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Module : 13 Standards, Patents, Trade Catalogues, etc as source of information



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Module 13: Standards, Patents, Trade Catalogues, etc as source of information

I. Objectives

After reading this module, you will be able to:

- Understand the role of Standards as sources of Information,
- Establish the need of Patents as Sources of Information,
- Explain the Trade Catalogues as Sources of Information,
- Identify the organisations involved in providing information from Patents, Standards and Trade Catalogues, and
- Give examples of Patents, Standards and Trade Catalogues as sources of information.

II. Learning Outcome

After reading this module, you will be able to understand and establish the role of Standards and Patents as sources of Information. You will also be able to establish the need of Trade Catalogues as Sources of Information. You will be able to explain that Standards bring quality and uniformity in producing variety of products. Patents focus on the latest inventions and they can be grouped in several ways. Trade catalogues, although primarily published to promote the sale of particular products, serve as an indispensable source of information for specialized group of users. Lastly, examples of Patents, Standards and Trade Catalogues as sources of information will be explained in detail.

III. Module Structure

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1. Introduction

Standards, Patents and Trade Literature are primary sources of information presenting information pertaining to specific field of activity. Their origin and growth can be seen from the 19th century which heralded the industrial revolution. These covers all human aspects especially science and technology. Industrial revolution increased the pace of manufacturing, construction, research activities, and development of machines/products. As such there has been increased activities of invention/research and setting of manufacturing plant to produce machines, products, etc.

Standards are fundamental to many aspects of modern life, including science, technology, industry, commerce, health and education. To maintain standard, procedures are adopted for materials, machines and processes. There was requirement for development of standardized procedure in consultation with government agencies, business/production houses and other concerned parties. Standards are vital for suppliers, purchasers, and users of materials, products, or services to understand and agree upon all requirements in engineering, manufacturing, and business. They provide the necessary details about the specific requirements. Standards are rules for quality, size, or shape of industrial products. These help in simplifying the product's distribution by a manufacturer and eliminating the non-standardized items from the market. These are usually drawn up by organized agencies, governments, or quasi-governments, corporate bodies and Technical/trade institute/associations like British Standard Institute (BSI) in Britain, Bureau of (American National) Standards (Institute) in USA, the Bureau of Indian Standard (BIS) in India, International Standards Organisation (ISO), ASTM, IEC, CEN, DoD, etc. In India, BIS alone brings about 300 standards annually. In industrial and commercial practice, standards are essential for a number of reasons such as-to prevent avoidable wastage of resources and manpower; to enhance safety, speed, and productivity; to ensure uniformity, reliability, and excellence of product and quality; and to achieve overall efficiency and economy. These are required mainly by engineers, technologists, manufacturers, construction agencies, etc. To protect the inventors/researchers for their invention and research lest it be copied/duplicated/plagiarized, patent system was devised to give patentee exclusive right for their invention on the basis of relevant patentability requirements, such as novelty and non-obviousness. In general, any person who has invented any new and useful process, machine, manufactured or composition of matter, or any improvement thereof, may obtain a patent. Patents have proven to be an immensely valuable information source for invention, technology, business, and legal actions (scientific/technological invention) . One quarter of the technological and scientific publications produced every year are published by patent offices around the world. Modern researchers and technologists emphasize the need for rapid and accurate information (about products, machines and services); patent specifications meet such needs. Patents relate information much faster than any other form. Patents are used to evaluate specific technology,

identify and alternate technology and its sources, improve an existing product or process, develop new products or processes, and monitor development in a specific technology.

Industrial and commercial companies produce trade literature, which constitutes an important form of primary sources of scientific and technical literature. Trade literature aims to illustrate and describe equipment or goods relating to the manufacturers. They are issued by the manufacturers or dealers and are often very well produced. Trade literature may take the form of a technical bulletin, price list, data sheet, etc. USA/UK is one of the largest producers of trade literature. The continuous flow of sheets, folders, pamphlets, and bound volumes containing original data on new products, material and processes, which has not previously appeared in the regular literature, raises these manufacturer's publications to the level of a primary source of scientific and technical information. These materials are originally produced by manufacturers and wholesalers for their salesmen to market their products. The Trade Literature is internationally known as an extraordinary source for the history of business, technology, marketing, consumption, and design. Trade literature includes printed or handwritten documents, usually illustrated, of items offered for sale, ranging in size from small pamphlets to oversized folios of several hundred pages.

2. Standards

Standards are very important and vital for modern life, viz. science, technology, industry, commerce, health, and education. A specification is a type of a standard which is often referenced by a contract or procurement document. It provides the necessary details about the specific requirements. Standards and specifications are documents that stipulate or recommend:

- a. Minimum levels of performance and quality of goods and services
- b. Optimal conditions and procedures for operations in science, industry, and commerce including production, evaluation, distribution, and utilization of materials, products, and services,
- c. Enhance safety, speed, and productivity, and
- d. Ensure uniformity, and reliability

They contribute significantly in the functioning of the single market, the protection of health/safety, international trade promotion and create industry competitiveness. Standards are established by general agreement among representatives of consumers, designers, manufacturers, distributors and other concerned groups. Standards and specifications are important components of technical literature. These range from common items of every day such as paper clips, toys, food, and drugs to extremely complicated equipment and components used in nuclear reactors and space vehicles.

About 20,000 years ago, Ice Age ancestors in Europe made the first rudimentary attempts to keep track of days. The Sumerians in the Tigris /Euphrates valley devised a calendar very similar to the one we use today. Over 5,000 years ago, the Sumerian farmers used a calendar that divided the year into 30 day months. Each day was divided into 12 hours and each hour into 30 minutes. The Egyptians were the first to develop the 365 day calendar and can be credited with logging 4236 BC as the first year in recorded history. They based the year's measurement on the rising of

the 'Dog Star' or Sirius every 365 days. Standards have thus existed since the beginning of recorded history. Some were created by royal decree. For example, King Henry I of England standardized measurement in 1120 A D by instituting the ell, which was equivalent to the length of his arm.

Standardization is an age-old process and has always been a central component of transnational and transcultural exchange. Standards of measurement and quality control have been in existence from ancient times, but the early standards were quite crude. The Egyptian cubit, for example, was the distance from the tip of the middle finger of an "average" man to his elbow. The inch was originally the length of three grains of barley placed end to end. The first attempt to scientific standard for measurement of length was made in 1496, when the distance between two marks on a bronze bar was decreed to be 'imperial yard' this standard bronze bar is still preserved.

The first systematic attempt at standardization took place in France during the Revolution and focused mainly on weights and measures. The metric system of weights and measurement began in France in 1790. The French government passed a law in 1840 forbidding the use of other systems of weights and measures. Standards for weight and measurement have been in existence since ancient time in England also. A number of parallel historical developments rendered the creation of common national/ international standards in various fields highly desirable and feasible. The introduction and spread of a unified system of weights and measures led to first concerted and enduring effort at national and then international standardization. The metric systems of weights and measures have been adopted by most countries, in which the kilogram and the meter are, respectively the standard units of mass and length. Standardization of interchangeable parts for machines and equipment started in the United States in 1798, using machine-made components for the manufacture of guns. The principle of interchangeability of parts was adapted in clock manufacturing in 1802. Standards for interchangeable threaded parts (e.g., screws, nuts and bolts, etc.) were developed in 1841 in England.

Standardization was for the first time thoroughly systematized in late eighteenth-century in Europe. Attempts at large-scale setting of norms and standards gained momentum and introduced an entirely new rationale to the process of standardization. Standardization was taken up in the newly established United States of America and Great Britain also. Standardization of iron and steel structural components led to the establishment of Engineering Standards Committee in 1901. The committee soon extended scope to other engineering materials and components, and it gave birth to the British Standards Institution. Telecommunications standardization has taken place very fast. The standardization of time-keeping became necessary owing to long-distance transport and communications that started in the middle of the nineteenth century. Standardization of time on a national level occurred in other countries at roughly the same time.

During the World War I, virtually all countries used the gold standard. Either they had made their currencies convertible into gold and stabilized their exchange rates with respect to convertible currencies. The first attempts for international monetary agreements took place during 1860. The emergence of such a widely adopted common currency standard immensely facilitated the ongoing globalization of trade and investments. A combination of internal and

external factors was made possible for adoption of national monetary commissions to switch to gold standard.

Attempts for the large-scale setting of norms and standards leaped forward towards the end of the eighteenth century and that introduced an entirely new rationale to the process of standardization. Standards help the market to create an effective trading language and the associated tests and certificates are often seen as a way to build trust and confidence between trade partners. Private sector experts, working in the standards organizations are more suited to develop technical solutions that comply with the laws. In the mid-18th Century, the emergence of companies allowed the Industrial Revolution to boom.

With the advent of the Industrial Revolution in the 19th century, the increased demand to transport goods led to advanced modes of transportation. The invention of the Railroad was a fast, economical and effective means for transporting goods . Standardization of the railroad gauge made it possible. During the Civil War the U.S. Government recognized the military and economic advantages to having a standardized track gauge measuring 4 feet 8 ½ inches, a track size that originated in England. This gauge became the U.S. standard. During nineteenth-century in Europe, telecommunications standardization was brought about. In the case of time, the first examples of standardization occurred in closed systems (railway networks). Later these standards were adopted more widely.

Modern standardization, from the beginning, directly related to companies. Need for capacity expansion, higher profit and quality and innovation provided companies the impetus to standardization. In-company standardization leads to R&D which led to uniform dimension and interchangeability of parts and afterward continued with essential forms of standardization such as unification, simplification and modularization in product design, processes and manufacturing. Historically, technical innovation and standardization were inter weaved together. Military and national defense needs gave an impetus to the defense industry and industrial standardization.

The need for standardization at the international level has become most important in view of increased international cooperation and involvement in scientific, research, technological development, industrial production, space exploration and national defense related activities. These factors emphasize the need-for: (a) dissemination of national standards information at the international level; and (b) coordination of standardization effort at the international level in some vital sectors, to facilitate international communication and exchange of ideas, products, and technological know-how. Manufacturing industries exporting their products are required to conform and have knowledge about the standards and specifications affecting their products in other countries where their products are likely to be marketed.

Government agencies are among the largest producers and users of standards and specifications in most countries.

Standardization provides the clearest expression of the mix of scientific and commercial values at the heart of these professional engineering societies. Early standardization across companies and societies took place viz. ICE in 1818, IMechE in 1847, ASME in 1881, AIEE, later IEEE, in

1883; and VDE in 1893, American Society for Civil Engineers (ASCE, founded in 1852), the American Institute of Mining Engineers (AIME, founded in 1871), the American Society of Mechanical Engineers (ASME, founded in 1880), and the American Institute of Electrical Engineers (AIEE, founded in 1884). Standards committees (in groups such as the AIEE, ASME, and ASCE) multiplied quickly throughout the first decade of the 20th century. By World War I, over 100 private organizations—including the engineering societies mentioned above as well as trade associations and international bodies such as standard American Society for Testing Materials (ASTM - 1898) and the International Electro-technical Commission (IEC – 1906) were created for disseminating industrial information. International Electro-technical Commission (IEC) was established with the same goal. The IEC “developed many of the techniques and institutional mechanisms that came to typify international standard setting” and thereby laid the procedural foundations for bodies such as the American Engineering Standards Committee (AESC) and the International Federation of the National Standardizing Associations (ISA). The AESC was established as the first American general standards setting body in 1918. The ISA followed in 1926 and should be considered as the first 6 normalization standards body with a road map complementary to the IEC. The establishments of ISO (1946)/ IEC(1906) and ITU(1865) mostly were simultaneous with national ones which made it difficult to draw a clear time boundary between them.

The International Organization for Standards was established in 1946 to achieve “international agreement on industrial and commercial standards and to facilitate international trade and interchange of scientific and technological data relevant to standards.” ISO has 64 national members. When ISO was created, its objective was essentially to provide recommendations to its members aimed at harmonizing national standards, and for the first 25 years of its existence, the results of ISO’s technical work were published as ISO Recommendations. It was in the early 1970s that ISO began to publish International Standards and, in hindsight, this was a very opportune moment given the significant expansion of international trade which followed. By the early 1980s, it began to be accepted that ISO standards had their own validity in the market place and by the latter part of the decade first signs of what has come to be known as the globalization of markets was visible.

The United States government is also one of the largest producers and users of standards and specifications. Most well known is the MIL(Military) series of specifications dating back to 1944. Federal standards and specifications are administered by the General Services Administration. A key government agency dedicated to standardization and research at the national level is the National Bureau of Standards (NBS). NBS was established by an act of Congress on March 3, 1901, with the broad objectives of strengthening the nation’s science and technology and facilitating their application for public benefit. The bureau consists of several field centers and five organizational units. One of these is the Institute for Basic Standards. The bureau also assists industries in developing and publishing voluntary product standards.

2.1 Standards Bodies

The first Standards bodies were established during the early years of the twentieth century. In the year 1901, several British engineering societies founded the Engineering Standards Committee

(later the British Engineering Standards Association) to introduce nation-wide standards. A few national Standards bodies are listed below:

Engineering Standard Committee (ESC), the predecessor of British Standard Institute (BSI)	1901
Deutsches Institut für Normung e.V. (DIN)	1917
American National Standard Institute (ANSI)	1918
Commission Permanente de Standardisation, a predecessor of Association Francaise de Normalisation (AFNOR)	1918
The Association belgede Standardisation (ABS) , a predecessor of Belgian Standards Institute (Belgisch Instituut voor Normalisatie/Institut belge de 7ormalization)	1919
Japanese Industrial Standards Committee (JISC)	1929
Industrial Standard Committee of China	1931
Comité Européen de Normalisation (CEN)	1961
Comité Européen de Normalisation Electrotechnique (CENELEC)	1973
European Telecommunications Standards Institute (ETSI)	1988
Bureau of Indian Standards (BIS) earlier Indian Standards Institution	1986(1946)
Badan Standardisasi Nasional, Indonesia	1997
Brazilian National Standards Organisation	1940
Bureau of Standards Jamiaca	1969
South African Bureau of Standards	1945
Italian organisation for Standardisation (ENIU)	1921
Standards Australia	1922
Colombian Institute of Technical Standards and Certification	1963
Standards New Zealand	1931
Standards Council of Canada	1970
Swedish Standards Institute (SIS)	1922
Standards Norway	1923
Dutch Standardisation Institute	1916

Table 1: National Standards bodies

Other organizations such as Pacific Area Standards Congress (PASC), ASEAN Consultative Committee for Standards and Quality (ACCSQ) of ASEAN, Arab Industrial Development and Mining Organization (AIDMO), Pan American Standards Commission (COPANT) and African Regional Organization for Standardization (ARSO) were also founded

The standardization system formed in the twentieth century was comprised of the private, national, regional and international standardizations. It reflected both the competition and cooperation among countries and regions in the context of economic globalization.

As an important milestone, the WTO was founded in 1994, with the aim to promote the international trade. The descriptions of technical regulations, technical standards and conformance assessment, general rules and good practices for standardization were all refined in the TBT agreement. Technical regulations and standards became important rules for international

trade. This strengthened the positions of the ISO/IEC/ITU both for standards development and for their roles in international affairs. The binding relationship between ICT standards and technical innovation, along with the network externalization and positive feedback in ICT field, enables the ICT technical standards to have a great effect on the industry. The WTO/TBT agreement has enhanced the position of international standards; governments have paid more attentions to standards than before. The standardization pattern in China characterizes similarity to eastern countries and third world.

A technical standard/specification may be developed by various kinds of organizations, both public and private companies viz. corporation, a consortium (a small group of corporations), a trade association (an industry-wide group of corporations), a national government (including its military, regulatory agencies, and national laboratories and institutes), a professional association (society), a purpose made standards organization such as ISO, or vendor-neutral developed generic requirements (Telcordia Technologies). Specifications may be written by government agencies, standards organizations (ASTM, ISO, CEN, DoD, etc.), trade associations, corporations, and others. A specification might include:

- Descriptive title, number, identifier, etc. of the specification
- Date of last effective revision and revision designation
- A logo or trademark to indicate the document copyright, ownership and origin
- Table of Contents (TOC), if the document is long
- Person, office, or agency responsible for questions on the specification, updates, and deviations.
- The significance, scope or importance of the specification and its intended use.
- Terminology, definitions and abbreviations to clarify the meanings of the specification
- Test methods for measuring all specified characteristics
- Material requirements: physical, mechanical, electrical, chemical, etc. Targets and tolerances.
- Acceptance testing, including performance testing requirements.
- Drawings, photographs, or technical illustrations
- Workmanship
- Certifications required.
- Safety considerations and requirements
- Environmental considerations and requirements
- Quality control requirements, acceptance sampling, inspections, acceptance criteria
- Person, office, or agency responsible for enforcement of the specification.
- Completion and delivery.
- Provisions for rejection, re-inspection, rehearing, corrective measures
- References and citations for which any instructions in the content maybe required to fulfill the traceability and clarity of the document
- Signatures of approval, if necessary
- Change record to summarize the chronological development, revision and completion if the document is to be circulated internally

2.2 Company Standards

Most large designing and manufacturing companies develop new standards or modify published standards for internal use. Sometimes company standards developed for internal use form the basis for national standards for industry wide use. Company standards are usually confidential documents, not intended for publication or public use; they are primarily intended to streamline design and production procedure, and to achieve uniformity, safety, quality control, and economy within the company.

There are a large number of trade associations such as the Technical Association of the Pulp and Paper Industry (TAPPI), the American Petroleum Institute, and the National Electrical Manufacturers' Association and professional societies viz. Society of Automotive Engineers (SAE). Standards made by these associations are often approved as national standards by the national standardization bodies (e.g., ANSI in the United States and the British Standards Institution in England). Though a large number of engineering societies and trade associations create standards, the bulk of the standardization activity is carried out by only a few organisations. The American Society for Testing and Materials (ASTM) is the largest society solely dedicated to standardization.

Standards are covering vast area of human life. These are very important for securing right and reliable product, material, services.

2.3 Information Sources for Standards

Some of the information sources for accessing standards are:

a. Standards: A Resource and Guide for Identification, Selection, and Acquisition/Patricia Ricci and Lind Perry. St. Paul, Minn: StirtzBernardo, 1990.

A convenient inventory of national and international, governmental and industrial organisations that develop voluntary standards and specifications. Also includes listing of libraries, standards vendors, consultants of standards, newsletters and a bibliography of standards publications.

b. The KWIC Index of International Standards. Ed. 6. Geneva: ISO and IEO, 1993.

It is a single comprehensive reference source that helps to identify all existing international standards on any given subject resulting from the activities of ISO, IEO and 26 other international organisations.

Index and Directory of Industry Standards. Colorado, USA: Information Handling Services. 1991. 7 volumes.

Vol.1 - US standards (subject wise)

Vol.2 - US standards (numeric index)

Vol.3-4 - International and non-US standards (subject wise)

Vol.5 - International and non-US standards (numeric index)

Vol.6 - DIN German standards (subject wise)

Vol.7 - DIN German standards (numeric index)

It lists over 1,38,000 standards from 400 national and international standards developing organisations.

US National Bureau of Standards which has been renamed as US National Institute of Standards and Technology brings out annual publication entitled, "Publications of the National Institute of Standards and Technology". American Society for Testing and Materials (ASTM) brings out Annual Book of ASTM Standards. The British Standard Institution brings out annually Standards Catalogue. The 1996 catalogue lists around 15,000 British Standards.

c. International Abstracting Agencies such as Chemical Abstracts (CA), Engineering Index, Index Mechanics include a separate section on patents and standards. CA also provides Index to Standards and Patents. It also gives hint about equivalent standards patents in other countries, patents applied, patents allowed.

d. The Bureau of Indian Standards (BIS), New Delhi publishes three information bulletins:

- i. Standards World over (Monthly Addition): It provides classified information on about 2000 standards received in the Institutes, library each month, under 835 subject groups.
- ii. Current Published Information on Standardization is a monthly abstracting bulletin providing information on standardization and related topics.
- iii. Standards Monthly Addition: This monthly bulletin is giving information about new and revised Indian standards, ISO standards, drafts of Indian standards and GATT-TBT notifications.

e. BIS Handbook: A catalogue of around 13,000 Indian standards with alphabetical index, it is published at regular intervals.

f. Manak Doot: A quarterly journal is brought out in Hindi to create awareness about standardization and consumer protection among the masses.

g. Manak Sandarbhika is a computerised service under which information for about 2000 overseas standards are recorded on magnetic tapes. More than 1,70,000 records have already been entered and the Bureau provides topical bibliographies on a nominal charge. 84 Sources-Part 1.

3. Patents

Patents typically give the inventor an exclusive right to product of an innovation within the boundaries of the nation that grants the patent for a specified period of time. A patent is a set of exclusive rights granted by a sovereign state to an inventor or their assignee for a limited period of time, in exchange for the public disclosure of the invention. An invention is a solution to a specific technological problem, and may be a product or a process. Patents are a form of intellectual property.

The word patent has its origin from the Latin *patere*, meaning 'to lay open, for example, it is available for public inspection. It is a shortened version of the term *letters patent*, i.e., a royal decree granting exclusive rights to a person, predating the modern patent system.

A patent can be defined as a grant of exclusive rights to an inventor over his invention for a limited period of time. The exclusive rights conferred include the right to make, use, exercise, sell or distribute the invention (in India) across the nations. The term of a patent is twenty years, after the expiry of which, the invention would fall into the public domain.

The procedure for granting patents, requirements placed on the patentee, and the extent of the exclusive rights vary widely between countries according to national laws and international agreements. Typically, however, a patent application must include one or more claims that define the invention. These claims must meet relevant patentability requirements, such as novelty and non-obviousness. The exclusive right granted to a patentee in most countries is the right to prevent others from making, using, selling, or distributing the patented invention without permission. An invention should be novel, new and useful art, process or method provide specific solution to technological/manufacturing problem, development of machine/apparatus, capable of industrial application and it may be a product or process.

In accordance with the original definition of the term "patent," patents are intended to facilitate and encourage disclosure of innovations into the public domain for the common good. If inventors did not have the legal protection of patents, in many cases, they might prefer or tend to keep their inventions secret. Awarding patents generally makes the details of new technology publicly available, for exploitation by anyone after the patent expires, or for further improvement by other inventors. Furthermore, when a patent's term has expired, the public record ensures that the patentee's invention is not lost to humanity.

A patent does not give a right to make or use or sell an invention. Rather, a patent provides the right to exclude others from making, using, selling, offering for sale, or importing the patented invention for the term of the patent, which is usually 20 years from the filing date subject to the payment of maintenance fees. A patent is a limited property right the government gives inventors in exchange for their agreement to share details of their inventions with the public. Like any other property right, it may be sold, licensed, mortgaged, assigned or transferred, given away, or simply abandoned.

A patent, being an exclusionary right, does not necessarily give the patent owner the right to exploit the patent. For example, many inventions are improvements of prior inventions that may still be covered by someone else's patent. If an inventor obtains a patent on improvements to an existing invention which is still under patent, they can only legally use the improved invention if the patent holder of the original invention gives permission, which they may refuse.

3.1 History (of Patent)

In 500 BC, in the Greek city of Sybaris (in what is now southern Italy), "Encouragement was held out to all who should discover any new refinement in luxury, the profits arising from which were secured to the inventor by patent for the space of a year." The Florentine architect Filippo

Brunelleschi received a three-year patent for a barge with hoisting gear, that carried marble along the Arno River in 1421. In 1449, King Henry VI granted the first English patent with a license of 20 years to John of Utynam for introducing the making of colored glass to England.

Patents in the modern sense originated in 1474, when the Republic of Venice enacted a decree that new and inventive devices, once put into practice, had to be communicated to the Republic to obtain the right to prevent others from using them. It was then followed by England in 1624, England followed with the Statute of Monopolies in 1624, under King James I, which declared that patents could only be granted for "...projects of new invention." During the reign of Queen Anne (1702–14), lawyers of the English Court developed the requirement that a written description of the invention must be submitted. The patent systems in many other countries, including Australia, are based on British law and can be traced back to the Statute of Monopolies. The patent systems in many other countries are based on British law including Australia. In 1641, Samuel Winslow was granted the first patent in North America by the Massachusetts General Court for a new process for making salt. In the United States, during the colonial period and Articles of Confederation years (1778–89), several states adopted their own patent systems. The first Congress adopted a Patent Act in 1790, and the first patent was issued under this Act on July 31, 1790 (to Samuel Hopkins of Vermont for a potash production technique).

In France, patents were granted by the monarchy and by other institutions like the "Maison du Roi". The Academy examined novelty. Examinations were generally done in secret with no requirement to publish a description of the invention. Actual use of the invention was deemed adequate disclosure to the public. The modern French patent system was created during the Revolution in 1791. Patents were granted without examination since inventor's right was considered as a natural one.

The patent law in India has its origin in the 19th century, during the British rule when first legislation relating to patents was enacted. It was Act VI of 1856 by the British crown via Government of India Act 1858. Fresh legislation for granting 'exclusive privileges' was introduced in 1859 as Act XV of 1859. This legislation contained certain modifications of the earlier legislation, namely, grant of exclusive privileges to useful inventions only and extension of priority period from 6 months to 12 months. This Act excluded importers from the definition of inventor. These Acts were based on the United Kingdom Act of 1852 with certain departures which include allowing assignees to make application in India and also taking prior public use or publication in India or United Kingdom for the purpose of ascertaining novelty. Subsequently three laws relating to patents -The Patents and Designs Protection Act, 1872; The Protection Of Inventions Act, 1883 later consolidated as The Inventions & Designs Act, 1888; and The Indian Patents & Designs Act 1911 were enacted in the British Era. Patent Administration was brought under the management of the Controller of Patents for the first time via the Indian Patents and Designs Act 1911. The 1911 Act was amended in 1950 by Act 32 of 1950, in relation to working of inventions, including compulsory licensing and revocation of patents. The new law of patent, namely, the Patents Act, 1970, came to be enacted and came into force on April 20, 1972, replacing the Patents and Designs Act, 1911.

3.2 Advantages of Patent Documents as a Source of Information

- They contain information which is often not divulged in any other form of literature.
- They have a relatively standardized format including an abstract, bibliographic information, a description of, and in most cases also drawings illustrating the invention and full details on the applicant.
- They are classified according to technical fields (for more information see "General Information on the International Patent Classification System"; also available in Spanish and French).
- They provide examples of industrial applicability of an invention.
- They cover practically every field of technology.

3.3 Requirements for a Patent

Patents are granted only after the satisfaction of certain requirements, which include the patentable subject-matter, utility, novelty, obviousness and specification.

- **Patentable subject matter:** To be patentable, an invention should fall within the scope of patentable subject matter as by the patent statute. The invention must be a product or a process in order to be eligible for patent protection.
- **Novelty:** The invention claimed must be novel indicating that it should be new at the time of conception. Novelty of invention must be considered in the light of prior art. Prior art means the technology that is relevant to the invention and is publicly available at the time the invention is made. It includes prior specifications, patents, printed and published literature and other materials related to the invention. An invention is not novel if it can be anticipated in the light of prior art.
- **Obviousness/Inventive step:** An invention should also not be obvious to a person having ordinary skill in the art to which it relates. If the invention is obvious and does not have any inventive step, it is not patentable. Existence of a prior publication of the invention in any Indian specification or in any document in India or elsewhere or public use of the invention would make an invention obvious. In order to be ineligible for a patent, an invention should be obvious at the time of conception of the invention and not at the time of contention of obviousness.
- **Specification:** Specification is an essential part of a patent. It should consist of the subject-matter, description and at times including the drawing of the invention indicating its scope. The specification has to enable a person with ordinary skill in the art to practice and use the invention. It should also describe the best mode of performing the invention.

A patent is usually granted only if it satisfies all the aforementioned requirements.

3.4 Patent Infringement

Infringement of a patent is the violation of the exclusive rights of the patent holder. If any person exercises the exclusive rights of the patent holder without the patent owner's authorization then that person is liable for patent infringement. An accused infringer has the right to challenge the validity of the patent allegedly being infringed in a countersuit. A patent can be found invalid on grounds described in the relevant patent laws, which vary between countries. Often, the grounds are a subset of requirements for patentability in the relevant country. Although an infringer is generally free to rely on any available ground of invalidity (such as a prior publication, for example), some countries have sanctions to prevent the same validity questions being relitigated. An example is the UK Certificate of contested validity.

Patent licensing agreements are contracts in which the patent owner (the licensor) agrees to grant the licensee the right to make, use, sell, and/or import the claimed invention, usually in return for a royalty or other compensation. It is common for companies engaged in complex technical fields to enter into multiple license agreements associated with the production of a single product. Moreover, it is equally common for competitors in such fields to license patents to each other under cross-licensing agreements in order to share the benefits of using each other's patented inventions.

3.5 Ownership of Patent

In most countries, both natural persons and corporate entities may apply for a patent. In the United States, however, only the inventor(s) may apply for a patent although it may be assigned to a corporate entity subsequently and inventors may be required to assign inventions to their employers under an employment contract. In most European countries, ownership of an invention may pass from the inventor to their employer by rule of law if the invention was made in the course of the inventor's normal or specifically assigned employment duties, where an invention might reasonably be expected to result from carrying out those duties, or if the inventor had a special obligation to further the interests of the employer's company.

The inventors, their successors or their assignees become the proprietors of the patent when and if it is granted. If a patent is granted to more than one proprietor, the laws of the country in question and any agreement between the proprietors may affect the extent to which each proprietor can exploit the patent. For example, in some countries, each proprietor may freely license or assign their rights in the patent to another person while the law in other countries prohibits such actions without the permission of the other proprietor(s).

The ability to assign ownership rights increases the liquidity of a patent as property. Inventors can obtain patents and then sell them to third parties. The third parties then own the patents and have the same rights to prevent others from exploiting the claimed inventions, as if they had originally made the inventions themselves.

3.6 Patent Governing Laws

The grant and enforcement of patents are governed by national laws, and also by international treaties, where those treaties have been given effect in national laws. Patents are granted by national or regional patent offices. A given patent is therefore only useful for protecting an invention in the country in which that patent is granted. In other words, patent law is territorial in nature. When a patent application is published, the invention disclosed in the application becomes prior art and enters the public domain (if not protected by other patents) in countries where a patent applicant does not seek protection, the application thus generally becoming prior art against anyone (including the applicant) who might seek patent protection for the invention in those countries.

Commonly, a nation forms a patent office with responsibility for operating that nation's patent system, within the relevant patent laws. The patent office generally has responsibility for the grant of patents, with infringement being the remit of national courts.

3.7 Patent System in India

The patent landscape in India is fast evolving. The IPO continues to improve and with the availability of patent examiners, the capacity of the IPO to resolve pending applications has increased significantly. Furthermore, the availability and reliability of information from the IPO helps to create greater certainty in the Indian patent system. However, with four patent offices, specific disclosure requirement and statement of working requirement, getting and maintaining a patent or even getting information on a patent in India can still be a maze to navigate. MaxVal with patent attorneys and agents both in the U.S. and India can help people understand the issues and implement patent strategy.

- **Indian Patent Information System**

The Indian Patent Office is administered by the Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM). This is a subordinate office of the Indian government and administers the Indian law of Patents, Designs and Trade Marks. The CGPDTM reports to the Department of Industrial Policy and Promotion(DIPP) under the Ministry of Commerce and Industry. The patent office is headquartered at Kolkata with branches in Chennai, New Delhi and Mumbai, but the office of the CGPDTM is in Mumbai. The office of the Patent Information System and The Rajiv Gandhi National Institute for Intellectual Property Management is at Nagpur.

The Indian Patent Office has 75 Patent Examiners, 70 Assistant Controllers, 7 Deputy Controllers, 1 Joint Controller, and 1 Senior Joint Controller, all of whom operate from four branches. Although the designations of the Controllers differ, all of them (with the exception of the Controller General) have equal authority in administering the Patents Act.

An Indian Patent Examiner is mandated to search for prior art and for objections under any other ground as provided in the Patent's Act, then to report to the Controller, who has the power to either accept or reject Examiners' reports. Unlike the system at the USPTO /EPO/JPO,

Examiners at IPO have only recommending power and the controllers are empowered by statute either to accept or refuse their recommendations. This means that only Controllers have the power to grant or refuse patents in India. Examiners' reports to the Controller are not open to the public unless courts allow it.

- **Indian Patent Laws**

India is a major market with a population of 1.21 billion people (2011 census), the second most populous country in the world and is a rapidly growing economy. Starting with the Patents Act of 1970, India had opted for strong protection to its industry and particularly to its pharmaceutical industry. Consequent to India becoming signatory to TRIPS in 1998, the patent laws and rules have been amended with the latest amendments taking effect from May 5, 2006.

The Annual Report of the Indian Patent Office (IPO) (June 2011) states that “the TRIPS compliant intellectual property laws in India coupled with strong enforcement mechanism and judicial system created the best investment opportunities and conducive environment for protection of IP rights in order to enable the business community to diversify their commercial activities.”

In addition to the legal improvement, the functioning of the IPO has been streamlined, and the availability and reliability of information has seen continual improvements. This article discusses some nuances of patent filing and prosecution in India that require special consideration arising from certain country-specific provisions.

- **Amendments to the Patents Act**

Amendments (in 1999, 2002, 2005, and 2006) were necessitated by India's obligations under TRIPS, allowing product patents in drugs and chemicals. Another important feature was the introduction of pre-grant representation (opposition) in addition to the existing post-grant opposition mechanism. The pre-grant representation has had success in a short span. A controversial provision of this amendment was on software patent-ability, which was later withdrawn in another amendment (Patents Act, 1970, as amended by Patents (Amendment) Act, 2005). It is clear from the legislative history and interpretation of provisions in the Patent Act, 1970 (as amended in 2005) that the Patent office should not allow intrinsic patent-ability of computer programs. But there is evidence suggesting that the Patent office has acted otherwise. Patent Rules 2003 were amended in 2005, 2006 and again in 2012. Some of the important features of both the 2005 & 2006 Rules are the introduction of reduced time lines and a fee structure based on specification size and number of claims, in addition to a basic fee. The amendment in 2012 focused on change in marks of Patent Agent Examination.

- **Patent Filing Procedure**

The Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM) is located in Mumbai. The Head Office of the Patent office is in Kolkata and its Branch offices are located in Chennai, New Delhi and Mumbai. The Patent Office receives applications at each of the four offices according to a determination of jurisdiction. For international applicants, the appropriate

office is the one closest to the address for service in India, which practically goes down to the place of business of the patent agent.

- **Patent duration**

Term of every patent in India is 20 years from the date of filing of patent application, irrespective of whether it is filled with provisional or complete specification. However, in case of applications filed under PCT the term of 20 years begins from International filing.

3.8 U. S. Patent System

In modern usage, the term patent usually refers to the right granted to anyone who invents any new, useful, and non-obvious process, machine, article of manufacture, or composition of matter. Some other types of intellectual property rights are also called patents in some jurisdictions. The additional qualification utility patent is sometimes used (primarily in the US) to distinguish the primary meaning from these other types of patents. Particular species of patents for inventions include biological patents, business method patents, chemical patents and software patents.

U.S. patent system is an incentive system. The 17-year exclusive right to make, use, and sell a patented invention stimulates not only invention and innovation, but also investments in new productive facilities and disclosure of new technology revealed in patents. As such, U.S. patent system has played a uniquely important role in the development of U.S. technology and has been a major factor in the nation's economic vitality, increased productivity, enhanced standard of living, and position of leadership in science and technology. Examples of patented products and processes which have been responsible for creating new markets and industries are all about us and recorded in the archives of the Patent and Trademark Office. Anyone who makes, uses, or sells the patented invention without the patentee's authorization infringes the patent right and is legally liable.

3.9 Patent Cooperation Treaty (PCT)

A significant advance in the international patent community has been the development of the Patent Cooperation Treaty (PCT). This treaty was unanimously approved by a plenary session of the member states of the Paris Union at the Washington Diplomatic Conference in the spring of 1970. At the conclusion of the conference the treaty was signed by 20 member states of the union. The PCT has been designed to save effort both for applicants and national patent offices in the handling of applications concerning the same invention filed in one or more countries. Additionally, the treaty is designed to increase the likelihood of issuing strong patents in countries not having all the facilities required to do a thorough search and examination. The basic feature of the Patent Cooperation Treaty is the filing of a single international patent application in one language with one patent office. This international application would have, from its filing date, the same effect in each of the contracting states designated by the applicants as if they had filed national applications separately. In other words, it has the effect of a national filing in each of the designated states.

The Patent Cooperation Treaty, which is not yet in force but is expected to be operational in the near future, is optional and in no way diminishes the rights that an applicant may have under the Paris Convention. An applicant may elect to proceed according to the Paris Convention or according to the Patent Cooperation Treaty. In any event, insofar as the treaty provides centralized filing procedures and a standardized national application format, it should offer a stimulus to the cross-filing of patent applications on a worldwide basis which should correspondingly increase the transfer of useful technology to the member states and facilitate and accelerate access by the international public to technical information contained in documents describing new inventions.

Under the World Trade Organization's (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights, patents should be available in WTO member states for any invention, in all fields of technology, and the term of protection available should be a minimum of twenty years. Nevertheless, there are variations on what is patentable subject matter from country to country.

3.10 Sources of Patent Information

a. Official Sources

All member countries of the Paris Convention for Protection of Industrial Property (1983) (amended from time to time) are required to produce an official journal giving details of granted patents and trademarks. These official journals are usually published.

The Official Journal (1854 -) published at weekly interval by the British Patent Office, carries information on newly granted patents in UK.

Official Gazette (1872 -) of the US Patent office, also published at weekly interval, is the American counterpart to The Official Journal.

Indian patents are published in Gazette of India, Part III, Sec. 2 every week. Indian Chemical Patents Index, 1988 (Nine, National Information Centre for Chemistry and Chemical Technology, National Chemical Laboratory, Pune 411007) covers current Indian patents in chemical sciences.

The European Patent Office is bringing out a weekly bulletin in English, French and German. The World Intellectual Property Organisation located at Geneva, publishes PCT Gazette both in English and French at fortnightly intervals.

The International Patent Documentation Centre (INPADOC) in Vienna collates and publishes information about patents from around 60 countries and regional patent issuing authorities around the world. INPADOC Database available online has bibliographic details of more than thirteen million patent documents dating 1973 to present.

In India, the Patent head office is located at Calcutta with branch offices at Chennai, Mumbai and Delhi. The Libraries of the Patent offices have been offering consultation facilities. The Patent Office Journal is an annual publication. The Calcutta Office also maintains collection of

US, UK, Russian, Australian, New Zealand, the Netherlands and German (former GDR) specifications. The Library subscribes to World Patent Abstracts (Derwent).

The Patent Information System (PIS) set up at Nagpur in 1980 has patent information of more than fifty countries from 1968 onwards in a computer searchable form. The centre also conducts statutory novelty searches of patent document in respect of patents filed in Indian Patent Office. The Centre has a collection of over 7.5 million foreign patent documents and various patents abstracts publications covering patents of different countries.

Patent and Know-how Information Division of National Informatics Centre (NIC) provides both offline and online services. The offline service provides bibliographic search, abstracts and full patents. The online service provides access to one of the most comprehensive and largest database on the Patent bibliography known as EPIDOS (European Patent Information and Documentation Service) published by the European Patent Office. NIC has also acquired US Patent Office's Patent CASSIS. Under CASSIS the various services offered are CASSIS/ BIB (1969+ , bimonthly), CASSIS/ASSIGN (1980+, quarterly), CASSIS/CLASS (1990+ , bimonthly) and CASSIS/ASIST (quarterly). All are available in CD-ROM.

The National Science Library, NISCAIR (INSDOC), New Delhi has Japanese and Australian Patents. This library also houses the CSIR, Intellectual Property Management Division. The function of this division is to process and keep record of the patents received by the CSIR.

b. Commercial Sources

Patent throughout the World led. by Alan J. Jacobs. Ed. 4 New York: Trade Activities. A single volume loose leaf publication, kept up-to-date by publication of revised pages quarterly in a year.

Rimmer, Brenda M. International Guide to Official Industrial Property Publications. Ed.2/ revised by S. van Dulken. London: The British Library. The handbook describes the official literature that records patents, designs, and trade marks for about 50 national and international patenting authorities. Also describes historical development of Patent Systems and Contemporary Legislations and Publications.

World Directory of Sources of Patents. Geneva: World Intellectual Property Organisation, 1985. Information Sources in Patents/ ed. by P. Anger. New Providence, N.J.: Bowker-Saur, 1992.

Patent Information and Documentation Handbook. Geneva: World Intellectual Property Organisation.

World Information and Documentation Handbook. Geneva: World Intellectual Property Organisation, 1981, an English/French multi volume loose leaf work updated periodically with replacement sheets.

There are some serial publications for patent information:

World Patent Index. London: Derwent, 1975-, updated weekly and monthly. This comprises of two main sections, Current Patents Index and Electrical Patents Index. It is the only comprehensive patent abstracting service. It covers patents issued by most of the European countries, China, Japan, South Korea, Israel and the USA. It comprises alerting abstracts in individual country reports weekly as well as subject oriented weekly journals for non-chemical technologies.

World Patent Information. Oxford: Pergamon. (For European Community and World Intellectual Property Organisation 1979- , Quarterly.) This covers patent documentation, classification and statistics and also contains articles, short communications, information on meetings and literature review.

NISCAIR (INSDOC) in collaboration with Intellectual Property Management Division of CSIR has brought out a database of Indian patents on CD-ROM titled INPAT. It is a bibliographic database providing information on nearly 52,000 patents granted in India from the year 1972 to December 1998. The information on a patent in the database comprises: patent title, applicant and inventor names, patent and application numbers, application and publication dates, international Classification Code and country.

4. Trade Catalogues

The trade catalogues are an important source for getting information about any product and its development. Trade catalogs are primary sources in which information about products or processes appears prior to any other form of literature. In fact, vast amount of information about specific commercial products are depicted.

The term "Trade catalogue" is derived from the expression "to the trade," and the materials are originally produced by manufacturers and wholesalers for their salesmen to market to retailers. Definitions of the term "trade catalogue" vary, but in general, trade catalogues are printed materials published by manufacturing, wholesalers or retailers for promoting sales by making advertising claims, give instructions in using products, provide testimonials from satisfied customers, and include detailed descriptions of sale products. These aim to describe and illustrates equipment, goods, processes, services. These are generically used to denote a variety of literature produced by manufacturers and distributors illustrating different kind of material, product, processes, services. Generally these are developed to advertise about product and promote the sales giving instructions in using products, providing testimonials from satisfied customers, and includes detailed descriptions of products.

The origin of trade catalogues can be traced back to 1780 in England. Some British manufacturers were sending their catalogues to many countries. Product catalogues are generally important for engineers and technologists engaged in design, development, production and marketing of industrial products. Trade catalogues are often undated and price information is usually not included as these are almost always supplied free. No standards are followed by publishers of trade catalogues.

The vast varieties of products are described in trade catalogues apart from tremendous variety in the products themselves. There is considerable diversity in the format, size, and source of catalogues, as well as in the nature and amount of information provided therein. It may be a brief announcement of a single product to thousands of products which often are described in great detail with photographs, drawings, etc. These may be in the form of technical bulletin, data sheet, price list, etc. The design of trade catalogues seems to be governed by the psychology and economics of advertising and selling -rather than by considerations of their use and preservation. These range from a single sheet of paper with a technical description of one product to a bound volume containing detailed descriptions and technical data on numerous products of a company, or a loose-leaf service kept up to date by periodic supplement Catalogues of this category contain substantial technical data about products and their applications, periodic supplements.

4.1 Functions of Trade Catalogues

The functions of trade catalogues are:

- To provide latest information related to industrial products,
- To make available latest details with regard to availability of a particular machinery, its components or products in the market,
- To enable experts and specialists to compare similar products available from different manufacturers,
- To serve as a channel of communication between manufacturers, agents and buyers of products,
- To provide names, addresses and contact details of manufacturers, distributors, etc.,
- To provide information with regard to history of a technology, process or product, and
- To provide business history of commercial items through back issues of these bulletins.

Trade catalogues contain application-oriented descriptive information rather than detailing theoretical principles. However, trade literature describing medicines and complex scientific instruments frequently includes a brief descriptions of relevant background research, supported by charts, diagrams, equations, and literature references.

4.2 Categories of Trade Literature

Trade literature is available in wide range of information sources. In spite of the bewildering variety in the physical characteristics of trade catalogues, a few basic types can be identified:

- Manufacturer's catalogues and Data sheets
- House journals and newsletters
- Special issues and supplements of journals
- Advertisements and announcements in technical/trade journals
- Directories of industries, products and companies
- Product description supplied at Trade fairs, Exhibitions and Conferences/Conventions
- Companies Websites and Trade Portals
- Trade catalogue services

- Manuals

Most technical journals and trade magazines carry product advertisements as well as product news and notes compiled by staff. Almost always each issue has an advertisers Index. Some journals (e.g. Production, Equipment Digest, Chemical Processing and Product Engineering. Reader Service Cards (RSC) in the journals is a simple mechanism for the reader of the journal to obtain more detailed information about a product or service advertised or announced in the journal from the manufacturer or distributor. Many technical journals publish an annual special issue or a supplement, usually called "Buyers' Guide" or "Directory Issue".

A rapid growth of trade literature was characteristic for the epoch of developing capitalism. Owing to the fierce competition among companies in present-day bourgeois society, the number of publications dealing with practical applications is low and becoming still lower. In socialist society, trade literature is published at a high and stable rate. The publication of trade literature in the developing countries is increasing.

Trade publications include handbooks and manuals, monographs and serial publications, such as Builder's Library and Economics of Metallurgical Production, and descriptions of new methods in industry. Other types of trade publications are albums of designs and plans, pamphlets, specifications, technological instructions and norms, and operating and servicing instructions. Monographs dealing with applied science and published for advanced study by highly qualified specialists are becoming increasingly common. They reflect the practical results and potential of scientific research and development.

4.3 Trade Fair Catalogues

Manufacturers exhibit their products and distribute catalogues at conventions and conferences organized by professional societies. Trade catalogs are also issued at international trade fairs and expositions Directories. These are independent, publications containing data on a number of companies and their products in one branch of science, engineering, or technology.

4.4 Examples of Trade Catalogues

- <http://catalogs.indiamart.com/> makes available all details related to Indian industries.
- <http://catalogs.eindiabusiness.com/>: This is an online catalogue concerning various business in Indian Industry.
- Economic Times annually brings out supplements related to 100 top selling brands, top 100 companies, etc.
- Industrial Products Finder is a monthly product news magazine, presenting new products, devices and services for, and relating to, the industrial sector of India. It is currently India's widest circulated industrial journal that carries details of new industrial products and services manufactured in India.

- Industrial Equipment News®: U.S. has been delivering product sales messages to the top decision-makers across the U.S. for over 70 years. Over 200,000 qualified industrial management and engineering specifiers rely on IEN - U.S. for information about new products and services from the US and around the world. The target users include Qualified Industrial/Design Engineers, Corporate Management, Purchasing, Production, and Plant Operation Management.
- Manufacturers Directory: Hand Tools, Garden Tools, Machine Tools and Allied Products.
- Manufacturers and Wholesalers Directory, an online B2B platform lets buyers interact with businesses of their interest, in domestic and international marketplace. Get access to an online directory of manufacturers and wholesalers, dealing in the manufacture and wholesale of a wide range of products and services.
- <http://www.biztradeshows.com/>: The largest directory of trade fairs and business events provides an exhaustive coverage of exhibitions, trade shows and expositions, conferences and seminars for various industries worldwide. You can browse through the most comprehensive information on individual trade events worldwide, along with their event profile, organizer, exhibitor and visitor profile, venues and dates to plan your participation much in advance.
- <http://www.eindiabusiness.com> : eIndia Business is an online business directory of India that contains details related to Business Catalogs, Indian Exporters, Indian Importers, Indian Service Providers, Exporters Worldwide, Importers Worldwide and Service Providers Worldwide.
- India Machine Tools Show 2007, July 24 - 27, 2007, New Delhi
- Electrical and Electronic Expo 2007, July 27-29, 2007, Hyderabad
- MTA Malaysia 2007 – the 4th Malaysia International Precision Engineering, Machine Tools and Metal Working Exhibition and Conference, 16-20 May, 2007, Kuala Lumpur, Malaysia
- <http://www.buyersguide.com/>: This website is an online Buyer's Guide that offers guidance to the buyers on a variety of products, specializing in cars, real estate, automotive & pets.
- <http://www.tradeportalindia.com/>: India Trade Promotion Organisation (ITPO) is the premier trade promotion agency of the Government of India. ITPO provides a broad spectrum of services to trade and industry so as to catalyse the growth of bilateral trade, particularly India's exports, and technological upgradation and modernization of different industry segments. ITPO's programmes are carried out in close cooperation with

the Indian industry whose promotional needs it seeks to serve. Business Information Centre (BIC) is ITPO's initiative in providing trade information services with electronic accessibility. Through this site, BIC addresses the new challenges and methods of doing business using reliable trade information and support services. BIC provides on stop point for varied trade information and services on India by serving overseas importers to source from India and Indian exporters to expand business. BIC provides efficient management of trade information services besides connectivity and linkages to trade organizations in India and overseas and facilitates greater market access for Indian business.

- <http://www.tradeindia.com/>: This site provides vital information related to exporters, importers, manufacturers, buyers, service providers, online catalogues and trade leads for over 6.5 lakh members. It operates through an online control system to customize and manage all subscriber related operations on tradeindia.com. Packed with lots of useful and interesting features, this is an ideal platform to post buy/sell offers, receive trade alerts, keep track of all trade inquiries, see current status and update the company profile.

5. Summary

In this Module, we had discussed Standards, Patents and Trade catalogues. These form a major collection of any scientific and technical libraries. Standards bring quality and uniformity in producing variety of products. The standards organisations in various countries bring out information about standards. The various sources that make available standards have also been discussed.

A patent is essentially a limited monopoly whereby the patent holder is granted the exclusive right to make, use, and sell the patented innovation for a limited period of time. Patents focus on the latest inventions and they can be grouped in several ways. There are various official and commercial sources for patent information.

Lastly, the Trade catalogues, although primarily published to promote the sale of particular products, serve as an indispensable source of information for specialized group of users that includes technologists, scientists, chemists, medical practitioners, industry users, etc.

6. References

1. <http://catalogs.indiamart.com/>
2. <http://catalogs.eindiabusiness.com/>
3. <http://www.biztradeshows.com/>
4. <http://www.eindiabusiness.com>
5. <http://www.buyersguide.com>

6. <http://www.tradeportalindia.com/>
7. <http://www.tradeindia.com>