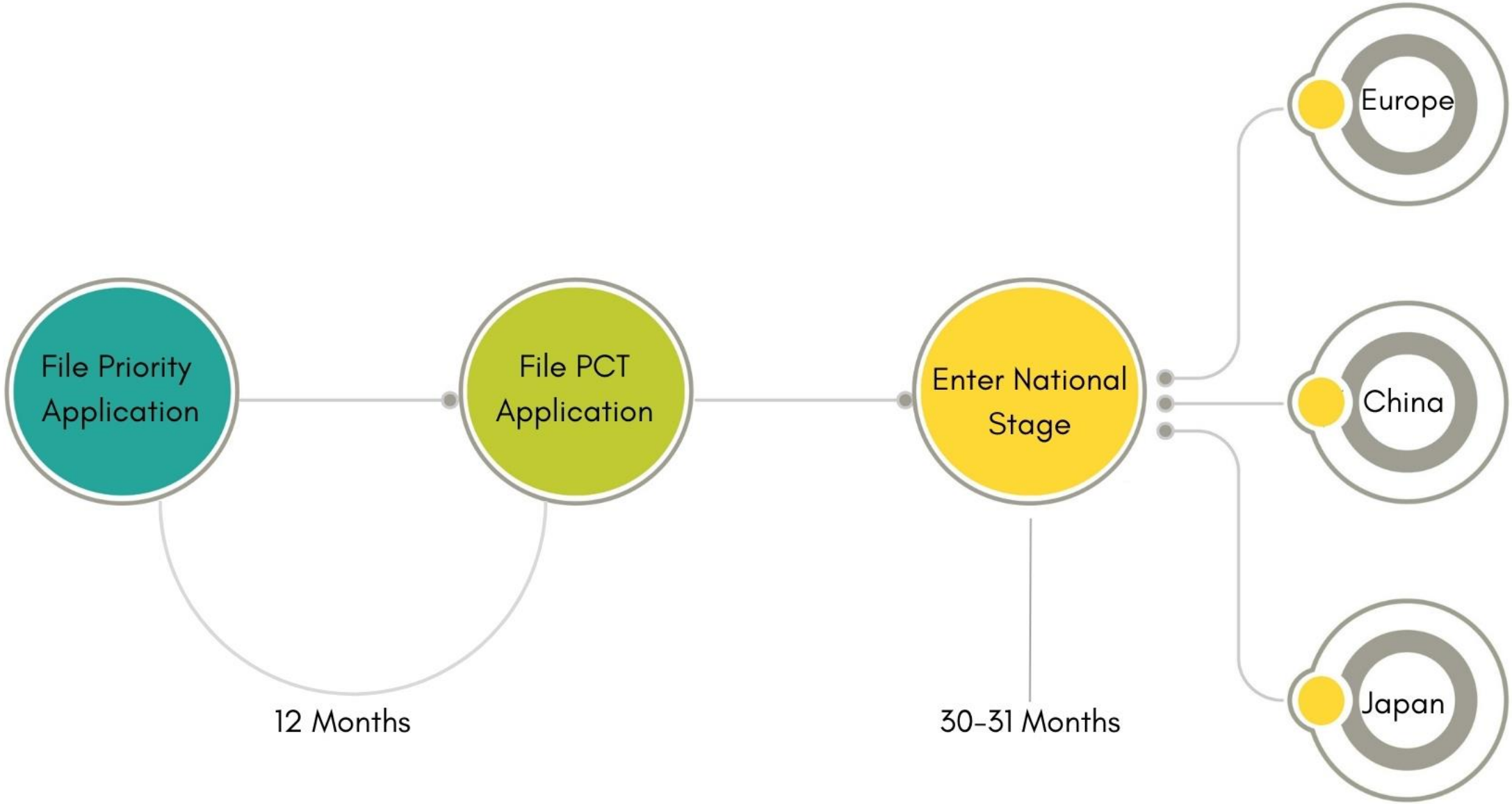
The time-frame for filing the same is scheduled within 31 months from the priority date or the international filing date

Time-limit could be enhanced through National Laws by each member country.

The title, description, abstract and claims as filed in the International Application under PCT shall be considered as the Complete Specification

The regulations applicable for filing and processing an ordinary patent application is also applied here.

PCT - National Phase Entry



Difference between PCT International & National Phase

The main difference between the international and national phases of the Patent Cooperation Treaty (PCT) is that the international phase involves filing a single application, while the national phase involves filing individual applications in each country:

International phase

The applicant files a single international application that can be valid in up to 157 countries. During this phase, the application is searched, and the applicant receives an opinion on patentability. The international phase gives the applicant time to research, evaluate options, and check the market.

National phase

The applicant files individual applications in each country where they want patent protection. The national phase takes place before the designated patent offices, which are responsible for granting patents.

The PCT is recommended if you need to seek patent protection in multiple countries, need more time to decide where to seek protection, or need more time to get funding.

Types of Patent Applications

1. Provisional Application
2. Ordinary or Non-Provisional Application
3. Convention Application
4. PCT International Application
5. PCT National Phase Application
6. **Patent of Addition**
7. Divisional Application

Patent of Addition

This application must be filed if the applicant discovers that he has come across an invention which is a slight modification of the invention which has already been applied for or patented by the applicant.

It can only be filed if the invention doesn't involve a substantial inventive step.

A patent of addition is only granted after the grant of the parent patent, and hence no separate renewal fee should be remitted during the term of the main patent.

Shall be granted for a term equal to that of the patent for the main invention, and therefore expires along with the main patent.

The date of filing here shall be the date on which the application for patent of addition has been filed.

Example

Original Patent Application

Patent Number: 123456

Title: System for Detecting and Preventing Cyber Attacks

Summary: A system for detecting and preventing cyber attacks by analyzing network traffic patterns and identifying potential threats.

Claims:

1. A system for detecting and preventing cyber attacks, comprising:

a. A network traffic monitoring module that collects and analyzes network traffic data;

b. A threat detection module that identifies potential threats based on the analyzed network traffic data;

c. A prevention module that takes action to prevent or mitigate the detected threats;

d. A database that stores information about known threats and vulnerabilities.

Patent Addition (Divisional Application)

Patent Number: 789012 (Divisional of 123456)

Title: System for Detecting and Preventing Cyber Attacks - Additional Features

Summary: An addition to the original system for detecting and preventing cyber attacks, including additional features for advanced threat analysis and enhanced prevention capabilities.

Claims:

1. The system of claim 1, wherein the threat detection module includes additional features for:

a. Analyzing network traffic patterns to detect anomalies and identify potential threats;

b. Using machine learning algorithms to improve threat detection accuracy;

c. Integrating with other security systems to provide enhanced threat analysis.

Types of Patent Applications

1. Provisional Application
2. Ordinary or Non-Provisional Application
3. Convention Application
4. PCT International Application
5. PCT National Phase Application
6. Patent of Addition
7. **Divisional Application**

Divisional Application

An applicant may choose to divide an application and furnish **two or more applications** if a particular application claims for more than one invention.

The priority date for these applications is similar to that of the parent application.

Example

Parent Patent:

Title: "Smartphone App for Ordering Food"

Description: A smartphone app that allows users to order food from restaurants and have it delivered to their doorstep.

Claims:

A smartphone app for ordering food from restaurants, the app comprising: a user interface for selecting food items and restaurants; a payment processing system for handling payment transactions; and a delivery system for coordinating delivery of the food items to the user.

The app of claim 1, wherein the user interface includes a feature for allowing users to rate and review restaurants.

The app of claim 1, wherein the payment processing system is integrated with a payment gateway to process credit card transactions.

Divisional Patent 1:

Title: "Smartphone App for Ordering Food - User Interface"

Description: An improvement to the smartphone app that enhances the user interface for selecting food items and restaurants.

Claims:

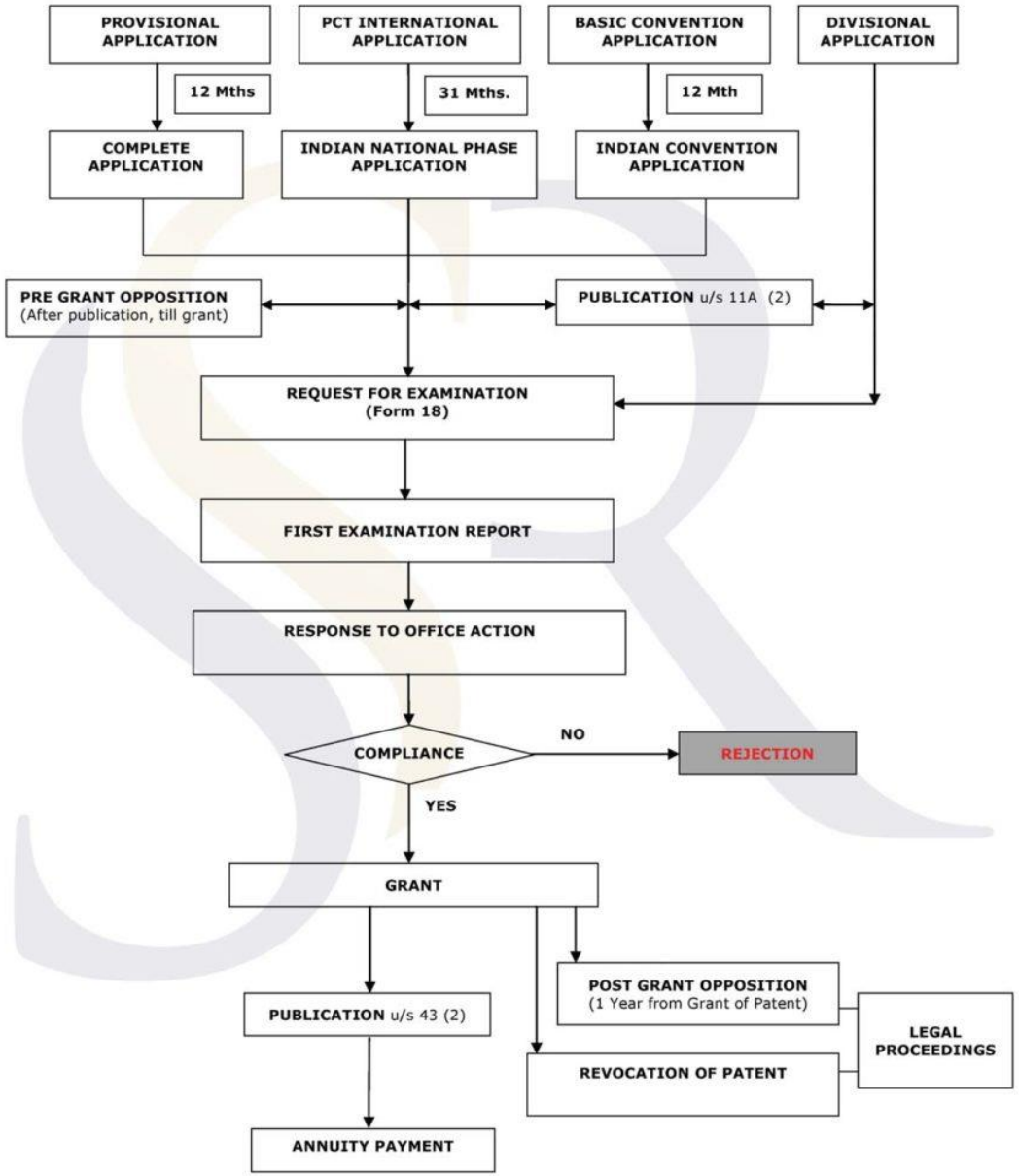
A user interface for selecting food items and restaurants, comprising: a menu listing for displaying food items offered by restaurants; a search bar for searching for specific food items or restaurants; and a sorting feature for sorting menu items by price, rating, or other criteria.

The user interface of claim 1, wherein the menu listing is organized by categories such as cuisine type or dietary restrictions.

- Divisional Patent 2:
- Title: "Smartphone App for Ordering Food - Delivery System"
- Description: An improvement to the smartphone app that enhances the delivery system for coordinating delivery of food items to the user.
- Claims:
- A delivery system for coordinating delivery of food items to a user, comprising: a database for storing information about available delivery options, such as delivery times and locations; a routing algorithm for determining the most efficient route for delivery; and a notification system for sending updates to the user about the status of their delivery.
- The delivery system of claim 1, wherein the database is updated in real-time to reflect changes in available delivery options.

Patent Process

- Stages from Filing to Grant
- Filling
  - Once filed it is published 18 months after the date of filing or date of priority
- Publication
- Examination
  - This is not initiated unless a request has been filed with the PO
- Grant
  - If the patent is found in order of grant, the same is expedited with the seal of the PO & published in the Patent Journal & Letters Patent & granted for a term of 20 yrs
- Renewal.



Stages of the Patent Application Process

Stage 1 Beginning the process

Your patent attorney must provide documentation consisting of:

- A request for a patent.
- Details of the applicant (you).
- A description of the invention.
- Claims.
- Drawings (if any).
- An abstract.

A fee must also be paid. In order to avoid delay, it is vital that all documentation conforms in every detail to official requirements. For your patent attorney to prepare all the information about your invention, he or she will obviously need to work closely with you. **Do not assume that you know best because it is your invention**. You must trust the skill and judgement of your patent attorney, as patenting involves a complex mix of law and technology. The claims in particular need to be drafted with skill, as they are the most important aspect of a patent.

Stage 2 Filing date and initial examination

If your documentation appears correct, your application is given a **filing date** - also known as your **priority date**. After filing there is a **formalities examination** to ensure that your documentation is correct and complete.

At any time in the next 12 months you can file for patent protection in other countries and have those later filings treated as if they had been filed on your priority date. In practice, this gives you a year to decide how many countries you wish to include in your patent protection.

Stage 3 Search

A **search report** is sent to you, listing and including copies of all prior art documents found by an experienced examiner and regarded as relevant to your invention. The search is based mainly on your claims for novelty, but your description and any drawings will also be taken into account. The report will often include an initial opinion on the patentability of your invention.

Stage 4 Publication

Your application is **published** 18 months after the filing date. Your invention will appear in databases accessible to other people around the world. It will act as **prior art** against any future patent applications from other inventors or companies for similar inventions.

You then have six further months to make two decisions:

•Do you want to continue with your application? You indicate ‘yes' by requesting a more thorough (‘substantive') examination.

•Which countries do you want to include (‘designate') in your patent protection? Designation fees must be paid.

After your patent is granted, you may claim damages for infringements originating as far back as the publication date of your application. However, to enjoy this right in some countries it may be necessary to file a translation of your claims with their national IP office and for them to publish the translated claims.

Stage 5 Substantive examination

If you request **substantive examination**, the EPO has to decide whether your invention **and** your application meet the requirements of the European Patent Convention. For maximum objectivity there are usually three EPO examiners, one of whom maintains contact with your patent attorney. This stage will often involve dialogue between the examiners and your patent attorney, which may result in the re-drafting of key parts of your application. Your patent attorney will defend your application, and this is one more reason why it is essential to have professional representation.

Stage 6 Decision to grant a patent

If the examiners decide to grant a patent, and all fees have been paid and any claims translations filed, the decision is reported in the European Patent Bulletin. The **decision to grant** takes effect on the date of publication.

Stage 7 Validation

What you have now got is a ‘bundle' of individual national patents. After the EPO decision to grant is published, your patent has to be **validated** in each designated state within a specific time limit. If this is not done, your patent may not be enforceable in that state. In some states, validation may include having to file (and pay for) a translation of the whole patent, or just a translation of the granted claims.

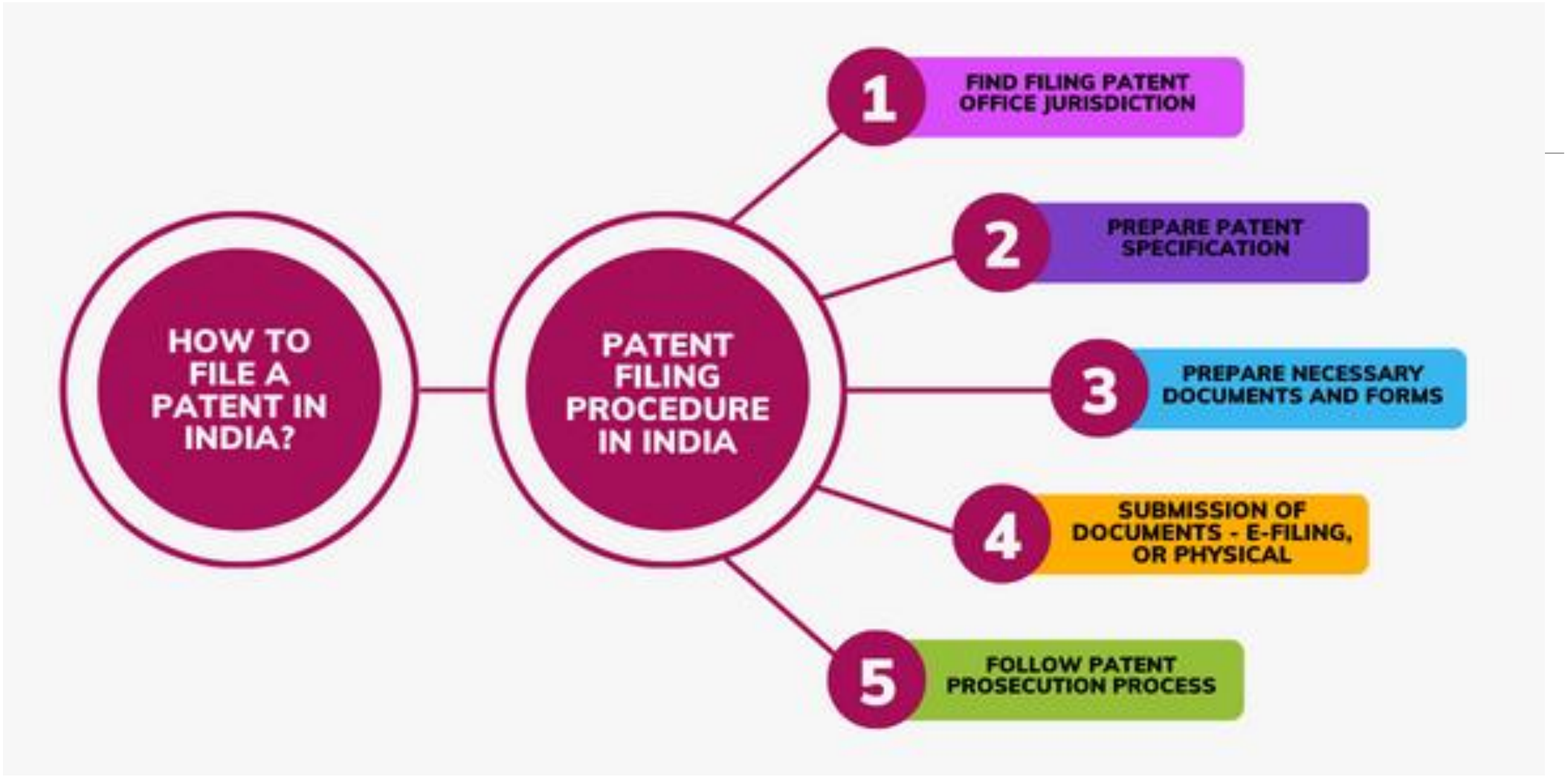
Stage 8 Opposition

A granted patent may be **opposed** by third parties - usually the applicant's competitors - if they believe it should not have been granted. After the grant is reported in the European Patent Bulletin they have nine months in which to file notice of opposition. The most common charge is that the invention is not novel or lacks an inventive step. The case will be examined by an EPO team, again of three examiners.

Opposition is the last chance to attack a European patent **as a single entity in a single forum**. Later, the patent can only be challenged in national courts and a ruling in one country has no effect on the patents for the same invention in other countries. This gives competitors a strong incentive to challenge an invention during the opposition period, as challenging patents in separate national courts can be much more expensive.

Stage 9 Appeal

All EPO decisions are open to appeal.
Responsibility for decisions on appeals is taken by independent boards of appeal.


HOW TO FILE A PATENT IN INDIA?
PATENT FILING PROCEDURE IN INDIA
1
FIND FILING PATENT OFFICE JURISDICTION
2
PREPARE PATENT SPECIFICATION
3
PREPARE NECESSARY DOCUMENTS AND FORMS
4
SUBMISSION OF DOCUMENTS - E-FILING, OR PHYSICAL
5
FOLLOW PATENT PROSECUTION PROCESS

Reading patents

Indian system

12 characters fixed length numeric standard
Patent Application format

[LecturePatent_22\IN202041016724A_indiapatent.pdf]

New Numbering Format for Patent Applications in India

Format: YYYYJTNNNNNN

Where,

- "YYYY" denotes four digit fixed length "Year of filing"
- "J" denotes fixed length single digit "Jurisdiction" in numerals (1 for Delhi, 2 Mumbai, 3 for Kolkata, 4 for Chennai)
- "T" denotes fixed length single digit "Type of Application" in numerals:
    - 1 for Ordinary
    - 2 for Ordinary-Divisional
    - 3 for Ordinary-Patent of Addition
    - 4 for Convention
    - 5 for Convention-Divisional
    - 6 for Convention-Patent of Addition
    - 7 for PCT NP
    - 8 for PCT NP-Divisional
    - 9 for PCT NP-Patent of Addition
- "NNNNNN" denotes 6 digits fixed length common continuous running serial number applicable for all Patent Offices in India

Thus, the first application (Ordinary) filed in Delhi in the year 2016 would be numbered as 201611000001. If second application is filed from Mumbai as "Convention" application in the year 2016, it would be numbered as 201624000002.

The "NNNNNN" series of applications shall be unique and sequentially incremented for all the four patent offices in the order of their filing. Date of Application shall accompany the Patent application number in the following format: YYYY/MM/DD.

WIPO ST.16 Kind Codes	Kind of document	Comments
A	Patent	Kind code replaced by B1 or B2
P	Plant Patent	Kind code replaced by P2 or P3
B1, B2, B3	Reexamination Certificate	Kind code replaced by C1, C2, C3

(12) PATENT APPLICATION PUBLICATION (21) Application No.202041016724 A

(19) INDIA

(22) Date of filing of Application :18/04/2020 (43) Publication Date : 05/06/2020

(54) Title of the invention : METHODS AND COMPOSITIONS FOR INFECTIOUS RNA, CDNA, AND MRNA OF SARS CORONAVIRUS.

(51) International classification	:C12Q0001700000, A61K0039000000, C07K0014005000, A61K0039215000, C12N0007000000
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)DR. SUDHA ARVIND (ASSOCIATE PROFESSOR)
Address of Applicant :CMR TECHNICAL CAMPUS, KANDLAKOYA, HYDERABAD -501401, TELANGANA, INDIA. Email: sudharvind99@gmail.com Telangana India
2)DR. DEVIKA S.V. (PROFESSOR IN ECE)
3)DR. C.M. JOSHI (DIRECTOR)
4)PROF. (DR.) VIPIN JAIN (PRINCIPAL/ DIRECTOR)
5)PROF. DR. YASHPAL SINGH (DIRECTOR & PROFESSOR)
6)PROF.(DR.) VANDANA SINGH (FOUNDER ADBIGA INNOVATION)

(72)**Name of Inventor :**
1)DR. SUDHA ARVIND (ASSOCIATE PROFESSOR)
2)DR. DEVIKA S.V. (PROFESSOR IN ECE)
3)DR. C.M. JOSHI (DIRECTOR)
4)PROF. (DR.) VIPIN JAIN (PRINCIPAL/ DIRECTOR)
5)PROF. DR. YASHPAL SINGH (DIRECTOR & PROFESSOR)
6)PROF.(DR.) VANDANA SINGH (FOUNDER ADBIGA INNOVATION)

WIPO ST.16 Kind Codes	Kind of document	Comments
A1	Patent Application Publication	Pre-grant publication available March 2001
A2	Patent Application Publication (Republication)	Pre-grant publication available March 2001
A9	Patent Application Publication (Corrected Publication)	Pre-grant publication available March 2001
B1	Patent	No previously published pre-grant publication
B2	Patent	Having a previously published pre-grant publication and available March 2001
C1, C2, C3	Reexamination Certificate	Previously used codes B1 and B2 are now used for granted Patents
E	Reissue Patent	No change
H	Statutory Invention Registration (SIR)	No change
P1	Plant Patent Application Publication	Pre-grant publication available March 2001
P2	Plant Patent	No previously published pre-grant publication
P3	Plant Patent	Having a previously published pre-grant publication and available March 2001
P4	Plant Patent Application Publication (Republication)	Pre-grant publication available after March 2001
P9	Plant Patent Application Publication (Corrected Publication)	Pre-grant publication available March 2001
S	Design Patent	No change


US009776893B2

(12) **United States Patent**
Wiemers et al.

(10) **Patent No.: US 9,776,893 B2**
(45) **Date of Patent: *Oct. 3, 2017**

(54) **MOBILE STATION FOR DIAGNOSING AND MODELING SITE SPECIFIC EFFLUENT TREATMENT FACILITY REQUIREMENTS**

(71) Applicant: **Rockwater Resource, LLC**, Denver, CO (US)

(72) Inventors: **Reginald A. Wiemers**, Littleton, CO (US); **Robert Kohlheb**, Csersegtomaj (HU); **Bardia B. Khalili**, Denver, CO (US); **Gyorgy Lipovszki**, Budapest (HU); **Peter H. Zahn**, Littleton, CO (US)

(73) Assignee: **Rockwater Resource, LLC**, Denver, CO (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 372 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/120,985**

(22) Filed: **Jul. 18, 2014**

(65) **Prior Publication Data**

(58) **Field of Classification Search**
CPC B01D 61/02; B01D 61/04; B01D 61/12; B01D 61/16; B01D 61/22; B01D 61/58;
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,383,920 A 5/1983 Muller et al.
4,999,116 A 3/1991 Bowers
(Continued)

FOREIGN PATENT DOCUMENTS

GB 2284906 6/1995

OTHER PUBLICATIONS

Publication: Chao Chen et al, "Comparison of seven kinds of drinking water treatment processes to enhance organic material removal: A pilot test", Science of the Total Environment, vol. 382, pp. 93-102, Published May 23, 2007.*
(Continued)

Primary Examiner — Joseph Drodge
(74) *Attorney, Agent, or Firm* — Harold A. Burdick

Reading a US patent

Issued patents generally begin with "US." That is followed by the one-to-seven-digit patent number.

Patent Database

- Patent Public Search
- USPTO Patent Full-Text and Image Database (PatFT)
- USPTO Patent Application Full-Text and Image Database (AppFT)
- Global Dossier
- Patent Application Information Retrieval (PAIR)
- Public Search Facility
- Patent and Trademark Resource Centers (PTRCs)
- Patent Official Gazette
- Common Citation Document (CCD)
- Search International Patent Offices
- Search Published Sequences
- Patent Assignment Search
- Patent Examination Data System (PEDS)


PATENTED