KLUWER LAW INTERNATIONAL

Intellectual Property and Competitive Strategies in the 21st Century

By Shahid Alikhan and Raghunath Mashelkar

Second Edition

Wolters Kluwer
Law & Business

KLUWER LAW INTERNATIONAL

Intellectual Property and Competitive Strategies in the 21st Century

SECOND EDITION

By
SHAHID ALIKHAN
and
RAGHUNATH MASHELKAR

Wolters Kluwer
Law & Business

AUSTIN BOSTON CHICAGO NEW YORK THE NETHERLANDS

Published by:
Kluwer Law International
PO Box 316
2400 AH Alphen aan den Rijn
The Netherlands
Website: www.kluwerlaw.com

Sold and distributed in North, Central and South America by:
Aspen Publishers, Inc.
7201 McKinney Circle
Frederick, MD 21704
United States of America
Email: customer.care@aspenpubl.com

Sold and distributed in all other countries by:
Turpin Distribution Services Ltd.
Stratton Business Park
Pegasus Drive, Biggleswade
Bedfordshire SG18 8TQ
United Kingdom
Email: kluwerlaw@turpin-distribution.com

Printed on acid-free paper.

ISBN 978-90-411-2644-3

Printed in Great Britain.

PREFACE

That knowledge has played a key role in human progress has long been acknowledged by leaders in all walks of life. It is the vitality of new and original knowledge and of creative expressions of ideas which has brought the role of knowledge, and consequently of the intellectual property system, into the limelight in recent years.

We build on the basis of accumulated knowledge through creative adaptation, innovative interpretation and ingenious insights. Creating an environment which fosters and enhances the use of this improved understanding of ourselves and our environment is a key challenge and a core concern for the state, market and society in many countries.

The modern intellectual property system has become an important tool for harnessing the power of knowledge for development, and this enhanced focus on intellectual property has put this system under intense scrutiny from multiple perspectives worldwide. The dynamics of economic, social, cultural and political factors in a democratic dialogue and consensus-driven environment invariably interface with and shape the future evolution of the intellectual property system.

The authors are internationally well-known authorities on intellectual property matters – Shahid Alikhan, a former Deputy Director General of the World Intellectual Property Organization (WIPO); and Raghunath Mashelkar, an outstanding scientist and dynamic leader of the Council of Scientific and Industrial Research (CSIR) of India. They have, through this book, helped to demystify the subject of intellectual property for a varied audience and have done so with a singular conviction that, if properly managed, the intellectual property system can contribute to the betterment of the human condition in all societies. Their presentation on *Intellectual Property and Competitive Strategies in the 21st Century* is unique in its emphasis on the techno-economic impact of intellectual property rights on enterprise competitiveness. Its coverage of a number of current issues that pose challenges to the intellectual property system is especially timely.

This book deals with a wide array of topics in a lucid, coherent and concise manner, and provides a panoramic view of the pitfalls, challenges and possibilities linked to the intellectual property system as an instrument for socio-economic, cultural and technological development as well as for improving the quality of life of the many people of our planet.

Kamil Idris
Ex-Director General
WIPO

ACKNOWLEDGEMENTS

It is a pleasure to present the second edition of this book. The edition contains a judicious update of the data and analysis. This has been done especially in light of significant advances in the intellectual property arena that have taken place over the past five years in many critical areas that help shape competitive strategies.

This book arose out of our recognition of the need to enhance and increase broad-based awareness of the techno-economic effects of intellectual property rights protection on enterprise competitiveness, national growth and development.

We wish to record our deep gratitude and thanks to the Director General of the World Intellectual Property Organization (WIPO), Dr Kamil Idris, for writing the preface for this book.

A number of WIPO officials and friends have made many suggestions and willingly provided considerable assistance by going through the relevant portions of the text and by providing very useful comments and input, including updating of information. In the latter context, we wish particularly to thank very much Guriqbal Singh Jaiya and Anuradha Madhavan for their enormous help. In the same connection, we equally and profusely thank our other friends in WIPO, including Francis Gurry, Geoffrey Yu, Carlotta Graffigna, Yo Takagi, Kurt Kemper, Sherif Saadallah, Jorgen Blomqvist, Inayeth Syed, Wang Zhengfa, Alejandro Roca, Richard Owens, Wolfgang Starein, Vladmir Yossifov, Li Jiahao, Pushpendra Rai, Edward Kwakwa, Colin Buffam, Marcus Hopperger, Denis Croze, William Guy, Wend Wendland, Irfan Baloch, Monique Ivanovsky, Anil Sinha, Larry Allman, Dimiter Gantchev, Christine Collard and Cecile Muller-Soligon, among others. Our grateful thanks are also due to our friends in the WTO, including the former Director General, Mike Moore, whose addresses, sent to a co-author, we have partially quoted.

Our warm thanks are also due to friends in the government, the private sector and national and international organizations in our country, including S. Narayan, Economic Adviser to the Prime Minister and former Finance Secretary and also Secretary, Industrial Policy and Promotion, Government of India; Raghubir Singh, former Legislative Secretary, Ministry of Law and Justice, Government of India and Secretary of the National Commission to Review the Working of the Constitution; S. Chakravarthy, former Senior Indian Civil Servant and Member, Monopolies and Restrictive Trade Practices Commission; Suresh Chandra, Additional Secretary and Development Commissioner (SSI), Ministry of Small Scale Industries, Government of India; Rajiv Ranjan, Director, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India.

Our grateful thanks are also owed to Kiran Karnik, President, National Association of Software and Service Companies (NASSCOM); Arun Agrawal, Secretary-General, World

Association of Small and Medium Enterprises (WASME); V.N. Prasad, Senior Economic Adviser, WASME; Sanjay Tandon, Director General, Indian Performing Rights Society (IPRS); Aditya Trivedi, Secretary, Indian Institute of Intellectual Property Development (IIPD) and Joint Secretary, Federation of Indian Chambers of Commerce and Industry (FICCI).

We wish also to acknowledge with grateful thanks the assistance by way of requested information that was readily provided by our many friends in the international and national non-governmental organizations in other countries such as, among many others, Federico Mayor, former Director General of UNEWSCO; Mithaly Ficsor, former Assistant Director General, WIPO and currently Director, Centre for Information Technology and Intellectual Property, Budapest; Eric H. Smith, President, International Intellectual Property Alliance, Washington, DC; Clive Bradley, former Chief Executive of the British Publishers' Federation, London; Benoit Muller, former Director General, International Publishers Association, Geneva; Denis de Freitas, President of Honour of the British Copyright Council; Geoffrey Adams, Vice President and Janet Ibbotson, Secretary of the British Copyright Council, London; Moira Burnett, Legal Adviser, Legal Department, European Broadcasting Union, Geneva; and Elizabeth Iles, Head of Library Services, International Federation of the Phonographic Industry, London.

The significant contributions also made by the scientists and supporting staff of the National Institute of Science Communication and Information Resources (NISCAIR) – a constituent unit of the Indian Council of Scientific and Industrial Research (CSIR), and by the staff of CSIR are greatly appreciated. In particular, our very special thanks, for their immense help in many ways, are due to V.K. Gupta, Director, NISCAIR; R.K. Gupta, Head of the Intellectual Property Management Division of CSIR; NISCAIR's Editor B.C. Sharma, and scientists M.M.S. Karki, Archana Sharma, N.R. Mankad, B. Subramaniam, and their colleagues Vinod Kumar Sharma, Deepak Sheopuri, and many others who also assisted us readily and painstakingly. Further, our profuse thanks are also due to the staff of the office of the Director General, CSIR headquarters, namely Deputy Secretary S.C. Kalra and his colleagues, Sunil Kumar, N.K. Taneja, V.K. Sharma and Satish Chand, who always provided much help willingly.

Grateful thanks are also due to Arvind Chinchure and Amey Mashelkar of Reliance Innovation Leadership Council in Pune, who provided invaluable help in amending the second edition of this book.

ABOUT THE AUTHORS

Shahid Alikhan is a highly distinguished elder statesman in the field of intellectual property. A former Deputy Director General of the World Intellectual Property Organization (WIPO) and Undersecretary General in the United Nations, he is the author of numerous articles, monographs and books on various aspects of intellectual property rights as they relate to corporate competitiveness and socio-economic development. Now retired, he continues to write, lecture, and conduct seminars in such diverse areas of intellectual property rights as counterfeiting, the Internet, and electronic commerce, for such UN organizations as WIPO, UNESCO and ITC, as well as governmental and non-governmental organizations, and private sector institutions in Europe and in developing countries. He also acts as a representative and senior adviser of the World Association for Small and Medium Enterprises (WASME) on continuing and promoting assistance to single- and medium-sized enterprises (SMEs) worldwide, and serves on the editorial board of the monthly *Journal of Intellectual Property Rights of the National Institute of Science Communication and Information Resources* (NISCAIR) in New Delhi. He is also a member of the Governing Council of the Indian Institute of Intellectual Property Development (IIPD).

Raghunath Mashelkar, one of the world's outstanding chemical engineering scientists, has published more than 200 scientific research articles in polymer science and engineering. He is also known for his work on the nexus of intellectual property rights and economic development, particularly in the area of the protection of India's traditional knowledge base. For more than eleven years he was the Director General of the Council of Scientific & Industrial Research (CSIR), the largest chain of industrial research and development institutions in the world. He has also been the Chairman of the Standing Committee on Information Technology of the World Intellectual Property Rights (SCIT), a member of the UK Commission on Intellectual Property Rights (CIPR) and the Vice-Chairman of WHO Commission on IPR, Innovation & Public Health (CIPIH). He is one of only three Indian engineers in the twentieth century to be elected a Fellow of the Royal Society (FRS), London. His academic distinctions include Foreign Associateships of the US National Academies of Science and Engineering, the Third World Academy of Sciences, the UK Royal Academy of Engineering, and the World Academy of Art and Science, US. He has won numerous honours and awards nationally and internationally, including twenty-six honorary doctorates from major universities worldwide.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION TO INTELLECTUAL PROPERTY

– Nature of the Intellectual Property (IP) System
– Rationale for Its Protection

1.1 Emergence of a Knowledge Dominated Century

Leadership of the world in the twenty-first century will increasingly be in the hands of those who create and harness knowledge. This century, often called the century of knowledge, is indeed the century of the mind. A nation's ability to convert knowledge into wealth and social good through creativity and innovation will determine its future standing in the comity of nations.

The truism that knowledge is power has never been more apt than it is now. Trade and industry are becoming more knowledge driven. For instance, we can see a dramatic change in international trade. While it was formerly dominated by commodities such as iron ore, coffee and unprocessed cotton, it is increasingly moving towards knowledge-intensive goods. High technology goods have doubled their share of world merchandize exports from 11% in 1976 to 22% in 1996, while the share of primary products dropped from 45% to 22%. More than half of the gross domestic product (GDP) of the major Organization of Economic Cooperation and Development (OECD) countries relates to the production and distribution of knowledge.

In today's world, for both individuals and enterprises, confidence in the Intellectual Property (IP) system acts as a powerful stimulus to creativity and innovation. The increasing internationalization of corporate activities and the borderlessness of trade and technology offer new challenges and new opportunities. More specifically: exponential growth of scientific and technical knowledge; increasing demands for new forms of IP protection for hitherto excluded areas and for outputs in new fields of human endeavour; easier access to IP-related information; increasing dominance of the new knowledge economy over the old 'brick and mortar' economy; and complexities linked to IP issues in traditional knowledge, genetic resources and folklore, are trends that pose a great challenge as well as offer opportunities. These will ultimately lead to the establishment of the IP agenda for the twenty-first century.

An understanding of the role of intellectual property rights (IPRs) in the process of innovation and the role of innovation itself in the process of development is crucial. New or original knowledge and the creative expression of ideas provide the basis for creating and sustaining business and enterprise competitiveness. In every enterprise, whether it produces or delivers goods or services, the knowledge component is becoming the predominant element in differentiating it from its competitors. Protecting such new or

original knowledge and/or creative expression of ideas has been considered by different competitors in the marketplace as a key to preventing others from free riding on the success and goodwill of individuals or enterprises. Enterprises and businesses need the IP system to protect their manufacturing secrets and other useful information in order to remain ahead of the competition. Issues of generation, identification, valuation, protection and exploitation of IP assets are attracting increasing attention all around the world.

Understanding the importance of the nature and various forms of IP systems and using them optimally as an integral part of business strategy will be of crucial importance for success in the marketplace. Enterprises need to utilize their IP assets effectively to ensure the quality of their products and services and to develop and retain their customers.

1.2 Nature of the IP System

IP is defined – in an all-pervasive sense in Article 2 (viii) of the Convention Establishing the World Intellectual Property Organization (WIPO), signed in Stockholm on 14 July 1967 – to include the rights relating to literary, artistic and scientific works; performances of performing artists, phonograms, and broadcasts; inventions in all fields of human endeavour; scientific discoveries; industrial designs; trademarks, service marks and commercial names and designations; protection against unfair competition. Significantly, it further specifies: 'and all other rights resulting from intellectual activity in the industrial, scientific, or artistic fields'.

The IP system refers to the entire gamut of IP laws, procedures, practices and institutions responsible for protecting, administering, enforcing, and using intellectual assets for social, cultural and economic progress. While IP laws provide the mechanism for imparting some characteristics of tangible property to intangible assets, the institutions, procedures and practices provide the practical means for creators, innovators, businesses and industry to reap the benefits of intellectual assets if the circumstances are conducive. Intellectual assets are essentially new or original products of the human mind – its creative and innovative output – which manifests itself in various forms including the creative expression of ideas. Depending on the nature of the output, different types of IPRs are made available if the conditions and requirements prescribed in the relevant national or regional laws are fulfilled.

While IPRs are private rights and, in essence, pertain to individuals, in practice, these rights are being exercised more and more by corporate entities such as firms, businesses, corporations and other institutions that can legally hold, exercise and dispose of these rights. It is no wonder that the IP system has become an important instrument of economic and trade policies in many countries worldwide, apart from its role at the enterprise level where the IP strategy of the enterprise is a key component of its growth plan. The protection of IPRs enables countries to participate more actively in international trade as well as influence investment decisions. The importance of and linkage between the protection of IP, competitiveness in international trade and techno-economic growth and development has been a core concern of governments, the private sector and civil society as the IP system is seen as a determining factor in safeguarding the results of technological

developments as well as in encouraging, nourishing and sustaining creative expression. Economic progress is becoming increasingly technology driven, in as much as it is accelerated through the use of new, highly sophisticated technologies based on new or original ideas, techniques, processes and creative expression thereof.

Understanding and appreciating the social, cultural and techno-economic foundations of the IP system and its nature and the rationale for its protection is a prerequisite for comprehending its increasing importance and role in formulating national strategies for enhancing competitiveness and accelerating development, and in enterprise level strategy for higher profitability and market exclusivity.

1.3 Rationale for Protection of IP

The IP system is no longer considered a distinct or self-contained domain, but as an important and effective policy instrument which is relevant to a wide range of cultural, socio-economic and technological concerns. This far-reaching paradigm shift in international trade and commercial policy was brought into sharp focus by the Uruguay Round of trade negotiations, which resulted in the establishment of the World Trade Organization (WTO), requiring Member States to abide by its Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). The TRIPS Agreement (concluded on 15 April 1994 and effective as of 1 January 1995) lays down the minimum norms and standards for protection of IPRs and more importantly, their effective enforcement, unlike any other international treaty in the field of IP.

The development of skills and competence to manage IPRs at the enterprise, institutional or national level, and to leverage its influence is receiving increasing focus and attention by entrepreneurs, managers, administrators, policy-makers and politicians. Industrial and business activities have to compete not only in local or domestic markets but also in the sub-regional, regional and international marketplace. Developing internationally competitive products and services needs increasingly higher levels of investment in technology. In such a market-oriented situation, industries and businesses will require reasonable incentives and rewards to develop and deploy new and better products and services. These incentives and rewards are provided, among other things, by creating conditions for fair play in the marketplace through a balanced but effective IP protection system. For example, the patent system not only protects inventive processes and/or products of the inventor, whether owned by him or his employer, but also makes available to the public through patent documents the legal, business and technical information contained in these documents once they are published.

To be acceptable, any system of IPRs has to strike a balance, on the one hand, between providing incentives and rewards to the rights holders, and on the other hand, facilitating access to, and widespread diffusion and adoption of the fruits of creativity and innovation. This balance is reflected in Article 27 of the 1948 Universal Declaration of Human Rights, which recognizes both that 'Everyone has the right to the protection of the moral and material interest resulting from any scientific, literary or artistic production of which he is the author', and that 'everyone has the right . . . to share in scientific advancement and its

benefits'. Thus, the challenge is to create and fine-tune the balance between the interest of the inventor or creator and that of society in an optimum manner.

In many countries, especially the scientifically advanced developing countries, the potential economic value of IP and the socio-economic benefits of works of the mind have to be fully tapped. The IP system has to be viewed as an important instrument of economic and trade competition. The main objective of IPR protection is to encourage creative activity, thereby providing economic and speedy benefits of such activity for the largest possible number of people. To enable the IP system to play its due role in helping to shape the direction of research and development (R&D) in industries, business establishments, government institutions and universities there is a need for greater emphasis on the development of a highly skilled workforce, as the effective use of emerging modern technologies depends increasingly on the skills of a technocratic workforce.

Various types of IPRs are created through legislation. These are mostly national, but sometimes are created at sub-national or supra-national levels. For each category of rights, certain conditions prescribed in the relevant legislation must be fulfilled for either the registration or the grant of the right. In the case of industrial property rights, registration or grant of rights is administered by an office established by the government concerned, or optional registration in respect of copyright works as provided in some legislations.

There is a growing recognition that the IP system ought to provide a balance of interests between the creators of new knowledge and original creative expressions – who often have to provide and risk large outlays and resources to create and develop the technology – and those that use the technology as an important tool for accelerating economic and industrial development. A report entitled 'Integrating Intellectual Property Rights and Development Policy' by the Commission on Intellectual Property Rights (CIPR) addresses this issue of balance. While mentioning, inter alia, the importance of IPR protection for the more technologically advanced developing countries in obtaining access to protected high technologies through foreign investment or through licensing, the report points out that achieving the right balance in this regard may be difficult for some countries.[1]

On the whole, it may be surmised that both the uncritical enthusiasm and the uninform hostility to the IP system is diminishing. The challenge is to provide objective and credible evidence in support of opposing claims of the different parties to the debate on the usefulness of the IP system as a tool for socio-economic and cultural development.

1.4 Forms of IP

Historically, the IP system has been divided into two main branches. One branch dealt with industrial property, mostly useful in commerce and industry, comprising:

(a) technological inventions that provide new solutions to technical problems and are registered as patents;

---

[1] Report of the UK CIPR, London, Sep. 2002: <www.iprcommission.org/graphic/documents/final_report.htm>.

(b) utility models also known as 'petty patents' or 'utility innovations';
(c) trademarks for goods and services;
(d) commercial names and designations;
(e) industrial designs or aesthetic creations determining the appearance of industrial products or handicrafts;
(f) geographical indications or indications of source and appellations of origin; and
(g) layout designs of integrated circuits.

A second branch deals with copyright and related rights protecting literary and artistic expression or works of culture, which, in the broadest sense, relate to creative expression of ideas. Copyright provides protection of literary, musical, artistic, photographic and audio-visual works, computer programs, software, multimedia creations, etc., and in many countries, works of applied art. Related rights, neighbouring on copyright, protect the rights of performing artists, producers of phonograms, and broadcasting organizations. The protection of confidential business information of commercial value, often called 'trade secrets' is also an important and distinct form of IP. The protection of breeders' rights in relation to new varieties of plants is another distinct form of IP. An emerging contentious form of IP is that of non-original database rights.

1.4.1 Patents and Utility Models

A patent is an exclusive right granted by the government patent or IP office to an inventor to prevent others from making, using, selling, distributing or importing his new product or using his new process. This right is granted for a limited period of time. It is granted if three basic conditions of patentability are met. Generally, the three requirements for patentability are: novelty (new characteristics, which are not prior art, that is, which do not form part of the existing state of the art), inventive step or non-obviousness (knowledge being not obvious to one skilled in the field), and industrial applicability or utility (inventions which are susceptible to industrial application). In respect to legal protection for industrial property, the inventor is required to provide sufficient and full disclosure of an invention in his patent application which, at the appropriate time, is published in an official publication to notify all others who may be interested in its contents.

A patent will have one claim and may have a series of dependent claims which spell out the scope of the invention as to how it is different from, and/or improves upon, prior art.

The disclosure of an invention should be such that a skilled person in the relevant area or art would be able to practice the invention, that is, the invention must be described in the legal and government-prescribed patent application form in sufficient detail to indicate how the technology works. The patent application is published through an official notification, which enables the details of the invention to become accessible to the public. A patent prevents others from making, using, selling or exporting an invention. It is usually granted for twenty years from the date on which the patent application was filed in the relevant government office. Its validity is also limited to the territory wherein the granting patent law applies. There is no world or international patent but each invention, when

patented in a number of countries, contributes to a 'family' of patents including the relevant new and useful invention.

Historically, the first patents were granted for mechanical inventions such as the safety pin by Walter Hunt, the zipper by Whitcomb Judson and the locomotive steam engine for rail track by John Ruggles, which were granted patents in 1849, 1893 and 1930, respectively. Next came electrical inventions such as electrical lamps by Thomas Alva Edison in 1879 and still later, chemical inventions such as linear condensation polymers by Dupont in 1937. More recently, the scope of patenting has increased in many ways to include processes and products of genetic engineering (modern biotechnology); computer programs (for example, systems, methods and computer programs for providing financial protection of equity investments); business methods for commercializing goods and services over a global digital network; and electronic methods and systems for controlling and tracking information related to business transactions.

Exploitation of a patented invention without the prior authorization of the patent owner is illegal. No one will spend time, money and efforts on innovation if someone else can copy his or her invention. Patent legislation, however, generally provides for exceptions in the public interest in the form of compulsory licenses. The grounds and conditions for the grant of a compulsory license are specified in national legislation. The grant of such licenses requires that an adequate compensation be paid to the owner of the patent.

The patent system has greatly contributed to the orderly exploitation of inventions in newer and evolving fields of technology. This has proven to be a key factor in encouraging the investment flow into R&D projects generally and into high technology areas in particular. For enterprises investing money, time and manpower in the inventive process, the expenditure involved in the acquisition of a patent will not be wasted; it should be considered as a part of the overhead costs, as it will be an investment towards ensuring future profits for the enterprise.

The number of national patent applications filed, for example, in the year 2005, varied greatly from country to country.[2] Japan topped the list (367,960 from residents and 59,118 from non-residents); next was the United States of America (207,867 and 182,866 respectively), followed by China, the Republic of Korea, the European Patent Office, Germany, Canada, the Russian Federation, Australia, the United Kingdom and India, in that order. Among developing countries, the Republic of Korea took the lead (122,188 from residents and 38,733 from non-residents), followed by China (93,485 and 79,842 respectively). The others countries with the top twenty most impressive number of applications were India, Brazil, Mexico, Singapore and Thailand, in that order.

While the above figures are in respect of patents registered nationally, in the larger context of global competitiveness, it is the US patents that constitute an important factor in the measurement of technological progress. In this regard, it is interesting to compare the grant of US patents to certain developing countries. Table 1 below shows the relevant data.

---

[2] 2007 WIPO Patent Report 'Statistics on Worldwide Patent Activities': <www.wipo.int/freepublications/en/patents/931/wipo_pub_931.pdf>.

Table 1. US Patents Granted to Certain Developing Countries (1990-2005)

	1990	*1995*	*2000*	*2005*
Taiwan	732	1,620	4,667	5,118
Korea	225	1,161	3,314	4,352
Hong Kong	52	86	179	283
Singapore	12	53	218	346
India	23	37	131	384
South Africa	114	123	111	87
Brazil	41	63	98	77
China	47	62	119	402
Mexico	32	40	76	80
Argentina	17	31	54	24
Malaysia	3	7	42	88
I. Total of above	1,298	3,283	9,009	11,241
II Total World	90,365	101,419	157,494	143,806
III Share of Total (I) in World Total (II)	1.44	3.24	5.72	7.82

Source: US Patent and Trademark Office, <www.uspto.gov>

In addition to patents, some countries provide protection for utility models otherwise known as 'petty patents' or 'utility innovations'. Many technical creations involve a contribution of minor additions to existing technology which may not qualify under the higher criteria of inventiveness required for patenting an invention. These are protected by utility models which are granted for incremental or small innovations for a shorter duration, without having to go through substantive examination. The criteria of inventiveness is lower than for patents and the maximum term of protection for a utility model is shorter than that for a patent, usually ranging from six to ten years, and the procedure for obtaining it is shorter and simpler than that for a patent.

The introduction of utility models can also help boost national R&D of technology. A number of countries, both developed and developing, have provided for protection of utility models. Incidentally, the European Commission had, subsequent to publication of its Green Paper in July 1995, adopted in December 1997, a proposal for a Directive for harmonizing rules for the protection of utility models.

1.4.1.1 Patent Documentation as an Information Resource

Patent documentation is a valuable and much sought-after source of technological information. The well-documented disclosure of such information helps promote ideas for