FINDING THE HIDDEN TREASURE : A STUDY ON PATENT SEARCHING

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1. INTRODUCTION

What is a patent ?

A patent is defined as a grant by the sovereign or state to an inventor or to his assignee giving exclusive rights to make use, exercise and vend an invention for a limited period in exchange for disclosing it in a patent specification. The disclosure should be such that a person trained in the art (i.e. in that field or discipline / subject should be able to reproduce the invention.

The specification is structured in a specified format. When the patent is granted, the owner gets the right exclude others using the invention.

Patents reveal solutions to technical problems, and they represent an inexhaustible source of information: More than 80 procent of all technical knowledge is described in patent literature.[1]

There are over 30 million patents in the world today, and each year an average of one million new specifications are filed. This makes patents the largest single body of technological information available anywhere[2]

Patents represent a resource for both legal (ownership, inventors, reassignments, claims, etc.) and technology-rich prior art (background, specifications, etc.). Patents are accompanied by detailed textual descriptions of the inventions, and often, by drawings of electrical, mechanical, or chemical (Markush) structures.

Because of the deluge of information from varity of sources on internet and the complexity of the subject matter of a typical patent document , finding the exct information is very difficult.

2. METHODOLGY

Global volume of technical information being generated and documented is growing at a very rapid rate. There are variety of information sources with different features and tools. However One cannot rely on any single source for all the information needs. This assignment is aimed at providing a brief overview of all the tools, sources used in patent searching.

Information is collected from primary and secondary sources like Internet patents related websites, newsletters and patent offices websites and books on this topic. Various Internet databases are the most preferred sources for patent searching. All the major service providers are mentioned in brief and notes have been provided for some special tools.

At the end glossary of terms often used for patent searching is given.

3. CONTENTS OF A TYPICAL PATENT

A typical document cotais all the disclosure iformatio uder variety of titles .all the cotets of a typical patet documet ca eclassified I to following three road areas [3].

Bibliographic :

- Title
- Inventor
- Applicant
- Application no
- Serial no of patent
- Date of application
- Priority date
- Country of publication
- Priority number
- Priority country
- References cited by the examiner
- Abstract
- National patent classification
- International patent classification

Technical:

- Object of invention
- The problem one is getting to solve
- Prior art
- How others have approached the issue or related issues
- References are made to the entire " public knowledge domain "including patents, scientific literature, prior use, sale publicity brochures, news items etc
- Disclose/ describe invention. Approach and what is the solution
- Examples with supporting data….
- Examples to illustrate working of the invention so that anyone trained in the art can repeat the invention
- Claims defining the monopoly
- Define the protection boundaries of the invention

Legal:

- Deal with ownership issues
- Assignments

- Reassignments
- Licensing validity
- Expiry
- Geographical coverage of protection
- Overlapping claims

3. PHASES IN THE PATENT PROCESS:[4]

A typical patent filing process involves following stages . at every stage ,there is some new details are incorporated the bibliographic content . all these additions and remarks in the bibliographic or front part of the patent application reflect the legal status and position of the application in the entire process. For searching a patent document with all its history and relevant details it is necessary to understand these phases

Phase 1: The inventor or a company has an idea for a new technology. A prior art search is completed to make sure the technology passes the tests of novelty, usefulness and nonobviousness.

Phase 2: The patent application is filed and a filing date and application number (also called a *serial number* in the U.S. or a *filing number* elsewhere) are assigned. Depending upon the intent of the inventor there are many options for filing a patent application.patent filing can be through a PCT mode at one of the receiving offices or it can be for a particular country only.

Phase 3: The application is reviewed by the examiner who cites reasons to accept or reject the application. The applicant shows evidence in support. This is called the prosecution. Prior to November 29, 2000, in the U.S., patent applications were held in secrecy until they were granted(slow publishing countries). In some other countries the patent application was published (fast publishing countries).

Phase 4: If the application is successful, the invention is patented and a patent number is assigned.

Phase 5: Often a patent is reexamined, opposed, or infringed upon by a company; therefore, the legal status of a patent may change. Depending upon the mode of filing the patent application and the country's procedure the time required to complete these various phases vary from place to place .

Depending upon the time required to publish a patent document from its filing, all the countries can be broadly divided into following two categories.

Fast-publishing countries publish applications within 18 months of the application date, before they issue the patent. Germany, for example, is a fast-publishing country. The U.S. is currently a fast publishing country.

Slow-publishing countries, on the other hand, do not publish any information about the patent until it is granted.

Thus from country country , time timeline to over the entire process varies.

http://training.dialog.com/sem_info/courses/pdf_sem/gsm-03-30040patbasics_dweb.pdf

4. PATENT SEARCH OBJECTIVES

Business Perspective

- Gain competitive intelligence
- Monitor industry trends
- Uncover new markets and market opportunities
- Identify licensing opportunities
- Make build or buy decisions
- Find solutions to technological problems
- Research merger or acquisition candidates
- Explore investment opportunities
- Discover top inventors for recruiting purposes
- Protect your current intellectual assets

Legal and Technical Perspective

- researchers can easily understand the state-of-the-art tech. & so minimize researching time;
- product developers can be free from anticipated infringement suits;
- inventors can modify their ideas to be suitable for the patentability criteria;
- tentative applicants can determine whether they will apply or will save application fee;
- examiners can determine patentability of applications; and
- patentees can assess the strength of their patents.

5. TYPES OF PATENT SEARCHES

Search is search. Basically search is all the same in the sense that searchers are trying to find closely related documents. However, to make it effective, the ways of approach must be different from each other according to the aims of search. Searches can be classified, according to their aims, as follows:[5]

A preliminary search can provide a good estimate as to how strong a patent the inventor can hope to get. Patents are issued for things that are new and that are not obvious improvements on something else that is already known. A good search usually provides the basis for defining just what is new and "non-obvious" about an invention — and that's the only part you can hope to protect anyway.

Bibliographic Searches

This type of search is the easiest and the quickest because the searcher already has a patent number or an inventor's name. The point of this type of search is to find out what was covered by a specific patent number or to find out what patents a particular inventor has to his or her credit. Bibliographic searches can be done as a part of historical, biographical, archaeological, or product research.

Free online Tools: Refer to Information Resources

Citation searches Pre-Application Searches (PAS)

At first, an invention is just an idea. Many details are not even known or recognized as relevant parts. A novelty search based on a vague idea can only result in a vague picture of the prior art.

A preliminary search can provide a good estimate as to how strong a patent the inventor can hope to get. Patents are issued for things that are new and that are not obvious improvements on something else that is already known.

A good search usually provides the basis for defining just what is new and “non-obvious” about an invention — and that’s the only part you can hope to protect anyway.

The patent application process is difficult, time consuming and expensive; therefore, the inventor should conduct a “Pre-Application Search” (PAS) before filling a patent application.

In this search, the inventor should look for any printed publications, public knowledge, or patents already issued in his country or a foreign country that may relate to the particular invention.

State-of-the-Art Searches

This kind of search, also referred to as “Informative Search,” is made to determine the general state-of-the-art for the solution of a given technical problem as background information for R&D activities and in order to know what patent publications already exist in the field of the technology or research.

Further reasons for undertaking this kind of search could be the wish to identify alternative technologies which may replace known technology or to evaluate a specific technology which is being offered for licensing or which is being considered for acquisition.

State-of-the-art searches are especially useful for technology development or technology transfer purposes.

Novelty Searches

The objective of a “Novelty Search” is to determine the novelty or lack of novelty of the invention claimed in a patent application or a patent already granted, or of an invention for which no application has yet been filed. The aim of the search is to discover relevant prior art.

An early novelty patent search is usually discouraging. Normally, the basic inventive ideas are formulated in such an unspecified way that many publications will apply to this broad description.

Dependent on the outcome of the novelty search, the next decision will be whether to stop or to go ahead in developing the invention. If nothing of relevance was found, it is easy and you should go ahead. The decision becomes more difficult if one or several pertinent documents have been found.

A key part of the patent application process is examining prior art. Each of the world’s patent offices examines a filed application based upon standards similar to the utility, novelty and non-obviousness requirements at the U.S. Patent and Trademark Office (USPTO).

In the European Patent Office (EPO), for example, this examination is done in two phases.

A search is first done in order to establish the state of the art with respect to the invention. Second, the inventive step (novelty) and industrial applicability (utility) are examined. These two steps are combined in the USPTO and in Japan. .

The core of the examination process is a search of the prior art in both patent and technical literature.

The examiners at the U.S. Patent and Trademark Office search other publications, such as journals, conference proceedings, and the business press for disclosure of prior art. The examiners are divided into Art Units, each of which focuses on a particular technology. Both the applicant and the examiner usually undertake prior art searches.

The citations on the front page of the formal copy of a patent include both patents and technical references chosen by the examiner as integral to the invention under consideration.

Most patents will include a summary of the prior art (defined as “Background of the Invention” or something similar) followed by a section describing how the invention at hand is distinguished from the prior art.

6. WHAT IS PRIOR ART

The *Intellectual Property Law Dictionary* defines prior art as follows: “The general level of knowledge in the area of expertise involved with an invention that existed prior to, or is available at the time of, the invention. The relevant prior art (i.e., the prior art that teaches all or some aspects of the invention in question) is the benchmark used to determine whether an invention is really ‘inventive.’

Prior art includes:

- Any relevant description or discussion of the intentions’ essential characteristics in prior printed publication anywhere in the world, in any language, that was made available to the public before the invention was conceived of.

- Any relevant printed publication prepared by the inventor and published more than one year prior to the filing date of the patent application.

- Any relevant foreign or U.S. patent issued before the inventor conceived of the invention for which a patent is being sought, or any U.S. patent application made prior to such conception.

Prior art is used by the Patent and Trademark Office and the courts (in the event of an infringement action) to determine whether inventions are a) novel and b) non-obvious. Any specific instance of ‘prior art’ is generally referred to as a prior art reference.”[6]

Intellectual Property Law Dictionary, Nolo Press, Steven R. Elias, 1989.

In general usage, prior art includes any relevant publications, public disclosures (including conference papers), sales or orders for sales that occur before the invention was made. You might find prior art in:doctoral dissertations and master’s theses (as long as they are indexed); sales brochures; technical or tradearticles; press releases; technical presentations to the public; displays at trade shows, as long as the display enables an observer to make the device (e.g., a computer on display at a trade show may not be enabling if one can’t look into the inside to see the circuits). Dialog has many of the types of non-patent publications that are regularly searched for prior art.

Problems In Searching Prior Art

Since patents are legal documents that at some point may have to be defended in court, they are written to clearly and precisely identify the invention patented in such a way that a judge (who may not know the technology) can understand it.

This is the intent of the patent attorney or agent and with this intent, rights are secured for the life of the patent.

How does this affect searchability?

Consider that a patent consists of several distinct sections, each of which is serviced by its own brand of language.

Titles tend to be general and vague though they are supposed to be descriptive of the invention.

Implication for a searcher :because of the generality and vagueness, title hardly reveals anything about the patent. For searching a particular technology patent title searches can not be relied upon since they do not direct to the patent one is looking for .

Abstracts are supposed to summarize the invention in 150-200 words but in reality quite often consist of a rewritten claim.

Implications for a searcher :a very specific and pertinent key words can be used for searching a patent .usually abstract contains such terms .but still there is a lot of scope for a skilled searcher to come across the exact patent.

Specification is the scientific/technical part of the document and the one that gives us the most meat for searching. Here you will find descriptions not only of the invention, but a comparison to the prior art. Jargon, acronyms, and even trade names abound in this section which is typically one of the lengthiest of all. This is true technospeak, at its legal best and is quite often written by a technical advisor or a very technical attorney/agent.

Claims are the truly legalese part of the patent. Herein seeming absurdities will abound, brought about by over 200 years of legal decisions about truly minuscule points. Absurd though they may seem, the exact definition of a word is paramount to defending the patent in court and so this type of language is probably the most important part of the patent.

Claims are always one sentence long with the shortest consisting of two words

(I Claim: Element 95.) to one awarded in January,1995 that covers over 2500 words!

The format is typically with the noun first, followed by the adjectives, as in calling a red car “a vehicle having the color red.” Note that not only is the typical word order reversed, but there may also be several other words in between.

Thus, the (w) operator is not as important as the (n) operator and neither is as good as the (5n) or even (10n) to allow a maximum of five or ten words occurring between the noun and the adjective.

Another thing to consider is that a patent may have several claims, usually starting with a fairly broad claim and then resolving into more specific claims. That is, the broad claim may list "…a nonflammable gas…" which could be resolved to "….where in said nonflammable gas is carbon dioxide…" in a narrower claim.

Thus, someone using Argon (which is nonflammable) in the process of this patent would not infringe the narrower claim but would infringe the broader claim.

This is what makes patent prior art searching so difficult. If a searcher were to search on any process that involved Argon gas in such a process, the aforementioned patent claiming a "nonflammable gas" or "carbon dioxide" would not be found since Argon is not mentioned specifically.

So, when searching by subject, one must be aware of what a term would be listed as in a broader sense. This is not easy and can explain why so many patent searches miss the one item that should have been found.

But, where does one stop? Could a nonflammable gas also be a nonreactive gas? What if the gas was simply listed as an "…assistant gas, that is incapable of causing rapid oxidation…"; a bit verbose (or having prolixity in examinerspeak), but it gets around the word nonflammable! Again, where does itstop? Well, examiners are loath to allow patents to issue that claim the universe but even that can be argued. Note the number of patents under reexamination to get an idea on just how selective people can be when claiming inventions.

Most important is to restrict the search to the appropriate area. If an invention can be used in a different field, the patent office will classify it in various classes. It is, however, more important to study the patents classified in the most relevant area.

Patentability or Validity Searches

A "Patentability or Validity Search" is made to locate documents relevant to the determination not only of novelty but also of other criteria of patentability, for example, the presence or absence of an inventive step (i.e., the alleged invention is or is not obvious) or the achievement of useful results or technical progress. This type of search should cover all the technical fields, which may contain material pertinent to the invention.

Novelty and patentability searches are mainly being carried out by industrial property offices in the course of the examination of patent applications.

Assignment Searches

When a patent is assigned to another person or company it is the same as a sale, even though the terminology is just a bit different. For example, the buyer, whether a company or individual, is called the"assignee" and the seller(often the inventor) is called the "assignor." Assignment records of issued patents are public.

However, licenses are not recorded in the Patent and Trademark Office. The purpose of this type of search is to determine legal ownership of a patent

These are searches for locating information about published patent documents involving specific companies or individuals, as applicants, assignees, patentees or inventors.

Sometimes most of the transnational corporations file patent applications through variety of subsidiaries under variety of different assignee names .these variations in names should be kept in mind when one is specifically collecting information about a company's patenting activity. Some vendors provide specialized services for finding about the different assignee titles used by the major corporations for filing patents .

Online Tools: "Corporate Tree"[7]

Technological Activity Searches

They are to be understood as searches for identifying companies and/or inventors who are active in a specific field of technology. These searches are also suitable for identifying countries in which a certain technology is being patented, so as to know where to turn to for obtaining particular information in a given field of technology.

Infringement Searches

The objective of an "Infringement Search" is to locate patents and published patent applications, which might be infringed on by a given industrial activity. In this type of search the aim is to determine whether an existing patent gives exclusive rights covering that industrial activity or any part of it.

Patent Family Searches

This kind of search is carried out to identify a member of a "patent family." Patent family searches are used in order to:

- find the countries in which a given patent application has been filed (if published);
- find a "patent family member" that is written in a desired language;
- obtain a list of prior art documents or "References Cited"; and
- estimate the importance of the invention (by number of patent documents relating to the same invention and being published in different countries or by industrial property organisations).

Free online Tool: DEPATISnet[8]

Legal Status Searches

A search for this type of investigation is made to obtain information on the validity (status) of a patent or a published patent application, on a given date, under the applicable patent legislation in one or more countries. Such information can assist in making decisions on, for example, exporting, or in the negotiation of license agreements. It can also give guidance on the value attached to a particular patent by the patentee.

7. PATENT CLASSIFICATION SYSTEMS FOR EFFECTIVE PATENT SEARCHING

It should be appreciated that patents classifications are subject descriptor codes that examiners at national patents offices use as part of the patent examination and search process.

The databases have the patents classified and indexed with respect to these cods so that the searches can be conducted using the IPC cods or US classification code.

Electronic and manaul searches of patent databases are also possible on the basis of these classification systems.

One can conduct independent searches based on two different systems and then establish linkages and correalte the results of these searches.

The classification system changes with time to accomodate newer areas of technology as they evolve. One must therefore be familiar with the latest patent classification manual.

Targeted patent searching and plotting of technology patents grids requires substantial training in patent search and analytical techniques.

PATENT CLASSIFICATION

A classification is used both as a tool for finding patents (patentability searches), and for assisting in the assignment of patent applications to examiners for examination purposes. Classifications have definitions. Classifications have hierarchical relationships to one another.

Classes and subclasses have titles which provide a short description of the class or subclass. Classes and subclasses also have definitions which provide a more detailed explanation. Many Classes and subclasses have explicitly defined relationships to one another. Subclasses contain patents. In a sense, classes also contain patents but for classificaiton purposes patents are always classified at the subclass level. That is one or more classifications (i.e., class/subclass designations) are assigned to each granted patent and each published application.

Patent classification schemes are constructed and maintained by and for patent examiners and their primary purpose is to help the examiners in their work. When examining a patent application, the examiner needs to search a collection of patent documents to identify relevant existing patent specifications and this task is facilitated by the use of a tailor-made classification scheme.

As part of the examination process an examiner will assign patent classification codes to the specification he is examining, so in its turn that specification becomes part of the classified collection of specifications available to examiners in the future. Therefore the classified collection of patent documents is growing constantly.

The usefulness of patent classification as a means of searching for patents information is a by-product of its primary purpose as a tool for patent examiners.

Using patent classification as part of a search to identify patents in a particular field can help the non-expert searcher to focus and refine his search and produce a useful set of references.

The International Patent Classification[9]

The International Patent Classification (IPC) is currently used by over 70 patent authorities to classify and index the subject matter of published patent specifications. The IPC is maintained and is administered by the World Intellectual Property Organization and was first published in 1968. The seventh edition was published in mid 1999 and came into force in January 2000.

The IPC is available on CD-ROM and online as well as in hard copy.

Structure

The IPC divides patentable technology into 8 key areas:

A Human Necessities

B Performing Operations, Transporting

C Chemistry, Metallurgy

D Textiles, Paper

E Fixed Constructions

F Mechanical Engineering, Lighting, Heating, Weapons

G Physics

H Electricity

Within these areas technology is divided and subdivided to a detailed level, which allows the subject matter of a patent specification to be very thoroughly classified.

Each of the areas A to H is published as a separate volume and together they are referred to as the schedules. The schedules are accompanied by the following volumes:

- The Guide - which contains much useful information and advice on how the scheme should be used (also available in a web version)
- Concordance - which identifies areas in the current edition which have been revised since the publication of the preceding edition.
- The Catchword Index - which is a basic key word index identifying the area of the IPC schedules where specifications on a given topic are likely to be classified

The IPC codes, which act as an index to the subject matter of the patent, are printed on the front page of a patent specification and are always identified by the INID code 51. There is usually a superscript numeral indicating which edition of the IPC has been used to classify the document. e.g.

Using the International Patent Classification

Since the IPC is used by virtually all of the active patenting authorities in the world (and particularly by all the authorities of the major industrialized nations) as a common means of classifying the patent specifications they publish, it is possible to carry out an international search for patents on a specific subject using the IPC as a key. However, it is a massive and complex tool designed for an expert user group and when it is used by anyone outside that user group it should be applied with care.

Finding the “right” IPC classification code

Finding a classification code (or codes) upon which to base a search requires a basic grasp of how the IPC works. Taking time to browse through the Guide may help, but talking to someone who is familiar with using the IPC as a search tool will be of most value.

The Catchword Index may be a useful starting point, but it would be most unwise to search on a code identified from it without referring to the full IPC schedules to check for the context in which the code is placed and for relevant notes. The Catchword Index often proves to be inconsistent in the terms and concepts it includes.

One practical and efficient strategy for getting to the right area of the IPC schedules is to identify one or two relevant patents (perhaps via a quick key word search of a CD-ROM database), see how these have been classified and then to consult that part of the IPC schedules for detailed guidance on which codes to use. If using Esp@cenet then the more detailed version of the IPC, the ECLA classification, is often available as a hypertext link indicating the definition of the ECLA class.

A surprising range (or scatter) of classification codes at different levels of detail and even from different areas of the IPC can be assigned to specifications forming part of a single patent family and describing the same invention, or to specifications which are closely related in terms of their technical content. There are a number of factors which contribute to this IPC scatter:

- The classification policy of individual examining authorities may vary. Local practice may place emphasis on different features of the invention.

- The interpretation and subsequent classification of specifications on the same topic may vary from examiner to examiner.

- Classifications are revised in each new edition and there is no program of retrospective reclassification. So two specifications similar in technical content but published several years apart may have quite different classifications assigned to them.

- In the various language editions of the IPC terms may not have exactly the same significance and this can lead to some scatter in assigning IPC marks.

- Patent equivalents, though all describing the same invention, will not necessarily be expressed in the same way or stress the same points: a particular application of an invention may be stressed in a European specification while another application may be stressed in its Canadian equivalent.

- Some patent offices only apply the IPC at a very general level.

- The USPTO assigns IPC codes to its specifications via an automated concordance which is often “off target”. This scatter may not appear to be significant, but may have considerable impact on the effectiveness of a search based on the IPC.

- Taking an example from the extract from the IPC schedule for agriculture, forestry, etc. shown below, it is possible that a British specification describing a tong-like hand tool for uprooting weeds might be assigned the IPC code A01B 1/18, while a US specification on the same subject might be assigned the slightly less specific IPC code A01B 1/16 (hand tools for uprooting weeds).

- If a search for other patents on this topic was limited just to those classified at A01B 1/18, which appears to be the “right” IPC code, the US specification would not be identified.

A 01 B

subsection title

AGRICULTURE

class symbol

class title

A 01 AGRICULTURE; FORESTRY; ANIMAL HUSBANDRY; HUNTING; TRAPPING; FISHING

subclass index

subclass title

A 01 B SOIL WORKING IN AGRICULTURE OR FORESTRY; PARTS, DETAILS, OR ACCESSORIES OF AGRICULTURAL MACHINES OR IMPLEMENTS, IN GENERAL (making or covering furrows or holes for sowing, planting or manuring A 01 C 5/00; machines for harvesting root crops A 01 D; mowers convertible to soil working apparatus or capable of soil working A 01 D 42/04; mowers combined with soil working implements A 01 D 43/12; soil working for engineering purposes E 01, E 02, E 21)

Subclass Index

main group symbol

main group

reference

precedence reference

1/00 Hand tools (edge trimmers for lawns A 01 G 3/06)
1/02 . Spades; Shovels
1/04 . . with teeth
1/06 . Hoes; Hand cultivators
1/08 . . with a single blade
1/10 . . with two or more blades
1/12 . . with blades provided with teeth
1/14 . . with teeth only
1/16 . Tools for uprooting weeds
1/18 . . Tong-like tools
1/20 . Combinations of different kinds of hand tools
1/22 . Attaching the blades or the like to handles (handles for tools, or their attachment, in general B 25 G); Interchangeable or adjustable blades
1/24 . for treating meadows or lawns [2]

subgroup symbols

guide heading

Ploughs

3/00 Ploughs with fixed plough-shares
3/02 . Man-driven ploughs
3/04 . Animal-drawn ploughs
3/06 . . without alternating possibility, i.e. incapable of making an adjacent furrow on return journey
3/08 . . . Swing ploughs
3/10 . . . Trussed-beam ploughs; Single-wheel ploughs
3/12 . . . Two-wheel beam ploughs
3/14 . . . Frame ploughs
3/16 . . Alternating ploughs, i.e. capable of making an adjacent furrow on return journey
3/18 . . . Turn-wrest ploughs
3/20 . . . Balance ploughs
3/22 . . . with parallel plough units used alternately
3/24 . Tractor-drawn ploughs (3/04 takes precedence)
3/26 . . without alternating possibility
3/28 . . Alternating ploughs
3/30 . . . Turn-wrest ploughs
3/32 . . . Balance ploughs
3/34 . . . with parallel plough units used alternately
3/36 . Ploughs mounted on tractors
3/38 . . without alternating possibility
3/40 . . Alternating ploughs
3/42 . . . Turn-wrest ploughs
3/421 . . . . with a headstock frame made in one piece [2]
3/426 . . . . with a headstock frame made of two or more parts [2]
3/44 . . . with parallel plough units used alternately
3/46 . Ploughs supported partly by tractor and partly by their own wheels
3/50 . Self-propelled ploughs
3/52 . . with three or more wheels, or endless tracks
3/54 . . . without alternating possibility
3/56 . . . Alternating ploughs
3/58 . . with two wheels
3/60 . . . Alternating ploughs
3/62 . . . . Balance ploughs
3/64 . Cable ploughs; Indicating or signalling devices for cable plough systems
3/66 . . with motor-driven winding apparatus mounted on the plough
3/68 . . Cable systems with one or two engines
3/70 . . . Systems with one engine for working uphill
3/72 . . Means for anchoring the cables
3/74 . Use of electric power for propelling ploughs (electric current collectors B 60 L 5/00)

Thus the effects of the scatter become clear.

In short, the scatter means that it is important not to fix upon a single, very specific IPC code and to base all subsequent subject searching on that single code alone.

Even if it is possible to identify an IPC classification code which appears to express perfectly the subject to be searched, it is essential to consult the full IPC schedules, to look at the hierarchical context in which the code exists, to read the notes, to consider searching using a less specific code and to consider alternative codes.

Note that the hierarchy is indicated on the schedules by the number of dots and that for example a 4 dot code must be read in conjunction with the 3, 2 and 1 dot group titles immediately above.

IPC search tools

The IPC can be searched widely in databases on the Web, on other online databases and on CD-ROM.

In most databases the IPC codes are not updated when a new edition is introduced so to search back in time the older codes, where different, must be searched as well as the latest.

Using electronic search tools (CD-ROM or online databases) it is possible to simplify and speed up the process by truncating IPC codes.

In the hand tool example given above[10] it would be possible, for instance, to search electronically for any specification assigned **either** the IPC A01B 1/16 **or** A01B 1/18 in one go.

Further refinement can be achieved by searching for any specifications assigned an IPC with the stem A01B 1 and combining the results of this search with a key word search based on the word stems Tong and Weed. With this approach careful use of the IPC can greatly enhance the scope and effectiveness of a subject search.

IPC availability

The 7th and 6th editions of the IPC schedules are included in our list of patent classification schemes. Printed copies can be purchased from WIPO. The IPC is also available as a CD-ROM from WIPO.

International Patent Classification (IPC) 6th Edition hosted on the WIPO_website.

International Patent Classification (IPC) 7th Edition hosted on the WIPO website. [11]

PATIPC:Produced by DPMA (Deutsches Patent- und Markenamt)**, Germany and** World Intellectual Property Organization (WIPO).

The PATIPC file contains the text and graphics (chemical structure images) International Patent Classification (IPC) as published by the World Intellectual Property Organization (WIPO) and the German Patent and Trademark Office DPMA (Deutsches Patent- und Markenamt). The English text is available for IPC editions 1-7, the German one for editions 4-7. In addition to the IPC text the database contains the Catch word Index (Stich- und Schlagwoerterverzeichnis) of edition 7 as provided by the DPMA. The Catchword Index is available in English and German[12]

ECLA [13]

The European Patent Classification

Definition: The technical content of patent documents is classified according to the International Patent Classification (IPC). The European Patent Office has further refined the International Patent Classification by adding subgroups. This refined classification system is called the European Patent Classification (EPC). Content: All the published patent applications are classified by EPO staff according to the European Patent Classification to enable high quality searches

The classification is made up by a letter, denoting the IPC section, followed by a number (2 digits), denoting the IPC class. Optionally, the classification can be followed by a sequence of a letter, denoting the IPC subclass, a number (variable, 1-3 digits), denoting the IPC main group, a forward slash "/", a number (variable, 1-3 digits), denoting the IPC subgroup.

Although on some documents the IPC symbol is printed with a blank after the 4th position, in *esp@cenet* the symbol must be entered in the search field without any blanks[14]

This is the classification scheme applied by the European Patent Office to its internal collection of search documentation and is based on the IPC, but is often more detailed. ECLA classification codes can be used to carry out subject searches on the http://gb.espacenet.com/ database.

This is done by either inserting an ECLA classification in the EC classification field, if known, or by clicking on the highlighted ECLA field when a bibliographic record of a patent specification known to be of interest is found.

This provides a "back door" way of exploring the classification with the ECLA code for that record highlighted in yellow.

The ***advantages*** of using ECLA are that when the schedules are revised, which happens quite frequently, the http://gb.espacenet.com/ database is revised so that only the latest codes need to be searched to cover back in time.

The data also goes back much further than the IPC: to 1877 for Germany, 1909 for Britain, 1911 for France and 1920 for the USA, for example.

However the data is often only applied several months after the publication of the specifications, so it is *not suitable for current awareness searching.*

There are also seem to be some gaps in its coverage for the older non-German patents. the correct IPC codes must be determined before looking at the ECLA schedules, as it lacks an index.

US Classification [15]

This is the scheme used by the USPTO examiners as their primary classification tool. The scheme

can be used to subject search US patents as far back as 1790, since all the affected documents are reclassified whenever the classification schedules are revised.

Uniquely, design “patents” are covered by the classification in their own “D” classes, and are classified on the databases along with patents.

The US classification is only applied to US patent specifications and cannot be used to conduct an international search.

The scheme can be used to carry out searches on a number of databases which are dedicated to US patents and to search some CD-ROM products.

A search based on US classification can also be made on some free patent sites on the Internet.

Detail text for Us classifications is available on web[16]

9. INFORMATION RESOURCES BRIEF OVERVIEW

It should be appreciated that no single database can give all the relevant information on patents that are necessary for detailed analysis involving all the parameters.

The databases differ in their languages, search engines, coverage of the technologies and time periods, whether they include abstracts, full texts, legal status, citations, etc .one has to use a judicious combination of databases. This makes the excavation process time consuming and complex

What information do the databases provide ?

Free patent databases usually let you search through the information given on the front pages of a particular set of patent specifications. You can search for

- Inventor names
- Applicant names
- Classification codes
- Patent numbers
- Dates
- Key words in the patent title

And usually you can make a key word search in the text of the patent abstract and sometimes the full text of the patent specification as well.

Your results usually consist of the full front page data, and perhaps the full text of the specifications, for each patent you have found and a link is often provided to a facsimile of the patent specification itself. Refinements may include the linking up of patent equivalents or the provision of English language abstracts or full text for foreign language specifications.

Viewing and printing copies of the specifications is normally free of charge. However, many databases load each page of the document as a separate file, which makes printing a very slow process. To avoid this you can obtain software which downloads all the pages at once.

There are some key databases which differ from the description given above where the primary function is to give information on the legal standing of a patent application (see

Before selecting a adatabase;

Questions to ask before you begin your search on a free patent database:

- What kind of information does the file provide? (Are family links highlighted, are copies of the patent specifications available?)
- What patent authorities (countries) are covered?
- What dates does it cover?
- How often is the information updated - is an update loaded once a week or once a month ?
- How up to date is the database - what is the publication date of the most recent patents covered?
- What information is indexed and how? (can you search for key words in the title, for full inventor names, can you use wild cards?)
- Are titles and abstracts translated into English?
- What will the search results look like?
- Is there a charge for downloading results

Free Patent Resources (Multiple Country Resources)

esp@netcenet:(ep.espacenet.com/)

esp@cenet provides access to the bibliographic data of all patents published in the preceding two years by any member state of the European Patent Organisation, as well as by the European Patent Office and the World Intellectual Property Organization (WIPO). In addition, full-page facsimile images of documents are also retrievable to facilitate more detailed analysis of these documents. The data for this particular service is stored at the relevant national office.

For full coverage details.[17]

q **US Patent Full Text Databases:** (**http://www.uspto.gov/patft/)**

Key word and patent number searches of the front-page of U.S. patents (utility, design, reissue, plant and statutory invention registration patents) since 1976. Searchable fields include patent number, inventor's name, city, state and country; title; assignee's name, state, country and country; application filing date; application number; current U.S. classification; international classification; primary Examiner; assistant Examiner; government interest and abstract.

Patent numbers in the US Patent Full-Text Database, by type and year.[18]

Database	Utility***	Design	Plant	Reissue (RD,RE, RX)*	Defensive Pub. **	SIR	AI***
1976-2003	3,930,271- current	D242,583- current	PP3,987- current	RE28,671- current	T100,001- T109201; T942,001- T999,003	H1- current	
1790-1975	X1- X11,280; 1- 3,930,270	D1- D242,880	PP1- P4,000	RX1-RX125;RE1- RE29,094	T855,019- T941,025;		AI2- AI318

***** RDs and REs are issued in the same numeric sequence; RXs are issued in a separate numeric sequence.

		Countries DE	EP	WO	DD	AT	CH	FR	GB	US	JP
Fax-documents in archive		1877	1978	1978	1951 -1995	1920	1888	1920	1920	1790	1976x
Fulltext fields											
Titel	TI	1981	1999	1999	-	1999	1999	1999	1999	1999	1976
Abstract	AB	1981*	-	1999	-	-	-	-	1999	1999	1976
Description	DE	1987*	-	-	-	-	-	-	-	-	-
Claims	CL	1987**	-	-	-	-	-	-	-	-	-
Bibliographic data fields											
Applicant	PA	1981	1999	1999	-	1999	1999	1999	1999	1999	1976
Inventor	IN	1981	1999	1999	-	1999	1999	1999	1999	1999	1976
Application date	AD	1973	1978	1978	1973	1973	1973	1973	1973	1973	1976
Priority date	PD	1973	1978	1978	1973	1973	1973	1973	1973	1973	1976
Bibliographic IPC	ICB	1973	1978	1978	1973	1973	1973	1973	1973	1973	1976
Search file IPC	ICP	1877 1973	1978	1978	1951	1900	1900	1900	1900	1900	1976
Publication date	PUB	utility models: 1950	1978	1978	1973	1973	1973	1973	1973	1920	1976

*	= no utility models
**	= utility models since 1999

****** T patents were not numbered in a continuous sequence; numbers were issued in batches based on OG volume.

******* X and AI patents have non-withdrawn gaps due to patents lost in the historic Patent Office fire.

q **depatis.net(depatisnet**.dpma.de/)

* = no utility models

**= utility models since 1999

x = AbstractsThe German Patent and Trademark Office (Deutschen Patent- und Markenamtes (DPMA)) DEPATISnet website provides access to a worldwide patent collection. DEPATISnet provides free searching, including family searches and document delivery. Assisted searches are also available - queries can be sent direct to the German Patent Information Centre. The site is current in English and German. Overview on the contents of the DEPATIS search database by important countries and database fields

The table[19] below is arranged according to countries. It lists for each country, the respective year or which data are available in the specific database fields.

The bibliographic IPC (database field ICB), for example, is available for EP and WO documents as of 1978 and for the other countries as of 1973. Since old data, in particular, have been integrated into the database step by step, the year indicating the available data may not be accurate.

This means that data may be available for previous years or may be missing for subsequent years. The data of the search file IPC since 1900 approximately are integrated in the database, while the database also contains changes initiated by examiners before that year.

PCT (WIPO) Database(www.**wip**q **Pct Database: (**www.wipo.org/ipdl/en/)

The PCT database hosted on the WIPO website, contains the first page data (bibliographic data, abstract and drawing) of published PCT applications. The first page data of applications published each week in Section I of the Gazette are added weekly to the database. The database currently contains data relating to applications published from January 1, 1997.

Indian Patent Database:

Database on Indian patents are now available with Patent Facilitating Centre on the CDROM discs. The databases relate to patent applications filed and patent applications accepted and notified for opposition.

The CDROMs can be run on the Windows 95 and advanced versions. The databases are quite user friendly and equipped with latest search tools and logical operations. Value addition has been done in the databases to make the information easily accessible.

The required information for the databases has been compiled from the Gazette of India Part III Section 2.

The details of the two databases are as follows:

Ekaswa-A : Patent applications filed in India as published in the issues of the Gazette of India (Part III, Section 2) from January 1995 onwards

Ekaswa-B : Patent applications notified for opposition in the Gazette of India (Part III, Section 2) published from January 1995 onwards

Free Online Access to First Indian Patent Searchable Database http://www.indianpatents.org.in/ and http://pk2id.delhi.nic.in/

Commercial Information Ventors

Derwent : http://www.derwent.com

World's leading provider of patent and scientific information.

It has a large number of files on intellectual poperty with structured retrievable information on patent application, patent references, and patent citations.

The industry specific information covers class codes , family data, abstracts ,calims , legal status and citations ,to an from ptemts , subject classifications etc .

The patent citation covers author literature , author cited patents , examiner cited literature ,and examiner cited patents .

The industry specific patented technology information files contain bibliographic information in industries classified as agriculture and food sciences , chemistry and chemical industry, energy medical and biosciences , science and technology and engineering..

MicroPatentUSA :

Web: http://www.micropat.com

Commercial software products (on CD-ROM**):** World PatentSearch (WPS) allows searching of bibliographic data from U.S. patents since 1975 and EPO and WIPO patent applications since 1978; Patent Abstracts of Japan (PAJ) allows searching bibliographic data and main drawings of English translation of published, unexamined Japanese patent applications since 1995; US PatentSearch allow front-page text searching of 20 fileds in U.S. patents since 1975; PCT PatentSearch allows front-page searching of 13 fields in PCT patent applications since 1992 and ESPACE Access allows searching of 14 fields in European and PCT patent applications since 1978.

Optipat, Inc.

E-mail: information@optipat.com

Web: http://www.optipat.com

Commercial software product: OptiSearch/Net (OS/Net) package allows browser-based indexing and searching of full text of U.S. patents on intranet web server. Patents delivered in html format on CD-ROM.

Delphion Patent Server

E-mail: support@delphion.com

Web: http://www.delphion.com

Free services: Key word, phrase and number search of U.S. patents since 1974 (plus some in 1971-1973) by patent number, title, abstract, claims, assignee, inventors and attorney agent; complete scanned images of U.S. patents since 1974

LEXIS-NEXIS, a division of Reed Elsevier Inc.

Web: http://www.lexis-nexis.com http://www.lexis.com

Commercial services: Produces the Patent and Trademark Office Library (LEXPAT) which contains the full text of U.S. patents since 1976 as well as other patent-status related materials.

Questal.Orbit, Inc.

E-mail: help@questal.orbit.com

Web: http://www.qpat.com

Free services: QPAT-US allows search front page information of U.S. patents since 1974.

Commercial services: Access to a variety of databases including Biotechnology Abstracts, Chemical Abstracts, Chinapats, Claims, Derwent World Patents Index, Drug Patents International, European Patents, Japanese Patents, PCT Patent Applications, Pharmaceutical Patents, U.S. Classification, U.S. Patents and World Patents Index; QPAT-US allows full text of all U.S. patents since 1974.

Chemical Abstracts Service (CAS)

E-mail: help@cas.org

Web: http:/www.cas.org http://stneasy.cas.org

Commercial services: CHEMICAL ABSTRACTS (CA) and REGISTRY databases include 13 million abstracts of chemistry-related and patent literature and 17 million substance records; STN International provides access to over 200 scientific databases.

Fachinformationszentrum (FIZ) Karlsruhe

Gesellschaft für wissenschaftlich-technische Information mbH

Web: http://www.fiz-karlsruhe.de http://stneasy.fiz-karlsruhe.de

Commercial services: Hosts STN International databases in science and technology.

Dialog:

www.dialog.com

Dialog is the worldwide leader in providing online-based information services to organizations seeking competitive advantages in such fields as business, science, engineering, finance and law.

Commercial services: DIALOG WEB provides access to DIALOG databases; DIALOG SELECT provides access to a selection of DIALOG databases with guided searching of business, legal, scientific and technical information; DATASTAR WEB provides access to DataStar; SCIENCEBASE provides access to science and technology databases; SOURCEONE provides access to digital and library-based document collections with worldwide document delivery.

DIALOG and DataStar systems provide access to over 900 on-line databases.

10. EXCAVATING THE MEANING FROM THE PATENTS MINE

Patent Analysis

Patent analysis provides an overview of innovation and a method to track technological development.

Patent Analysis Types

- Macro-analysis; micro analysis
- Technology trends
- Geographic trends
- Key players
- Company analysis
- Competitive intelligence
  - Information regarding:
  - Who are my competitors in a given technology?
  - How are my competitors diversifying?
  - What are the overall trends in my industry? For example, is foreign
  - What new products are my competitors planning to introduce?
- Mergers and acquisitions, R&D strategy etc.
- Technology– portfolio-analysis

Patent Analysis Methods

1. Quantitative Analysis

The method understanding and analyzing patent through numerical statistic of patent information. Most usable data comes from bibliographical information including the number of patent applications, assignees, inventors, or patent classification codes, etc

- Quantity-based Analysis
- Time-Based Analysis
- RankingAnalysis, etc.

2. Qualitative Analysis

The method understanding and analyzing the content of patent. Generally, this analysis method is performed by the inter-relationship of Technology content or patent classification code, assignee, application date, etc Selection of core patent Technology development map, etc.

Patent Mapping (Technology Road Map)

Patent Map is the visualized expression of total patent analysis results to understand complex and various patent information easily and effectively. The patent map is produced by gathering related patent information of a target technology field, processing, and analyzing it.

Pantent Mapping Advantages:

1. Administrating / Planning

- Development Trend Market Research
- Relation of Companies

2. Researching/Technology Promoting

- Technology Trend
- Technology GAP
- Technology Portion
- Technology Relation

3. Technology Management

- Possible Infringement
- Analyze Claims
- Set up new patent application direction

Different Patent Mapping Results Quantitative Analysis Map (Statistical Analysis Map)

- Rate Map
- Number Map
- Trend Map
- Relation Map
- Radar Map
- Portion Map, etc.

Qualitative Analysis Map

- List Map
- Matrix Map
- Development Map
- Problems Vs. Solutions Map, etc.
- Trend Map (2D)
- Trend Map(3D)
- Portfolio Map

Citation Statistical Analysis

Patent Analysis Software

Software for practicing and reproducing patent information in many different ways to make user approach to patent information easily and obtain optimized information by sorting / mixing / interconnecting / rearranging raw patent information.

The Examples of Patent **Analysis** Software[2020] Refer to http://www.wipo.int/sme/en/activities/meetings/china_most_03/wipo_ip_bis_ge_03_16.pdf

- PM -MANAGER By Wips www.wips.co.kr
- P.I.A.S.(Patent Information Analysis System)BY K.I.P.O. www.kipo.go.kr
- PATENT LAB BYWISDOMAIN(Delphion) www.delphion.com

12. CONCLUSION

Patent documents contain very valuable technical, legal information which is not published anywhere else .

Information extracted from patents can be applied for various legal , business and technical purposes . information derived from careful analysis is very precious .

Looking for exact information on internet needs lot of skill as well as complete understanding of the subject matter with clear objectives .

One should use proper combination of various sources for information for getting all the details about the topic from various angles .

GLOSSARY OF REATED TERMS FOR PATENTS SEARCHING :[2121]

http://pk2id.delhi.nic.in/glossary.html

- **Abstract**

  A concise summary of the invention described in a patent application. It should include all the most important technical features of the invention.

- **Amendments**

  Alterations (such as clarifications or deletions) made to a patent application or to a granted patent specification. The description, drawings and claims can all be altered by amendment, either because the applicant wishes to, or because the Office requires it. Any amendments must not add any material to the application or specification that was not p>sent when the application was filed.

- **Anticipation**

  This is when the prior art indicates that a patent application lacks novelty.

- **Applicant**

  A person who makes a patent application. Often this will be the inventor, but it need not be so. Several people can apply jointly for a patent, as can organisations.

- **Application (for Patent)**

  Papers comprising petition, specification, drawings (when required), one or more claims, oath or declaration and filing fee, whereby an applicant seeks a patent.

- **Assignee**

  The person(s) or corporate body to whom all or limited rights under a patent are legally transferred. Assignment Transfer of all or limited rights under a patent.

- **Assignment**

  The transfer of intellectual property rights from the owner of the rights to another person or organisation.

- **Assignor**

  One who assigns a patent right.

- **Citations**

  Citations may be made by the examiner or author. They comprise a list of references that are believed to be relevant prior art and which may have contributed to the “narrowing” of the original application. The examiner can also cite references from technical journals, textbooks, handbooks and sources.

- **Claims**

  A p>cise statement of the invention that the applicant wishes to protect. It is the monopoly rights that the applicant is trying to obtain for the invention. A main claim will define the invention in its broadest form, by including its essential technical features. Further “dependant” claims can then relate to additional features of the invention. The claims become the actual monopoly that is given when/if the patent is granted.

- **Continuation**

  Applicable mainly in the US, continuations are second or subsequent applications which are subsequently filed while the original parent application is pending. Continuations must claim the same invention as the original application to gain the benefit of the parent filing date

- **Continuation-in-part**

  Generally referred to as a ‘C.I.P’ this is essentially the same as the continuation with the exception that some new material may be included. The disclosure of the parent is usually amplified and the C.I.P may claim the same or a different invention. A C.I.P application is accorded the benefit of the filing date of the parent application to the extent of the two applications’ common subject matter. The C.I.P must be filed while the original parent application is pending for any disclosed material in common with the parent.

- **Continuing Applications**

  There are three types of continuing applications: division, continuation and continuation- in-part.

- **Description**

  A full and detailed explanation of the invention and how it works, filed at the Office to initiate a patent application . The description may be accompanied by one or more drawings.

- **Drawing**

  One or more specially-prepared figures filed as a part of a patent application to explain and describe the invention. Drawings (or illustrations, where appropriate) are more commonly found with inventions for mechanical or electrical devices. As a rule, chemical patents will include chemical formulae in the description of the invention and/or in the examples.

- **Equivalent**

  A patent which relates to the same invention and shares the same priority application as a patent from a different issuing authority

- **European Patent Convention (EPC)**

  Nineteen European countries are parties to the European Patent Convention. It is the international convention governing the application for, processing and grant of a European patent. A patent application filed under this convention will, when granted, usually automatically be effective in each of the countries designated by the applicant.

- **European Patent Office (EPO)**

  The intergovernmental organisation (not part of the EU) set up to administer the EPC

- **Examiner**

A patent office official who is appointed to determine the patentability of applications.

- **Examples**

1. A worked description of one aspect (embodiment) of theinvention within the patent application.
2. Possible alternative embodiments of the invention within the patent application, with little detail provided

- **Expiry Date**

  The date when a patent has run its full term in a country and is no longer protected there (see alsoLapse, Withdrawn).

- **Filing date**

  The date on which a full description is lodged at the Office. An important date when considering if the invention in the patent application is novel and inventive.

- **First to File**

  The applicant who is the first to file an application for an invention will be awarded the patent over all others. This law is becoming increasingly the standard for countries adhering to Trade-Related aspects of Intellectual Property (TRIPs) guidelines.

- **First to Invent**

  In some countries, the applicant who is the first to invent will be awarded the patent over all others.

- **Forfeited Application**

  An application on which the issue or maintenance fee has not been paid within the designated period.

- **Infringe**

  To make, use or sell the patented item or process within the country covered by the patent without permission or licence from the patentee.

- **Infringement**

  Carrying out an action which falls within the scope of the patent rights owned by another person, without their permission

- **International patent application**

  Single patent application for up to 104 countries, made under the Patent Co-operation Treaty (PCT) via one of a number of receiving Offices . This can lead to the grant of a patent in each country designated by the applicant.

- **Markush**

  A term used to describe the series of compounds covered by a patent claim, where the compound is defined as a basic structure with a variable list of possible substituents (e.g. where R=H, alkyl, aryl etc.).

- **Non-Convention Equivalents**

  An application filed in a second, or subsequent country which does not claim a priority application in another country. Usually a result of filing the application after the 12 month Convention period, but may be within that period by choice of the applicant.

- Open for Public Inspection (OPI)

  In relation to a patents file, for example, that part which members of public can inspect as from the date of 'A' publication of the application

- **Opposition**

  The time period allowed for an interested party to post oppositions to the grant of a patent. For example, this may be up to nine months from the date of grant of a European patent.

- **Patent Family**

  All the equivalent patent applications corresponding to a single invention, covering different geographical regions Patent Law Treaty (PLT) A treaty to harmonise formal requirements for patent applications worldwide, which is currently in the process of being implemented.

- **Pending**

  The period in which the patent office has not yet decided whether to reject or to grant a patent application, and it has not yet been withdrawn.

- **Plurality**

  The claims of a patent application must relate to just one invention or to a number of inventions which all share the same inventive concept. If an application has claims which relate to more than one invention or inventive concept, there is "plurality of invention" and the claims must be altered by amendment to remove the plurality before a patent can be granted.

- **Preliminary Examination**

  The initial study of an application by an official in the patent office to check that the specification is properly arranged and for p>paring search reports.

- **Priority document**

  A previously-filed patent application which provides a priority date for a later application

- **Revocation**

  A process by which a granted patent can be annulled. This can happen because it is demonstrated that the patent does not satisfy one of the patentability criteria - but it can also occur for other reasons.

- **Substantive examination**

  A full examination of the patent application, undertaken by a patent examiner. This will determine whether the application complies with all the legal requirements set out in the Patents Act The examination report takes into account any documents listed in the search report. In the light of the issues raised in an examination report, amendment of the patent application may be required.

- **Utility Model**

  In some countries, a type of patent which is available involving a simpler inventive step than that in a traditional patent. Such patents generally have a shorter life.

- **Utility Patent**

  Utility Patents, sometimes called “functional”(or, final) patents, cover a new and useful invention in the categories of processes; mechanical, electrical or chemical procedures; machines with moving parts; articles of manufacture, such as hand tools; compositions of matter, like chemical compounds, combinations, or mixtures. the life of a utility patent is currently 20 years from the date of filing.

(Footnotes)

- [1] http://gb.espacenet.com/espacenet/gb/en/help/15310.htm
- [2] See http://thomsonderwent.com/patinf/
- [3] Prabuddha Ganguli, Intellectual Property Rights, Unlishing the Knowledge Economy(294),Mc Graw Hill,2001, Delhi.
- [4] For a detailed process refer to http://training.dialog.com/sem_info/courses/pdf_sem/gsm-03-30040patbasics_dweb.pdf
- [5] Refer to http://www.ipmall.info/hosted_resources/bp97/noveltypatsearch.htm#TOC1
- [6] **—** *Intellectual Property Law Dictionary*, Nolo Press, Steven R. Elias, 1989
- [7] Delphion Provides an effective tool ‘Corporate Tree’ to deal with this problem. The Original Assignee feature in Corporate Tree helps you discover all US patent records that belong to your target Assignee - even when they have been filed under different variations of the Assignee name. This means you don’t need to perform separate searches for each variation of the name. http:// www.delphion.com/products/research/products-corptree
- [8] DEPATISnet provides free searching, including family searches.See **depatisnet**.dpma.de/(German Patent office)
- [9] Available at www.wipo.org/**classification**s/en/ipc
- [10] refer to page No. 16
- [11] Availbale at www.**wipo**.org/**classification**s/en/ipc
- [12] Hosted by STN International.
- [13] Available at http://l2.espacenet.com/eclasrch
- [1415] Available at www.**us**pto.gov/go/**classification**/
- [16] http://www.uspto.gov/web/offices/opc/ for documents and manual related us patent classification
- [17] For coverage Details see http://ep.espacenet.com/espacenet/ep/en/help/15350.htm
- [18] see http://www.uspto.gov/patft/help/contents.htm
- [19] **Available at depatis** net.dpma.de/

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Shri V.D. Shrivastava is currently working as a Librarian in Assam University (A Central University), Silchar .Prior to this he has worked at various positions such as the Principal Library and Information Officer, Scientist-in-charge, Documentation Officer and Librarian of renowned institutions such as National Institute of Pharmaceutical Education & Research (NIPER), Mohali, Tata Memorial Centre (Department of Atomic Energy), Mumbai, Central Water and Power Research Station (MOWR), Govt. of India, Pune, Engineers India Ltd (A Govt. of India Undertaking), New Delhi, & Central Institute of Agricultural. Engineering, (ICAR), Bhopal. He has acquired his B.Sc. and B. Lib. Sc from Awadhesh Pratap Singh University, Rewa , MLISc. and Certificate in French from University of Pune, and pursuing his Ph.D. from Panjab University, Chandigarh). He is Life member of several National & International Professional Associations and has directed and chaired several National and International conferences. He has been actively involved in the activities of PUNNET, BONET, BOSLA, DELNET and Chandigarh Libraries Consoriurn (CLC), from their inceptions. His areas of specialization include Library Automation and Networking, CD-Rom/DVD based Information Retrieval Systems, Internet based information services, and Digital Library .