







# Views on the Future of the Intellectual Property System

John H. Barton Frederick M. Abbott Carlos M. Correa Josef Drexl Dominique Foray Ron Marchant



# Views on the Future of the Intellectual Property System

John H. Barton
Frederick M. Abbott
Carlos M. Correa
Josef Drexl
Dominique Foray
Ron Marchant



and Sustainable Development

### Published by

International Centre for Trade and Sustainable Development (ICTSD)

International Environment House 2

7 chemin de Balexert, 1219 Geneva, Switzerland

Tel: +41 22 917 8492 Fax: +41 22 917 8093
E-mail: ictsd@ictsd.ch Internet: www.ictsd.org

Chief Executive: Ricardo Meléndez-Ortiz

Programme Manager: David Vivas-Eugui

Senior Fellow: Pedro Roffe
Programme Officer: Gina Vea

Programme Officer: Fleur Claessens
Programme Assistant: Nico Tyabji

### Acknowledgements

ICTSD would like to thank all the authors involved in this compilation of briefs for their contributions. They are individually recognised in the following sections of this paper.

Funding for the ICTSD Programme on Intellectual Property Rights and Sustainable Development has generously been provided by the UK Department for International Development (DFID), the Swedish International Development Cooperation Agency (SIDA), the Swiss State Secretariat for Economic Affairs (SECO) and the Rockefeller Foundation.

For more information about the ICTSD Programme on IPRs and Sustainable Development visit our website at: www.iprsonline.org.

ICTSD welcomes feedback and comments on this document. These can be forwarded to David Vivas-Eugui at: dvivas@ictsd.ch.

Citation: Barton, J. H., Abbott, F. M., Correa, C. M., Drexl, J., Foray, D. and Marchant, R. (2007). *Views on the Future of the Intellectual Property System*, ICTSD Programme on Intellectual Property Rights and Sustainable Development, International Centre for Trade and Sustainable Development, Geneva, Switzerland.

Copyright © ICTSD, 2007. Readers are encouraged to quote and reproduce this material for educational, non-profit purposes, provided the source is acknowledged.

The views expressed in this publication are those of the authors and do not necessarily reflect the views of ICTSD or the funding institutions. The authors are solely responsible for the final text.

An electronic version of this paper can be obtained from: www.iprsonline.org

# **CONTENTS**

ABOUT THE AUTHORS	IV
FOREWORD	VI
INTRODUCTION	1
PATENTS AND DEVELOPMENT IN THE KNOWLEDGE ECONOMY  Dominique Foray	3
THE POLITICAL ECONOMY OF THE WIPO DEVELOPMENT AGENDA Frederick M. Abbott	7
THE FUTURE OF THE INTELLECTUAL PROPERTY SYSTEM AND CONSEQUENT NEGOTIATION TOPICS	13
John H. Barton	
RESPONDING TO THE CHALLENGES FOR DEVELOPMENT WITH A COMPETITION-ORIENTED APPROACH	17
Josef Drexl	
RESHAPING THE INTELLECTUAL PROPERTY SYSTEM WITH A DEVELOPMENT PERSPECTIVE	25
Carlos M. Correa	
INTELLECTUAL PROPERTY AND DEVELOPMENT: VIEWS FROM THE UK PATENT OFFICE	29
Ron Marchant	

# **ABOUT THE AUTHORS**

# FREDERICK ABBOTT

Frederick Abbott is Edward Ball Eminent Scholar Professor of International Law at the Florida State University College of Law. He is Rapporteur for the ILA Committee on International Trade Law. He has regularly served as consultant to the UNCTAD-ICTSD Project on Intellectual Property and Sustainable Development, to the World Bank, to the WHO and to the Quaker United Nations Office (Geneva). Professor Abbott serves as panelist for the World Intellectual Property Organization Arbitration and Mediation Center. He is on the editorial board of the Journal of International Economic Law (Oxford). His books include UNCTAD-ICTSD Resource Book on TRIPS and Development (Principal Consultant with Carlos Correa) (2005), The International Intellectual Property System: Commentary and Materials (with Thomas Cottier and Francis Gurry) (1999), China in the World Trading System: Defining the Principles of Engagement (1998), Public Policy and Global Technological Integration (with David Gerber)(1997), and Law and Policy of Regional Integration (1995). His book on treaty-making, Parliamentary Participation in the Making and Operation of Treaties, edited with Stefan Riesenfeld, was awarded the American Society of International Law Certificate of Merit.

# JOHN BARTON

John H. Barton is professor of law emeritus at Stanford Law School, where he began teaching in 1969. His teaching fields included international trade and high technology law, and he has published extensively on the pharmaceutical development process, on patent-antitrust issues, and on the transfer of technology to developing nations. He was a member of two working groups of the Commission on Macroeconomics and Health (the Sachs Commission), and of the U.S. National Research Council study of the patent system. He chaired the 2001-2002 UK Commission on Intellectual Property Rights and he spent the 2004-05 academic year as a Visiting Scholar in the Department of Clinical Bioethics at the US National Institutes of Health. He is a graduate of Marquette University (1958) and Stanford Law School (1968).

# CARLOS CORREA

Professor Carlos M. Correa is Director of the Center for Interdisciplinary Studies on Industrial Property and Economics and of the Post-graduate Course on Intellectual Property at the Law Faculty, University of Buenos Aires. He has been a visiting professor in post-graduate courses of several universities and consultant to UNCTAD, UNIDO, UNDP, WHO, FAO, IDB, INTAL, World Bank, SELA, ECLA, UNDP and other regional and international organizations. He has advised several governments on these issues. He was a member of the UK Commission on Intellectual Property, and of the Commission on Intellectual Property, Innovation and Public Health established by the World Health Assembly in 2004. He is the author of several books and numerous articles on law and economics, particularly on investment, technology and intellectual property.

# JOSEF DREXL

Professor Dr. Josef Drexl, LLM, graduated from the University of Munich in 1996 and holds a Ph.D. degree (1990) and a habilitation degree of the same University, in addition to an LL.M. degree from the University of California at Berkeley.

Josef Drexl worked as a law professor at the Universities of Würzburg and Munich from 1997 to 2006. In 2002, he became a director at the Max Planck Institute for Intellectual Property and Competition and Tax Law in Munich. In 2003, Professor Drexl was elected the first chair of the Academic Society for Competition Law (ASCOLA). He acted as a visiting professor at Oxford University and LUISS University (Rome). Professor Drexl is an expert in international and European competition law, intellectual property law, consumer law and WTO law.

# DOMINIQUE FORAY

Professor Foray has an academic background in applied economics (technological change, innovation and knowledge), management of technology, and economic policy for the new (knowledge-based) economy. He is Professor at the Ecole Polytechnique Fédérale de Lausanne (EPFL) and holds the Chair of Economics and Management of Innovation (CEMI). He also serves as a Dean at the College of Management of Technology, EPFL. Furthermore, he is currently member of the expert group "Knowledge for Growth"; a group of prominent economists created to advise the European Commission. Professor Foray's most recent publications is titled "The Economics of Knowledge" at MIT Press, paper edition, 2006. Before joining EPFL he was Professor at University Paris Dauphine (1995- 2001) and Principal Analyst at the Organization for Economic Cooperation and Development (OECD) (2001 - 2004).

# **RON MARCHANT**

Ron joined the Patent Office as a patent examiner on 1969 and quickly became active in the examiner's union, and was then charged with introducing an IT system into the patents operation, ensuring that it meet user requirements whilst remaining on time and on budget. The project succeeded and one a prize from the British Computing Society for its user focus. In 1990 he was promoted to Deputy Director and given the task of personnel management of patent examiners and relocating the patents operation from London to South Wales. In 1992 he was promoted to Director of Patents, joining the Executive Board of the Patent Office. During this period he undertook a major modernisation of the Patents Directorate and steered the attainment of ISO accreditation for the examining and grant operations. He began to make his presence felt internationally at WIPO and the EPO. In 2003 he became Chief Executive and Comptroller General, again leading modernisation of the whole office, work recognised by the Gowers Review. He was a leading figure in the EPO strategy debate and its outcome, and became known at WIPO for his interest in the proper application of IP regimes in developing countries. He retired in March 2007 having seen the office renamed the UK Intellectual Property Office in recognition of the wider role he had always championed. He intends to remain active in IP affairs as much as possible.

# **FOREWORD**

This paper addresses issues related to the development agenda deliberations initiated by a group of developing countries at the WIPO General Assembly in September 2004. It is a compilation of the principal papers submitted to a Dialogue facilitated by ICTSD on 20 November 2006 in Nyon, Switzerland. They were commissioned by ICTSD to stimulate a debate and exchange of ideas among Geneva-based diplomats around the development agenda initiative.

At the request of those familiar with the 20 November 2006 Dialogue, ICTSD has decided to publish these notes, revised by their authors for external publication, for the benefit of all those interested in the intense debate taking place in Geneva on the future of the WIPO development agenda. It is one further contribution of the ICTSD Programme on Intellectual Property Rights (IPRs) Sustainable Development to a better understanding of the relationship between intellectual property and development and of the general challenges faced by the intellectual property system in the 21st century.

The general premise of ICTSD's work in this field is that the controversial nature of intellectual property regimes (patents, copyrights, trademarks, industrial designs, integrated circuits and geographical indications) has a bearing on issues as diverse as access to public health, knowledge, food security, traditional knowledge, biodiversity, biotechnology, the development of the Internet, and the future of the entertainment and media industries - and necessitates a research-based and objective analysis which explains recent legislative trends and the intensification of international harmonisation of IPRs. There is a continuous need, particularly for developing countries, in an increasingly knowledge-based economy, to have a better understanding of developments in IPRs and their implications, challenges and opportunities.

Empirical evidence as to the role of IP protection in promoting innovation and growth remains inconclusive. Diverging views also persist on the impacts of IPRs on development prospects. It is urgent, therefore, to continue reflecting on questions such as: How can developing countries use IP tools to advance their development strategy? What are the key concerns surrounding the issues of IPRs for developing countries? What are the specific difficulties they face in intellectual property negotiations at different levels? Is intellectual property directly relevant to sustainable development and to the achievement of agreed international development goals? How we can facilitate technological flows among all countries? Do they have the capacity, especially the least developed among them, to formulate their negotiating positions and become well-informed negotiating partners? These are essential questions that policy makers need to address in order to design IP laws and policies that best meet the needs of their constituents and negotiate effectively in future agreements. These are the broad issues under discussion in the deliberations in WIPO on a development agenda to which this paper intends to contribute.

To address some of these questions, the ICTSD Programme on Intellectual Property and Sustainable Development was launched in July 2000. One central objective has been to facilitate the emergence of a critical mass of well-informed stakeholders in developing countries - including decision makers and negotiators, but also the private sector and civil society - who will be able to define their own sustainable human development objectives in the field of IPRs and effectively advance them at the national and international levels.

We hope you will find this compilation a useful contribution to the debate on intellectual property and sustainable development and particularly to the establishment, on strong grounds, of an IP development agenda in the context of the work of WIPO.

Ricardo Meléndez-Ortiz Chief Executive, ICTSD

# INTRODUCTION

Intellectual Property (IP) systems have existed for decades, in some instances even centuries, with the underlying purpose of promoting social welfare through the stimulation of innovation, research and creativity. It is, therefore, striking that one of the most distinctive features of IP regimes, compared to other policy areas, has been their relative isolation from more general public interest debates. It is only in the last decade that IPRs have emerged in discussions and debates on topics as diverse as public health, food security, education, trade, industrial policy, traditional knowledge, biodiversity, biotechnology, the Internet, the entertainment and media industries, and on the role of IP in a knowledge-based economy.

A second relevant feature is that the IP arena today is one of the most dynamic areas of international law. Beyond the TRIPS Agreement, new deals are being struck at the international, regional and bilateral levels that build on and strengthen the minimum standards established by TRIPS. There is a common tendency in these agreements to: expand the scope of information, ideas and products that are subject to IP protection; create new rights for the generators of IP; and, standardise the basic features of IPRs. Consequently, national IPR regimes throughout the world are facing increasing levels of pressure to harmonise their laws in line with those of technologically more advanced countries.

Thirdly, there are changes in the number and nature of institutions dealing with these matters. Today, a number of intergovernmental bodies beyond the WTO and WIPO include IP-related questions in their work programmes, as in the cases of the WHO, UNESCO, FAO, CBD, Interpol and certain other United Nations programmes (UNCTAD, UNDP, UNCHR). Given the crosscutting nature of IPRs, this horizontal expansion of institutions dealing with IP matters raises complex issues and concerns about policy coherence.

Notwithstanding the relative isolation of the IP system, its evolution has not been free from controversy. Critics have emphasised its failure to keep-up with new technological challenges such that it has adversely affected competitive environments for consumers and producers of knowledge. This has been highlighted prominently in a wide range of recent publications. In addition, critics have contended that the current system lacks inclusiveness and is failing to advance an IP agenda that responds to the needs of the 21st century. An important angle in recent debates has been the broad implications for development and the role of developing countries in the evolution

of the international system. These aspects were first highlighted in the 2002 Report of the Commission on IPRs and Development and in recent debates in the World Intellectual Property Organisation (WIPO) on a development agenda.

The development agenda deliberations initiated by a group of developing countries at the WIPO General Assembly in September 2004 seek the integration of development into the work of the organisation. Its original objective was to ensure that IP policy-making better takes into account development concerns, such as the need to promote access to technical knowledge, encourage technology transfer, maintain public interest flexibilities, and prevent anticompetitive practices.

Against this background, ICTSD facilitated a Dialogue among selected Geneva-based ambassadors on 20 November 2006 with the view of brainstorming around:

- Revisiting and identifying the main challenges of today's IP system;
- Contributing to the conceptualisation of these challenges; and,
- Exploring initiatives that could be promoted at the international level, particularly in the context of the Geneva debates, including potential opportunities for advancing a development agenda in WIPO.

For the purposes of facilitating the exchange of ideas, ICTSD invited the following distinguished experts to prepare discussion notes to serve as a basis for the brainstorming session: Professor Fred Abbott (Florida University); Professor John Barton (Stanford University); Professor Carlos Correa (University of Buenos Aires); Professor Josef Drexl (Max-Planck Institute, Munich); Professor Dominique Foray (Ecole Polytechnique Fédéral de Lausanne) and Ron Marchant, Esq. (UK Patent Office).

This publication is a compilation of the notes produced by these experts to assist in the deliberations of 20 November 2006.

The notes included in this compilation tackle, with more or less emphasis, the three main topics identified above. For example, Dominique Foray's note refers to the relevance of IP in the knowledge economy, explaining the importance of the rapid dissemination of new and superior knowledge. However, he points out that rapid dissemination can be the enemy of innovation. In this context, he explains that the patent system has many virtues as an incentive to future inventors. However, by recognising exclusive rights, the patent restricts

de facto the use of knowledge and its exploitation. Patents and other intellectual property rights (IPRs) are by no means the only solution to the problem of supporting inventors in their effort to capture benefits stemming from their work. There are many other solutions to help markets produce knowledge. In spite of some misuses of the patent system leading to high transaction costs and risks of innovation blockages, it is still a vital institution for innovation policy. The system is vital, not so much for its value of providing motivation to inventors, but for creating a secure economic environment for the very high investments that convert ideas into reality. However, Dominique Foray concludes that the high value of the system as "a tool for economic growth" does not apply equally to all countries.

Frederick Abbott elaborates on the fundamental policy questions for the WIPO development agenda. He looks at the main sources of the initiative put forward by the Group of Friends of Development in 2004. In his view, the initiative is intricately tied to potential forward movement on the draft Substantive Patent Law Treaty (SPLT). Professor Abbot addresses two fundamental questions: (1) what are the potential costs and benefits of moving forward with the draft SPLT (and under what conditions), and (2) what could reasonably be demanded from the WIPO Development Agenda?

John H. Barton focuses on patents as the statutory mechanism for encouraging innovation. He notes that attitudes toward IP are cyclic over time. During the period before about 1980, the US had a very weak patent system, and constrained it strongly with antitrust principles. A number of recent developments suggest that the pendulum of IP may be beginning to swing back at the domestic level. He notes that at the international level, however, the pendulum has not yet started back. He concludes with four recommendations for: a harmonised IP system on reasonable terms; a management system for bilateral trade agreements; a global deal in pharmaceuticals between the research based and the generic industries; and technology transfer barrier issues.

Josef Drexl concludes that the international IP system is increasingly departing from a competition-oriented economic order that includes IP rights as necessary elements of dynamic competition. He is of the view that in recent years, expansionist developments of IP law have gradually replaced a pro-competitive IP system with a more "proprietary" system that protects those who already own IP rights against new entrants in technology and knowledge-based markets. The issue is not whether we need stronger protec-

tion in addition to TRIPS standards. The issue is rather one of a different quality of IP protection. He argues in favour of an integrated concept of "intellectual property and competition law". One recommendation he makes is for WTO Members to work on more specific rules for controlling anticompetitive use of IPRs.

Carlos Correa delineates the function of IP in a knowledge-based economy by its role and limitations. He addresses the question of the flexibility of the system to tailor national implementation to the respective industrial and socio-economic circumstances of countries, particularly after the adoption of the TRIPS Agreement. He stresses that it is extremely difficult to determine the causal relationship between certain levels of intellectual property protection and indicators of trade, investment, innovation, and technology transfer. Although several studies have explored the relationship between intellectual property and some of these variables, their results are far from conclusive. His paper concludes with some broad observations on IP governance with particular reference to technical assistance.

Ron Marchant analyses the economic and political considerations underpinning the IP system both in developed and developing countries. He explains that developed countries have largely driven the IP agenda at the global level. At the same time, he argues that governments of developed countries recognise that the world trading system and global stability require an increase in self-sufficiency and economic strength in developing countries, both as markets and trading partners. He argues that it is imperative that the WIPO Development Agenda be given substance. However, he suggests that the existing architecture is not fully fit for this purpose. It is still too focused on the internalities of IP systems and does not integrate IP into commercial, innovation, social, and international policy. He contends that too often national offices are isolated from policy-making, sometimes even in relation to IP, and cannot think broadly about IP. In the short-term, he proposes the following priorities: encourage the wider consideration of IP in the context of other policy objectives; identify and agree on a subset of the issues on the current development agenda; agree on the form and nature of development impact assessments; work through Programme and Budget and with the Audit Committee to improve decision-making and accountability within WIPO.

In brief, these are all important contributions by distinguished experts on how to move the intellectual property system forward to meet the challenges of the 21st century, paying particular attention to sustainable development considerations.

# PATENTS AND DEVELOPMENT IN THE KNOWLEDGE ECONOMY

Dominique Foray

# THE PRODUCTION AND DIFFUSION OF KNOWLEDGE: THE ECONOMIC TRADE-OFF

Broad and rapid diffusion of new and "superior" knowledge is good for social well-being. It is quite obvious that efficiency and growth are promoted by the rapidity with which new knowledge and new technologies are disseminated: the greater the share of individuals, firms or countries that make use of superior products and processes, and the sooner they do so, rather than being confined to inferior substitutes, the more widespread and substantial the growth benefits should be.

However, we know also that rapid dissemination can be the enemy of innovation. If a firm expends considerable money and effort to carry out its innovation programme, but finds that other firms rapidly share in the fruits of its investment, why should that firm devote time, effort and funding to continue that programme?

In summary, rapid dissemination is good for social well-being but bad for private returns: no one wants to invest in the creation of new knowledge if free sharing and dissemination occur too rapidly.

This is why it is important to devise social mechanisms to allow the knowledge producer to capture (at least) a fraction of the benefits generated by the invention. But from the point of view of society, the efficiency of these mechanisms will depend on the kind of balance which is built between the two elements of the trade-off: namely, providing a means for the knowledge producer to capture the benefits of his effort whilst maximising the social dissemination of the knowledge. Institutions that govern the creation and diffusion of knowledge have always been moulded by this so-called knowledge trade-off.

A knowledge economy is an economy characterised by the centrality of the production of novel ideas that subsequently lead to new or improved goods, services and organisational practices. In such an economy, these governing institutions are more important than ever and tend to become central in society.

In this note, I will briefly review some of them and discuss some specific "design options" as appropriate ways to solve the tension between the maximisation of the inventor's private interests and the socially optimal use of knowledge.

# **PATENTS**

Among these mechanisms, intellectual property rights (IPRs) and patents are of particular significance. A patent is a legal device which is generally defined as a right to exclude. It ensures inventors the right to a temporary monopoly on a technical invention. It is a property title that is valid in time and geographic space. In exchange for patent rights the inventor must publicly divulge the technical details on the invention. This is the typical response of the patent system to the knowledge trade-off. The public availability of the technical description is an essential element: it is the basis of the balance between the inventor's interests and those of society. The patent is thus a mechanism facilitating access to knowledge (before its creation in the 16th century, inventors were hostile to the idea of revealing new knowledge).

The patent system has many virtues beyond its main role to provide an "incentive" (an economic motivation) to future inventors. Firstly, it facilitates the market test of new inventions because it allows disclosure of related information while protecting against imitation. Secondly, patents create transferable rights and can therefore help to structure complex market transactions of technologies. Patents are an essential element of the legal infrastructure of the markets for technologies that are in certain industries a source of great efficiency. Thirdly, patents are a means to signal and assess the future value of the technological efforts of young companies for which other classes of "intangibles" cannot be used for proper evaluation.

However, by imposing exclusive rights, the patent restricts de facto the use of knowledge and its exploitation by those who might have benefited from it had it been free. This is a case for social inefficiency. Some other shortcomings of the system, from a social point of view, are caused simply by inappropriate modes of use of patents. A case in point is the so-called "strategic use" of patents by firms. Some firms use them as

bargaining chips in cross-licensing agreements. Such strategic use has little to do with protecting innovation whilst increasing the asymmetry of power relations between the big and small players in bargaining and negotiation. There is now strong evidence that in some industries the increasing number of patent applications is explained not by the need to protect more innovations, but by some strategic use purposes. "I just don't know what is in my portfolio of 8000 patents" is a good quotation from a Chief R&D Officer of a large and well known company that illustrates the magnitude of the problem. In this respect many shortcomings in the patent system are not inevitable, for they are not intrinsically associated with the concept of intellectual property, but result from a mode of use that leads to blockages or slows down innovation.

Given both advantages and shortcomings, the patent system has often been qualified as a "necessary ill". Economists agree that it is a good thing for innovation and growth, provided the negative effects on the economy are reduced. However, recent trends are towards i) strategic use; ii) patents moving up to the domains of scientific research (research tools); iii) the broadening of the possible subject matters (business methods, software, living organisms) which leads to some weakening of the basic rules. All these trends have caused economists to question whether the "ill" is perhaps greater than generally believed. And perhaps it is an ill which is no longer necessary, since we clearly see some other mechanisms doing a better job, supporting innovation without creating exclusivity and monopoly. For instance, we can observe the current knowledge boom of some social systems - such as "open-source" and "open collaborative research" - in which high rates of innovation are correlated with a rich and instantaneous, free-revealing pattern, implying that private inventors do not always rely on exclusivity and excludability mechanisms to capture the private benefits from their intellectual assets and creative work.

# PATENT: ONE SOLUTION AMONG MANY

Patents and other IPRs are by no means the only solution to the problem of supporting inventors

in their effort to capture benefits stemming from their inventions. There are many other solutions to help markets encourage the production of knowledge, and one interesting feature is that each of those solutions proposes a specific response to the knowledge trade-off. For example, being the first to produce new knowledge may be sufficient in certain cases to capture a good fraction of the benefits, since dissemination, even if it is free, does not occur immediately; hence the fact of being first is an asset which can be converted into positive prices even in a private competitive market. Developing prize-mechanisms (either a prize offered for innovation that is not identified in advance or a targeted prize rewarding an invention which has been identified in advance) or subsidising research are other possible alternatives; each offering a particular treatment of the knowledge trade-off. The prize system is particularly interesting since it has the advantage of creating a public good: once the invention has been made, it is made publicly available whilst the inventor is compensated by receiving the monetary value of the "social return" of the invention. While patents create a monopoly with a high potential for exclusion and social inefficiencies, prizes reward inventions for contributing to the public domain. But this system may be hard to implement, not a minor issue: the estimation of an amount for the prize (i.e. the social value of the new knowledge) raises difficult problems, and its administration would require some kind of central decision making. These two difficulties are ignored by the patent system.

# DESIGNING "SUPERIOR" SOLUTIONS

How the knowledge trade-off should be solved (and so what kind of mechanism should be used) depends obviously on the nature of the knowledge and the characteristics of the economic environment. For example, if the issue to be addressed is encouraging the invention of vaccines for tropical diseases, there are two arguments for not using the patent system and for developing a kind of prize-mechanism instead: firstly, companies know that poor countries will not be able to afford new products at a monopoly price, and therefore the private rationale to use the patent system is weakened (or

companies anticipate that they will be forced to sell the product at a lower price and again the economic motivation to undertake the research is undermined); secondly, that access to the new knowledge will be so vital that creating a monopoly would generate very high social costs and inefficiencies.

Economists and policy makers are interested not so much in a particular mechanism but in the design of "superior" solutions to the knowledge trade-off. This is certainly the most interesting policy question: what is the right mechanism for a socially efficient solution to the problem? Helping the market to invent a new vaccine for a global disease, an orphan drug, a new encryption method or a new environmental technology involves the mobilisation of different classes of solutions.

# THE PATENT SYSTEM HAS DIFFERENT SOCIAL VALUES FOR DIFFERENT STAGES OF DEVELOPMENT

Despite some misuses of the patent system leading to high transaction costs and risks of innovation blockages, it is still recognised as a vital institution for innovation policy. It is vital not so much for its value in providing motivation to inventors (how many great inventors never used the patent system whilst maintaining their creative drive?) but for creating a secure economic environment for the very high investments that convert ideas into reality.

However the high value of the patent system as "a tool for economic growth" does not apply equally to all countries. It is certainly an important tool for leading countries at the technological frontier. It is also an important tool for those countries that are successfully committed into the catching-up economically, involving the slow transformation of an economy based on imitation to an economy based on innovation. In these countries, growing entrepreneurial activities certainly need the patent system. This is however not the case for the least developed countries (LDCs). And the current tendency to strengthen the patent system by forcing all countries to implement a legal

system that will guarantee the enforceability of IPRs - the WTO's Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) - puts LDCs at great risk (even if some transition periods are allowed for the poorest ones). The official TRIPS message is that LDCs should take this legal obligation as a good deal. The introduction of a legal system to enforce IPRs everywhere is of course a good thing for multinational companies (MNCs) which can expect an increase in the profitability of their R&D investments. It would also be a good thing for developing countries themselves if such a legal evolution created incentives for the endogenous development of domestic entrepreneurial capacities, and helped these countries attract more foreign direct investment (FDI), including the transfer of R&D capacities.

It is, however, quite certain that things will not happen this way, since:

- throughout history, stronger patent systems have tended to be the result of technological development, not a precondition;
- stronger patent rights are likely to increase payments from developing to developed countries for technology rights;
- international trade flows and FDI respond positively to strengthened patent rights in middle-income and large developing countries, but not in the poorest ones.

In other words, if, as an LDC, you want to attract FDI or promote entrepreneurial activities at home, you need to solve many difficult problems before dealing with the patent issue. Thus, the relevant policy question is to ask at what stage of development will economic and market-based incentives (such as patents) start to matter in encouraging productive entrepreneurial activities and attracting more FDI.

For LDCs, as far as IPRs and patents are concerned, the right policy orientation should be to put more emphasis on preventing the potential collateral damage that strengthening IP is likely to generate, rather than on using IPR as a positive market incentive to support entrepreneurship and attract FDI.

# THE POLITICAL ECONOMY OF THE WIPO DEVELOPMENT AGENDA

Frederick M. Abbott

From the perspective of world trade regulation, intellectual property (IP) is as valuable a monetary asset as a bond or currency. Some countries have major oil reserves, some have abundant fertile land, and some have more extensive capacity to develop and commercialise technology. Oil reserves and farmland are tangible and can be protected by tracking equipment, fences and security guards. Technology embodied in intellectual property is "ephemeral", prone to leakage, and easily transported across borders. It is difficult to track or protect with cryptographic fences. Intellectual property is protectable by legal rules, but because it is readily transported across borders, this protection is highly dependent on international legal co-operation.

Historically, the division between the Organisation for Economic Co-operation and Development (OECD) countries and developing countries regarding intellectual property has been based on a fundamental disparity between the "haves" and "have-nots". OECD countries view IP as monetary "assets" that deserve protection, just as financial instruments deserve protection. The right to protection derives from the "investment" in research and development (R&D) that generates the technology assets. Developing countries have based weak enforcement policies largely on claims to "moral justice" that demand a rebalancing of global economic position, and on the apparent "cost-free" character of preexisting technology.

The North-South dividing line regarding IP policy was clearer when the "haves" and "have-nots" were comparatively easy to identify. However, over the past decade, a number of major developing country actors have entered a new "middle ground" which places them squarely in neither camp. (This type of transition reflects also the historical pattern of countries, which today is part of the OECD.) The emergence of China and India as centres of innovation is fundamentally altering the dynamic between the "haves" and "have-nots". Both these countries are presently undergoing difficult internal IP policy transformations as their interests in promoting and protecting domestic innovation achieves greater parity with their interests in making low-cost use of externally-generated innovation. Similarly, other major developing country economies, such as Brazil, are progressively more successful in selected high-technology sectors, for instance, intermediate-sized civilian aircraft, and are increasingly seeking to identify the proper balance between more and less protective IP policies.

The World Intellectual Property Organization (WIPO) Development Agenda (WDA) arose principally from two sources. The first was from non-governmental organisation (NGO) pressure, which had its foundation in the way that patents were being used to limit access to medicines. WIPO technical advice to developing countries in the formulation and implementation of their patent laws was considered inconsistent with the perspective of the NGOs and the "softened" rules at the World Trade Organization (WTO). Consequently, changes at WIPO were perceived as necessary to maintain and advance modest successes at the WTO in generating greater sensitivity toward social objectives. (There are other NGO interests participating in the development agenda, such as the "open source" movement, but these NGO interests have not generated the same type of public pressure as the "access to medicines" movement.)

The second pressure was from a group of developing countries, which determined as a collective internal policy matter that further moves to harmonise and consolidate regulatory authority over the international patent system would adversely affect their interests. This determination was presumably based on a calculation that harmonisation and consolidation would reduce the discretion of their legislatures and national patent offices to limit patent applications or refuse enforcement of patents. Given that the great preponderance of global patent ownership is in the hands of enterprises based in OECD countries, and that shifts in the pattern of patent ownership are likely to emerge slowly, more comprehensive systems of protection on the part of developing countries will result in net royalty outflows. From this perspective, resistance to harmonisation and consolidation by a group of developing countries may be economically justifiable.

It is not clear that the objectives of the NGO "access to medicines" movement and the more general interests of the group of developing countries need to be addressed in the same way. A reasonable argument can be made that public health-related patent issues should be "carved out" of the general IP system and addressed differently than patent issues in other fields of technology, such as civilian aircraft, electronics, communications, power generation, and so forth. This is because the social welfare cost of "strong patents" may be significantly greater in the field of medicines than in other areas. In fact, historically, medicines-related patents (and food-related patents) were often treated differently to those relating to other fields precisely because of concerns over the social cost of strong patents in the field of medicines.

From a negotiating standpoint, the proposals for an ambitious WDA put forward by the Group of Friends of Development may be linked to potential forward movement on the draft Substantive Patent Law Treaty (SPLT). That is, there is a group of developed countries that may be unwilling to permit forward movement on the WDA as a stand-alone matter. Without prejudice to the answer, it may be useful to explore two fundamental questions: (1) what are the potential costs and benefits of moving forward with the draft SPLT and under what conditions, and (2) what could reasonably be demanded from the WDA?

How the group of developing countries promoting the WDA should address potential movement on the substantive patent law harmonisation is a difficult and nuanced question. The difficulty arises from consideration of history and from current economic trends. The further question is what alternatives may be reasonably available?

There is strong demand from certain OECD business groups to make the granting and enforcement of patents both in developed and developing countries more efficient. In the early 1980s, when OECD business groups were frustrated in their efforts to enhance global IP protection at WIPO, they ingeniously shifted forums to the General Agreement on Tariffs and

Trade (GATT) and ultimately out-manoeuvred developing countries. Today, there is similar OECD business group frustration at WIPO - although it is less intense than the pressure that drove the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) negotiations in the Uruguay Round - on the subject of substantive patent law harmonisation, but forum shifting to the WTO is politically unfeasible. It would, however, be short-sighted to assume that the pressure will simply "dissipate". Already forum shifting is taking place in two contexts: (1) bilateral and regional agreements where substantive patent law harmonisation is part of the package, and (2) mini-lateral patent office meetings among developed countries, whether styled Group B+, OECD or otherwise.

From the perspective of the group of developing countries, the optimist would say that the major developing country actors have so far successfully resisted bilateral and regional patent harmonisation, and that the bilateral and regional agreements reached to date are with less economically significant national actors. Perhaps more important, the optimist would say that an agreement between, the European Union (EU), Japan, Switzerland, the United States (US), and other OECD countries, on substantive and procedural patent harmonisation is of minor consequence because it simply would not apply among the group of developing countries. In that sense, there is the historical precedent of the GATT Uruguay Round negotiations in which early OECD proposals focused on a "code" among like-minded participants. The OECD ultimately abandoned the code strategy when it became apparent that this approach would not address the very countries that the OECD sought to "bring into the fold". The optimist would argue that an intra-OECD patent agreement is a hollow threat. The optimist might also ask whether the patent and trade officials of the EU, Japan, Switzerland, and the US, who are advocating the SPLT, are in fact pursuing a strong mandate from their governments. Perhaps, for example, the United States Senate Committee on the Judiciary is less than fully prepared to cede its discretion and power regarding the characteristics of the US patent system pursuant to a multilateral agreement.

The pessimist may ask what will ultimately be the position of China and India (as well as Russia) in this strategic game? Here we are confronted with imperfect information and predictive difficulties. In considering India, it is difficult to ignore the increasing internal alignment of the Indian patent and regulatory system with those of the OECD countries, as well as the strong patent faction within the government promoting that alignment, recognising that there are strongly competing viewpoints on patent issues within India. This movement appears to be based on a belief that such alignment is useful for the attraction of foreign capital and, to a lesser extent, on its potential to stimulate local innovation. China is more opaque, but again it is difficult to ignore the rising tide of Chinese innovation and the strong local interest in patent protection as evidenced by the high filing rate of applications. Although we certainly do not have enough information to draw a firm conclusion about this, the pessimist might conclude that China and India will eventually join an OECD patent harmonisation and consolidation exercise (we have limited information about Russia in this context). The pessimist might note that the US Congress has already approved a series of bilateral and regional trade agreements that harmonise standards of patentability, so that it might well be prepared to cede its discretion at the multilateral level. At the end of the day (or a decade), a few major developing country economies and a number of moderate to smaller developing country economies might remain outside a more harmonised patent system.

The consequences for two or three major developing economies and a number of smaller developing economies that remain outside an otherwise global patent harmonisation and consolidation system are not easy to foresee or predict. There would undoubtedly be pressure from trading partners to join the system and that pressure might be accompanied by implicit or explicit threats to withdraw trade benefits. There may or may not be effects on the flow of foreign direct investment (FDI). There may be consequences with respect to the level of local investment in R&D. What is

relatively certain is that countries that choose to remain apart from the negotiations will have less impact or influence on the ultimate system that is designed.

Policy makers from the group of developing countries promoting the WDA must, of course, ask, what is the best internal domestic policy for their countries? That assessment will differ depending upon the specific characteristics of the local economy. It may be that the social costs that would result from flexibilities lost as a consequence of a SPLT would exceed the gains from potential increased FDI and R&D investment, and that the potential negative consequences for trade flows imposed by the OECD as indirect or direct "sanction" would not substantially alter that balance. (Of course, as with the Uruguay Round negotiations, the fact that an agreement on IP would result in net royalty outflows does not necessarily mean that offsetting benefits could not be secured in other trade-related sectors.)

If the group of developing countries behind the WDA determines that blocking forward movement on the draft SPLT is the best strategy, this may produce a stalemate regarding forward movement on the WDA. In that context, questions about what might best be included within the WDA are less relevant and important. (To be clear, this is not expressing a judgment about the correct developing country assessment of the situation, but rather attempting to identify the predictable consequences.)

If it is assumed, for the sake of argument, that a political decision is made in favour of allowing the harmonisation agenda to move forward, what demands might be made with respect to the draft SPLT? The following are put forward for consideration:

 The criteria of patentability must be framed in a way that permits countries to introduce and maintain socially important checks and balances on the granting of patents. Countries should not be required to adopt the very liberal approach to inventive step and utility that has been followed by the US Patent and Trademark Office (USPTO) and the European Patent Office (EPO). In this regard, for example, India's Patents Act provides for an assessment of efficacy with respect to pharmaceutical inventions. This should be within the permitted range of acceptable assessment of patentability. In this regard, the "battle-ground" of the negotiations would shift to the technical elements of the solution - particularly the definition of "inventive step". This would require active engagement by patent law experts in challenging assumptions presently made in the draft texts;

- 2) There should be no explicit or implicit requirement that patents in all fields of technology must be treated "the same". At a minimum, the notion from WTO law that "differentiation" does not constitute "discrimination" must be imported into the WIPO process. A demand should be maintained that in fields of essential social interest, such as medicines and nutrition, countries must have the flexibility to adopt and implement exceptions to the rights of patent holders. Moreover, the notion that exceptions must be "narrow" based on the WTO panel decision in Canada - Generic Pharmaceuticals, should be challenged;
- 3) It should be made explicit that the patent system does not "trump" other fields of national regulatory interest. A patent is not an unfettered right of exploitation. Its exercise may be subject to ordinary regulatory controls. Competition law may be applied to the exercise of patent rights, as may health and safety laws, price controls, and so forth.

The second fundamental question is what may constitute WDA demands that could further develop interests and yet be within the reasonable contemplation of the OECD countries on the other side?

1) WIPO technical assistance in the drafting and implementation of IP legislation

plays a critical role in the ultimate result for many developing and least developed countries. Demands that WIPO should not attempt to impose an internal preference for particular types of legislative solutions, but instead provide a range of policy options within the framework of agreed international minimum standards, would assist in improving the overall environment both within WIPO and within recipient countries;

- Information concerning the patent status 2) of products, including pharmaceutical has products, proven exceedingly difficult to obtain. The lack of transparency regarding patent status may shift purchasing patterns and inhibit local production efforts. A proposal to establish a transparent database linking patents to products, along with penalties for the provision of false information, may aid developing countries;
- 3) Competition law is the principal legal avenue for exercising control over abuse of power with respect to intellectual property rights. With some exceptions, developing country bureaucratic structures for the implementation and enforcement of competition law are not strong. A commitment of resources to train competition enforcement authorities would assist in building up capacity, as might consideration of regional cooperative enforcement networks;
- 4) OECD countries invest substantial public resources on research and development for new technologies. Many developing countries lack the resources to create viable R&D-based institutions. OECD commitments to fund such institutions in developing countries may assist in reducing the capacity gap;
- 5) Serious attention to the issue of protection of rights in bio-diverse resources is required. Developing countries have made concrete proposals regarding the requirement of disclosure of source and

- origin of biological resources. Developed countries must seriously engage on this issue;
- 6) The proper functioning of the patent system is strongly dependent upon "patent quality". Assessments of patent quality are highly dependent upon access to information relevant to the criteria of patentability, and upon the technical training of patent examiners. Extensive effort is needed to improve developing country capacity regarding access to information and training. A multilateral effort to establish data banks of relevant technology and to improve patent examiner training would benefit all parties working in or affected by the patent system.

# THE FUTURE OF THE INTELLECTUAL PROPERTY SYSTEM AND CONSEQUENT NEGOTIATION TOPICS

John H. Barton

# I. INTRODUCTION: FUNCTION OF IP AND RATIONALE

The function of intellectual property (IP) systems is to encourage innovation and creativity. I will concentrate in this paper on patents, the area in which I have most background. Patents are a statutory mechanism encouraging innovation. Upon describing the details of a new invention, and filing appropriate papers and fees, an inventor can obtain a certificate excluding others from practising the invention, provided that certain statutory standards have been satisfied.

However, three real world points should be mentioned. First, any legal mechanism is imperfect and the patent system is an example. Thus, very silly patents have been issued. Litigation to enforce a patent is enormously expensive and some firms have gained large sums from enforcing whose validity is questionable.

Second, the real working of the patent system varies from industry to industry. In the pharmaceutical industry, the system works pretty much as intended: the period of monopoly created by a patent provides an opportunity for extra profit and firms invest in research in anticipation of receiving such a profit. In contrast, in much of the electronics and computer world, firms market products that embody many inventions patented by many different firms. Although they sometimes obtain licences to use specific inventions, they often simply maintain a large portfolio of patents that their competitors are infringing. They thus deter a lawsuit by threatening a counter lawsuit.

Third, attitudes toward IP are cyclic over time. During the period before about 1980, the United States (US) had a very weak patent system, and constrained it strongly with antitrust principles. Since then, this has changed by moving towards strong IP and weak antitrust. A number of recent US Supreme Court decisions, a series of studies, and legislation being considered by the US Congress, all suggest that the pendulum of IP may be beginning to swing back towards the domestic level.

# II. THE ACTUAL INTERNATIONAL INSTITUTIONAL STATUS

At the international level, however, the pendulum has not yet started back. There have been recent efforts to negotiate stronger patent principles at WIPO. Far more important, there are substantial efforts, particularly by the US, to negotiate bilateral arrangements to strengthen intellectual property rights (IPRs). These efforts reflect several pressures. First, many of those involved in the negotiations genuinely believe that strong IPRs are generally "a good thing." Second, both the European Union (EU) and the US benefit economically from stronger foreign IP rights because such strengthening will lead to an increased flow of royalties or profits in the entertainment and pharmaceutical areas. These industries are placing strong pressure on the negotiators of the developed nations. Hence, there is a sense in the US, at least that if stronger IP cannot be negotiated at the World Intellectual Property Organization (WIPO) or the World Trade Organization (WTO), it should be obtained bilaterally.

One more international pressure should be noted. The major patent offices (European, Japanese, and US) are facing enormous increases in their search load and are looking for ways to share the burden. This, together with the business sector's desire for simpler processes to obtain global patent coverage, is creating pressure for harmonisation (which is, to some extent, a step towards a global patent system).

# III. PATENT STATUS AND THE ONE SIZE FITS ALL ISSUE

Within the developed world, there has been a recent series of critiques of the patent system. These were spelt out in a study by the Nuffield Council on Bioethics in 2002, a report by the US Federal Trade Commission in 2003, a study by the Royal Society in 2003, and two reports by the US National Research Council in 2004 and 2006. Although these reports differ in detail and focus, they agree enough to define an agenda for patent reform. Some of the critiques question the extension of the patent system into such new sectors such as software,

business methods, and certain forms of biological and genetic information. Essentially, all seek to raise the standards for granting patents, normally seeking an increased inventive step to distinguish the particular invention from pre-existing ideas. Some propose improved review methods to avoid silly patents.

Not only do these critiques seek to change the standards for granting patents, they also seek to facilitate the use of patented inventions in the course of research. In addition, there has been US Congressional discussion on restricting the availability of injunctions requiring that a manufacturer stop manufacturing an infringing product. (Damages would still be available.) In general the pharmaceutical industry opposes such a change whilst the computer industry would be happier with an arrangement that restricts injunctions. The US Supreme Court already rebalanced the law quite significantly in 2006 in eBay v. MercExchange.

For developing nations, the issue is whether the patent system as currently practised, or as reformed in the ways described above, is economically beneficial. As discussed in the 2002 Report of the UK Commission on Intellectual Property Rights, one size does not fit all. The poorest nations do not really need a patent system because there are few scientists and engineers and the markets are generally too small to be a significant incentive to innovation. It is only as a nation becomes middle income that a patent system becomes useful. At the same time, it must also be recognised that the most serious harms of a patent system for a poor nation are in the pharmaceutical sector and that they have been partly resolved by Doha.

# IV. RECOMMENDATIONS

I have four recommendations for new initiatives for consideration:

A. A Harmonised System on Reasonable Terms

First, I think that developing nations would not be significantly harmed by a globally harmonised (or even integrated) patent system, provided the system were designed along the lines laid out by the recent critiques. I fear that the alternative is that the US, and possibly EU nations, will seek a system that is stronger and will then effectively force it on developing nations through bilateral negotiations. Hence, I think the developing world would benefit from negotiations for a globally-balanced patent system.

This could be sought in a WIPO Standing Committee on the Law of Patents (SCP) context, assuming there is a way beyond the current impasses. As I understand the negotiations, part of the problem is that the US is not following the agenda suggested by the recent critiques - the job is to find a way to bring those critiques more fully into the negotiations. Presumably, the only kind of treaty currently plausible is one that harmonises the standards for granting patents. In this context, the benefits of differentiation for developing nations are minor. It will be some time before negotiations reach the very separate issues of enforcing patents, which would include antitrust and compulsory licences, etc. These issues are much more politically and technically complex.

# B. A Management System for Bilateral Agreements

In the meantime, the most important issue for developing nations is the fact that they are being pushed into a variety of forms of stronger IP protection in bilateral negotiations. There has also been talk that these bilateral efforts might extend to areas like compulsory licensing and antitrust in ways that could be extremely damaging. Here, it would be wise to brainstorm some effective diplomatic deterrents. It is unrealistic to anticipate a rule that excludes IP provisions from bilateral trade agreements. However, it might be realistic to use the Article XXIV WTO review procedure, the WTO Trade Policy Review Mechanism, or a WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) Council resolution as a basis for critique of bilateral IP agreements, both to ensure that the nations involved know the implications of the TRIPS-plus IP provisions and to begin a discussion on which provisions are to be avoided. The exact strategy and forum deserve careful consideration.

### C. A Global Hatch-Waxman

In 1984, the US Congress passed the Hatch-Waxman Act balancing the rights of the research pharmaceutical industry with those of the generic pharmaceutical industry, which manufactures lower cost pharmaceuticals that are off patent. The compromise extended the research industry's exclusivity for a reasonable period (presented as a way to compensate for time spent obtaining product regulatory approval) and also facilitated generic entry onto the market at the time a patent expires. This included a simplified regulatory drug approval process that enabled the generic manufacturer to rely on the clinical data previously provided by the pharmaceutical manufacturer. (The provisions that defined the circumstances in which the pharmaceutical firm could prevent the generic firm from using the data were the source of the data protection provisions included in TRIPS.) The legislation also included very technical provisions that have given rise to strategic litigation that is currently complicating generic entry onto the US market. Clearly these provisions were badly drafted and are not essential to the concept of a balance between the two branches of the industry.

The Hatch-Waxman Act defined a temporal period of patent exclusivity followed by a period of generic entry and a falling price. The pre-2005 world, ended by TRIPS, made a parallel geographic distinction allowing patent exclusivity in some nations and generics in others. Might there be a new grand bargain that would broaden the opportunity for generics in poorer nations and, at the same time, reduce some of the political pressure to strengthen data protection and the status of the research industry? My suggested balance might give the research industry some protection against the importation of geographically-based generics into the developed world, perhaps against price controls in the developed world, and would certainly provide greater international harmonisation of regulatory standards and guarantees of a period of public sector procurement for new products that benefit the developing world. In return, entry of generics into developing nations would be facilitated and data protection would be provided only where needed to facilitate the introduction of new products. Obviously, the detailed terms of the balance and the strategy to achieve such an arrangement require discussion in both the private and public sectors. It might, however, ultimately be ratified as a protocol to TRIPS or as an understanding in the style of the Doha Declaration.

# D. Technology Transfer Barriers

Finally, the more scientifically capable developing nations are using a variety of ways to attempt to encourage the transfer of technology to their industries. These include, for example, subsidies and requirements that those who sell to the government or set up new facilities in a nation should transfer technology to local partners. Some of these procedures are almost certainly unwise economically; others are probably wise. All are subject to developed world pressure, through the WTO Agreement on Trade-Related Investment Measures (TRIMS), through interpretations of the anti-dumping and subsidies codes, and through bilateral negotiations. They may constitute serious barriers to technology transfer. The first steps are certainly to make an inventory of the procedures and to carry out studies to determine which are effective and which are being prohibited through trade negotiations. After that, specific negotiating goals could be set.

# RESPONDING TO THE CHALLENGES FOR DEVELOPMENT WITH A COMPETITION-ORIENTED APPROACH

Josef Drexl

The following comments are based on a concern that the international intellectual property (IP) system is departing from a competition-oriented economic order; that is, one that includes intellectual property rights (IPRs) as a necessary element of promoting dynamic competition. Expansionist developments of IP law tend to replace a pro-competitive IP system with a more "proprietary" system, protecting those who already own IP rights against new entrants in technology and knowledge-based markets. Whereas the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) at least allows WTO Members to take into account the need to keep IP law pro-competitive, recent bilateral trade agreements tend to promote this more proprietary approach.

The following comments neglect the overall societal and human rights dimension of IPRs. This, however, is not to say that the need to guarantee access to essential drugs or information needed for education is not a valid concern. On the contrary, a competition-oriented approach may be helpful in addressing the social and human problems often linked to IPRs, although such an approach is certainly not sufficient to solve all of these problems.

# I. ECONOMIC AND POLITICAL CONSIDERATIONS RELATING TO THE IP SYSTEM

A. IPRs and the Concept of Dynamic Competition on the Global Level

The general purpose of IPRs is to create incentives for innovation and creativity. However, from an economic market-based perspective, any concept of IPRs that describes the economic objective in an "isolated" way, namely, by only looking at the incentive a given right exercises on the business decision of an undertaking, necessarily misses the point. Undertakings do not invest in research and development (R&D) because the IP system will pay them adequately, but because they hope that the subject matter of protection will find a large enough market. This explains why the patent system cannot convince pharmaceutical companies to invest

in orphan drugs and why the chemical industry invests a lot in patents for cosmetic products, despite the fact that they will not win market dominance in the highly competitive markets for such products.

The modern economic view, that takes into consideration the impact of IPRs on the market, follows a theory of complementarity, as is best explained by the transfer of technology guidelines in the United States (US) and the European Union (EU).<sup>2</sup> The European Commission (EC) Transfer of Technology Guidelines state that both bodies of law, namely IP law and competition law,

"...share the same basic objective of promoting consumer welfare and an efficient allocation of resources. Innovation constitutes an essential and dynamic component of an open and competitive market economy. Intellectual property rights promote dynamic competition by encouraging undertakings to invest in developing new or improved products and processes. So does competition by putting pressure on undertakings to innovate. Therefore, both intellectual property rights and competition are necessary to promote innovation and ensure a competitive exploitation thereof."

Without IP protection, undertakings would be afraid that competitors would copy (competition by imitation) and, therefore, would not invest in R&D. Conversely, without competition, a monopolist who holds IPRs would not have any incentive to reinvest in further innovation since this undertaking would already control the market and would be able to impose monopoly prices. Therefore, both sets of laws, IP laws and competition laws, need to be adequately combined in order to promote dynamic competition as a condition for a knowledge-based economy. As a consequence, IP law itself is in need of a "pro-competitive" design. Although the IP system excludes imitation in principle by the exclusivity of the right, it should not exclude competition as such. Market access with better or more creative products should always be possible (competition by substitution).

There is no reason why the role of IPRs at domestic and international levels should be different. However, it is obvious that the IP system,

as a market-oriented tool, will better serve the interests of consumers in economically strong markets. Accordingly, the patent system does not adequately respond to the need to treat diseases that can only be found in poor countries, although these diseases might affect large populations. In addition, the said theory of complementarity can only be transposed to the international level by conceptualising dynamic competition as a "global public good".4 In this context, dynamic competition can only be considered as a trade-off of benefits arising from incentives for innovation and creativity on the one hand, and a loss of allocative efficiency (price competition) on the other. Whereas, at the global level, the overwhelming benefits have to be found on the side of innovation, poor developing countries may well lose individually. Therefore, the argument may be made that IP laws do not have to be the same all around the world. In particular, countries may be authorised to allow imitation to the extent that such allowance does not affect the incentive structure of dynamic competition globally. Offering cheaper generic HIV drugs to patients that would otherwise not be able to buy those drugs does not cause a loss to the respective patent holders and, therefore, does not harm the incentive structure of the patent system.

# B. Defending a Pro-Competitive IP System Against Proprietary Concepts in FTAs

The above-mentioned rationale, of IP laws relying on a pro-competitive concept, should not just remain at the core of today's IP system. It even needs to be defended against the risk of being replaced by a different, namely more proprietary, approach that tends to foreclose market access. Accordingly, in the context of newly concluded free trade agreements (FTAs), the term of "TRIPS-plus" standards may not adequately capture what is actually going wrong. The issue is not whether we need stronger protection in addition to TRIPS standards. The issue is rather one of a different quality of IP protection.

Just to give a few examples: in the field of trademarks, Article 15 (1) of TRIPS allows WTO Members to require "distinctiveness", at least acquired by use, as a condition for registration.

Trademark offices and European courts nowadays rely very much on this concept in order to make sure that registration of new trademark forms, such as those for colours,<sup>5</sup> scents<sup>6</sup> and three-dimensional forms,7 which consumers have difficulties in distinguishing, do not foreclose the market. European practice thereby tries to safeguard the trademark system as a system that simultaneously gives incentives for the quality of goods and services and promotes competition against market foreclosure effects.8 In contrast, the US FTAs, with some variation, provide for an obligation of the contracting parties to protect problematic trademark forms, like sounds and scents, without any reservation to distinctiveness. Hence, those provisions enable the granting of proprietary rights that can almost automatically foreclose the market. Most importantly, the "new" exclusive right granted to undisclosed data concerning safety and efficacy of products<sup>10</sup> might well confer market power to pharmaceutical companies for products that do not qualify for patent protection or are no longer protected by patents. 11 Similar to the trademark example above, the FTAs protect the market position of IP holders against those who want to enter the market, a) without sufficient justification in the light of a competition-oriented IP system and b) whereas Art. 39 (3) of TRIPS only obliges Members requesting submission of such data to protect that data against unfair commercial use. 12 Equally, extension of the copyright term to 70 years after the death of the author<sup>13</sup> very much favours the copyright industry, which already owns copyrights, without providing any new incentive to create new works.

# C. Balancing the Interests of Different Parties Concerned in a Competition-Oriented Approach

A competition-oriented approach to IP law is also helpful to better balance the interests of the different parties concerned. By stimulating investment in innovation and creativity, such an IP system will better serve consumer demand in innovative products. "Successful" innovation is allowed, and is even expected, to override inferior technology and to win market dominance. However, such dominant positions in a competition-oriented IP system should remain contestable.

According to the competition-oriented approach, IP law has to make sure that market access for better products is not excluded as such. At least, as a matter of principle, there should always be the possibility that the incumbent might be overturned by more innovative products (competition by substitution). Such potential competition by future innovation may sometimes discipline the behaviour of the dominant firm right away, prevent excessive pricing and make sure that the incumbent continues to be innovative. The competition-oriented approach also makes sure that the costs of production are kept low. This is why the competition-oriented approach may also be helpful to promote transfer of technology to developing countries where production is usually cheaper.

In drafting IP laws, specific exceptions and limitations might be motivated by competition-policy concerns. This is true, for example, in the European rule on decompilation, which allows for reverse engineering of computer programmes with the objective of creating interoperability of the programmes. Another example is the exemption of spare parts from design protection. Course, the competition-oriented approach cannot explain all exceptions and limitations, as some may be justified by different concerns and specific users' interests only.

In the field of copyright, one should take into account the fact that the legislature does not only have to solve a conflict between IP owners and users but also has to face a triangle of interests with a conflict between the original authors and the copyright industry as two different groups of IP owners. 16 According to the traditional continental European droit d'auteur approach, attribution of the original right to authors is expected to enable them to generate equitable remuneration for the economic exploitation of their works. As experience has shown, however, and as economics can explain, the copyright system will not work this way. Even in a competitive market, original authors risk a buy-out of their rights to the copyright industry. Domestic copyright laws in the EU, in particular, react to the problem in two different ways. Firstly, some of them try to strengthen the bargaining power of authors by providing for specific contractual protection.<sup>17</sup> Secondly, some rights may be reserved for the administration by collecting societies that make sure that authors actually receive a fair share of the income. In contrast, US FTAs combine, in a strange way, droit d'auteur and copyright concepts by an obligation to protect for 70 years after the death of the author and a simultaneous requirement to make the copyright fully transferable. 18 Free transfer breaks the link between the original author and transforms the "author's right" into a proprietary right of the copyright industry. Still, the industry happily benefits from the longevity of the author who - or whose heirs - will receive nothing from the income generated by the extension of the term of protection. In addition, FTAs oblige the parties to ensure that the assignee fully enjoys the acquired right, 19 which may well exclude the possibility that certain residual statutory rights are held back by domestic legislation for the original author and, consequently, may no longer be administered by collecting societies only.

These FTA copyright rules favour those who invest in the acquisition of rights irrespective of whether such investment has any influence on the creative act of the original author. The economic effects may be extremely harmful to both the authors and the users. In some instances, like in the area of scientific publishing, the authors and the users belong to the same group of people and both have to cope with the market power of dominant "copyright owners", in this case the scientific and academic publishers.<sup>20</sup> The same rules produce a very negative effect on developing countries, be they in Latin America or Africa, where although local creativity produces music for the world market, it will almost certainly be controlled exclusively by multinational undertakings settled in the northern hemisphere.

# D. Addressing Issues of Abuse and Balance under Competition Laws and the TRIPS Agreement

This paper has thus far argued in favour of an integrated concept of "intellectual property and competition law" on the domestic and international level. However, a competition-policy oriented IP law alone cannot sufficiently address all competition problems that arise in the context of IPRs. Although IP statutes could generally be construed in a "pro-competitive"

way, courts may well make decisions that contradict the competition-oriented approach.<sup>21</sup> Registration offices may grant rights that seriously affect the openness of IP-related markets. Clauses in licensing agreements may restrict competition. De facto and de jure standardisation,<sup>22</sup> the latter based on network effects,<sup>23</sup> may exclude that market dominance based on IPRs can be contested by superior technology. Hence, even a competition-law oriented IP system needs to be complemented by IP-related rules of competition law.

The current TRIPS Agreement only authorises WTO Members to apply their competition laws to IP-related cases.<sup>24</sup> These TRIPS rules basically have two deficiencies. Firstly, they do not explain how to draw the line between permissible and illegal, i.e., anti-competitive use of IPRs. Whether international law could give more guidance at all at the moment is, however, quite doubtful since, with respect to the refusal to grant a licence in particular, single jurisdictions still demonstrate little certainty as to the most appropriate rules, 25 and considerable divergence exists between different jurisdictions. Secondly, current TRIPS rules only enable WTO Members to protect their own markets and therefore fail to establish an international regime that protects cross-border competition effectively against IP-related abuses. This is why even IP experts name competition law as the "single most important chapter to be written in the TRIPS Agreement".26

# II. IP AND DEVELOPMENT

As pointed out above,<sup>27</sup> a competition-oriented international system does not require recognition of the same IP standards everywhere in the world. There are basically two arguments that explain why divergence can even be beneficial.

The first argument relates to expansionist tendencies in IP law. For instance, recent expansion of US patent law to the areas of computer programmes and business methods alone does not advocate transferring such expansion to the international level. Since expansion of IP laws involves the risk of restraining competition, it is better to leave it to regulatory competition of different jurisdictions to find out whether,

over time, expansion produces positive effects for innovation. For example, the US has always been hesitant to adopt the European model of protecting databases on the grounds of mere substantial investment.<sup>28</sup> Today, it is the European Commission that questions its own policy of the 1990s and does not even exclude repealing the Database Directive of 1996.<sup>29</sup>

Whereas the first argument advocates more flexibility for all domestic IP laws with respect to expansion of IP protection, we have to add a second argument, which supports, in particular, more flexibility for developing countries. From a competition-policy perspective, one has to acknowledge that IP-related markets are not necessarily global. Rejection of the principle of international exhaustion in many economically more advanced countries actually leads to a fragmentation of the world market. Again, global protection of IPRs in situations in which IP-related markets are not international only promotes the proprietary interests of the IP owners without sufficient justification in market economics.<sup>30</sup>

# III. GOVERNANCE OF IP MATTERS

A. Safeguarding Objectivity and Independence in Dealing with the IP Structure and Industrial Lobbies

The current international system is highly inappropriate for the development of a framework that would lead to a more competition-oriented IP system and which would protect such a system at the global level. This is basically due to the fact that some governments equate the interests of certain industries with their own national economic interests.

It has to be remembered that TRIPS is basically the result of a problem experienced by some economically more advanced countries in the 1980s. Back then, the US, in particular, had to face an enormous trade deficit. Industries in the US had to respect domestic IP laws and often had to compete abroad with companies that were free to copy. Border measures could only combat importation of pirated and counterfeit goods. Therefore, TRIPS raised the standards of IP protection worldwide and promoted the enforcement of such rights in order to improve

the competitiveness of companies based in developed countries in global markets. Still, it does not necessarily appear that this policy has reduced the trade deficit of the US. Indeed, TRIPS has promoted globalisation. Intellectual property-related production and, increasingly, R&D, is moving to economically emerging countries, such as China and India. Technology-oriented multinationals (e.g., Microsoft, Monsanto, pharmaceutical companies) may still have their headquarters in developed countries and continue to push governments there to promote ever higher and "proprietary" IP standards internationally. Whether such a policy will remain in the best interests of such developed countries, however, is questionable.

In addition, promoting ever higher standards of IP protection on an international level also has a negative impact on the domestic IP law of the more advanced countries. A detailed analysis of the IP rules of recent US FTAs would demonstrate that the US does not only "export" US standards as they can be found in US statutes. These Agreements also create internationally binding obligations for the US, which can only be found in US case law and even oblige the US to raise their own domestic standards.31 From a domestic perspective, such expansion of domestic protection via international law is problematic since it largely excludes democratic debate in national parliaments on whether such expansion should take place or not.

For interested industries, FTAs are therefore an ideal instrument to promote IP expansion both on the international and the domestic level. The more countries are bound by "TRIPS-plus" standards of bilateral FTAs, the more likely it becomes that these often "proprietary" standards will become the multilateral standards that replace the still recognisable pro-competitive standards of the TRIPS Agreement. Likewise, FTAs promote "proprietary" expansion of domestic IP standards even in the US without sufficient democratic control.

# B. Possible Initiatives for Improving the Existing System to Respond to the Needs of the 21st Century

In light of the foregoing analysis, the outlook for future development of international IP law

is not an optimistic one. Still, some recommendations can be formulated to improve the current situation:

- 1) The WTO system is in urgent need of a moratorium on the conclusion of IPrelated bilateral agreements. Free Trade Agreements, including IP-related provisions, tend to be highly anti-competitive. Under the TRIPS most-favoured-nation (MFN) obligation, those agreements do not only oblige the parties to such agreements to raise IP standards and to apply these standards to all WTO Members; they also create preferential treatment in the field of trade in goods and simultaneously put countries that refuse to accept such agreements at a competitive disadvantage. Countries that enter into FTAs with the US, for instance, gain facilitated access to the US market, whereas other countries have problems to compete in the US market. With the growth of the number of such FTAs, it becomes increasingly harder for the latter group of countries to resist the conclusion of similar FTAs;
- The basic concept of the TRIPS Agreement, which relies on minimum standards, has to be reconsidered. There is an obvious need for the inclusion of maximum standards (ceilings) that guarantee that IP laws as such do not turn out to be anti-competitive and, thereby, hamper dynamic competition instead of promoting innovation and creativity;
- Members of the WTO should work on 3) more specific rules to control the anticompetitive use of IPRs. Such standards could be recommended to WTO Members as domestic standards. In view of the need to protect cross-border competition against restraints related to IPRs, TRIPS could also include a rule that obliges WTO Members to apply their competition law without discriminating between the protection of domestic and international markets. Such a rule would promote transfer of technology to developing countries, in particular, since developed countries, as the better competition law enforcers, would have to prohibit, for instance, anti-competitive

clauses in licensing agreements of licensors based in their countries, although such agreements would only relate to the use of IPRs abroad.

The general philosophy of these few recommendations relies on a concept of "dynamic" competition as a global public good. At the WTO level, however, such a philosophy would require governments to look beyond acting as representatives of the interests of "domestic" industries and rather develop greater awareness of the common interest of all states in a global competition-oriented IP system. It may well be that, from an institutional perspective, such a "change of mentality" is easier to achieve in the framework of WIPO than the WTO.

- <sup>1</sup> By this author, see Drexl, J. (2003). "Les principes de protection des intérêts diffus et des biens collectifs: quel ordre public pour les marchés globalisés?" Revue Internationale de Droit Economique 17(3-4), 387-409. See also Roffe, P., Tansey, G. and Vivas-Eugui, D. (2006). Negotiating Health Intellectual Property and Access to Medicines. Earthscan. London, UK Sterling, VA, US.
- <sup>2</sup> See "Antitrust Guidelines for the Licensing of Intellectual Property", issued by the US Department of Justice and the Federal Trade Commission, 6 April 1995, para. 1.0. Obtained from: http://www.usdoj.gov/atr/public/guidelines/0558. htm; Commission Notice Guidelines on the application of Art. 81 EC to technology transfer agreements, OJ EC 2004 No. C 101, p. 2.
- <sup>3</sup> Para. 7 of the EC technology transfer guidelines (see 2 above).
- <sup>4</sup> On the theory of global (or international) public goods, see Kaul, I., Conceição, P., Le Goulven, K. and Mendoza, R.U. (2003). Providing Global Public Goods. Oxford University Press. New York, US Oxford, UK. On the understanding of international competition as a global public good, see Drexl, J. (2004) "International Competition Policy after Cancún: Placing a Singapore Issue on the WTO Development Agenda". World Competition 27(3): 419.
- <sup>5</sup> See Case C-104/01, Libertel Group BV v. Benelux-Merkenbureau [2003] ECR I-3793.
- <sup>6</sup> See Case C-273/00, Sieckmann [2002] ECR I-11737 (rejecting registration of an olfactory mark for lack of being graphically represented).
- <sup>7</sup> See, most lately, Case C-25/05 P, August Storck KG v. Office for Harmonisation in the Internal Market (OHIM) [2006] ECR I-5719 (on the distinctive character of a three-dimensional shape of a sweet).
- See Phillips, J. (2005). "Trademark Law and the Need to Keep Free". International Review of Industrial Property and Copyright Law 36(4): 389-401.

- <sup>9</sup> See, for instance, Art. 17.2(2) of the US-Australia FTA. Obtained from: http://www.ustr.gov/assets/Trade\_Agreements/Bilateral/Australia\_FTA/Final\_Text/asset\_upload\_file469\_5141.pdf.
- $^{\rm 10}$  See, for instance, Art. 15.10 of the US-CAFTA and Dominican Republic FTA.
- <sup>11</sup> Provisions of the US FTAs in this field are very complex and are not the same in all FTAs. See, in general, Pugatch, M. P. (2005). "The International Regulation of IPRs in a TRIPS and TRIPS-plus World". Journal of World Investment and Trade 6(3): 430. For a closer analysis of the provisions in the US-Chile FTA, see Roffe, P. (2004). Bilateral agreements and a TRIPS-plus world: the Chile-USA Free Trade Agreement. Quaker International Affairs Programme. Ottawa, Canada.
- <sup>12</sup> It is usually held that the use of data already submitted by the authority to approve the marketing of competitors' products, such as generics producers, does not constitute unfair commercial use. On the interpretation of Art. 39(3) of TRIPS, see Correa, C.M. (2004). "Bilateral Intellectual Property: Defeating the WTO System for Access to Medicines". Case Western Reserve Journal of International Law 36(1): 79-96. In contrast to the FTAs, it is disputed whether Art. 39(3) of TRIPS only introduces a liability rule of unfair competition law or a duty to grant an exclusive right. See in UNCTAD-ICTSD (2005). Resource Book on TRIPS and Development. University Press. Cambridge, UK.
- <sup>13</sup> See, for instance, Art. 15.5(4)(a) of the US-CAFTA and Dominican Republic FTA.
- <sup>14</sup> See Art. 6 Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programmes. [1991] OJ EC L 122, p. 42.
- <sup>15</sup> On this issue, see Drexl, J., Hilty, R.M. and Kur, A. (2005). "Design Protection for Spare Parts and the Commission's Proposal for a Repair's Clause". International Review of Industrial Property and Copyright Law 36(4): 448-457.
- <sup>16</sup> See Hilty, R. (2005). "Verbotsrecht vs. Vergütungsanspruch: Suche nach den Konsequenzen der tripolaren Interessenlage im Urheberrecht" in Perspektiven des Geistigen Eigentums und Wettbewerbsrecht: Festschrift für Gerhard Schricker. Ohly, A., Bodewig, Dreier, T., Götting, H.-P., Haedicke, M. and Lehmann, M.
- <sup>17</sup> French and German law, which apply slightly different techniques, are good examples. On the German reform of 2002, see Dietz, A. (2002). "Amendment of German Copyright Law in Order to Strengthen the Contractual Position of Authors and Performers". International Review of Industrial Property and Copyright Law 33(7): 828-848.
- $^{18}$  See, for instance, Art. 15.5(4)(a) and (6)(a) and (b) of the US-CAFTA and Dominican Republic FTA.
- <sup>19</sup> See Art. 15.5(6)(b) US-CAFTA and Dominican Republic FTA.
- <sup>20</sup> For recent writing on this issue, see Drexl, J. (2006). "Droit d'auteur et information scientifique Analyse concurrentielle, protection des bases de données et perspective allemande" in La propriété intellectuelle en question(s) Regards croisés européens. Paris, France; Hilty, R.M. (2006). "Das Urheberrecht und der Wissenschaftler". Gewerblicher Rechtsschutz und Urheberrecht, Internationaler Teil 55(3): 179-189.

- <sup>21</sup> This was the case in the UK and Ireland where courts once held that mere listings of TV programmes enjoyed copyright protection. Thus, case law gave rise to TV stations' monopoly in the printed TV programmes market. The European Court of Justice reacted to this problem by requiring the TV stations to license the copyright under Art. 82 EC; see Joint Cases C-241 and 242/91 P, RTE v. Commission (Magill), [1995] ECR I-743.
- <sup>22</sup> For current US competition policy on standardisation, see Masoudi, G.F. (2007). "'Efficiency in analysis of antitrust, standard setting, and intellectual property", High-Level Workshop on Standardization, IP Licensing, and Antitrust, Tilburg Law & Economic Center, Tilburg University, 18 January 2007. Obtained from: http://www.usdoj.gov/atr/public/speeches/220972.htm.
- 23 The most prominent example of this is network effects that guarantee Microsoft market dominance in the market for operating systems.
- <sup>24</sup> See, for instance, the general rule of Art. 8(2) of TRIPS.
- <sup>25</sup> For instance, US antitrust law and EC competition law react differently to a refusal to license by a market-dominant right holder. For US law, see Hovenkamp, H., Janis, M.D. and Lemley, M.A. (2005). "Unilateral Refusals to License in the US" in Antitrust, Patents and Copyright, EU and US Perspectives. Lévêque, F. and Shelanski, H. The current state of stricter EC law is defined by Case C-418/01, IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG, [2004] ECR I-5039.
- <sup>26</sup> Ricolfi, M. (2002). "The Interface between Intellectual Property and International Trade: The TRIPs Agreement". Italian Intellectual Property 1(1): 28-40.
- <sup>27</sup> At A. I. above.
- <sup>28</sup> However, in the US, databases may enjoy similar and even better protection as a consequence of stronger protection of technical protection measures under the Digital Millennium Copyright Act (DMCA). Protection of technical protection measures, which does not depend on the eligibility for IP protection of the controlled data, allows the undertaking controlling such measures to define the scope of exclusivity autonomously. This form of "private exclusivity" is another example of how modern law tends to prefer a "proprietary" to a "competition-oriented" approach to IP laws.
- <sup>29</sup> See DG Internal Market and Services Market Working Paper First Evaluation of Directive 96/6/EC on the legal protection of databases, 12 December 1995. Obtained from: http://ec.europa.eu/internal\_market/copyright/docs/databases/evaluation\_report\_en.pdf.
- <sup>30</sup> For further reading on this argument, see Drexl, J. (2005). "The Critical Role of Competition Law in Preserving Public Goods in Conflict with Intellectual Property Rights" in International Public Goods and Transfer of Technology. Maskus, K.E. and Reichman, J.H.
- <sup>31</sup> One example for the latter is the inclusion of an obligation to respect the WIPO Joint Recommendation on the Protection of Well-Known Marks (1999). See, for instance, Art. 16.1(2)(b)(i) US-Singapore FTA. On domestic US law, which seems more restrictive on protecting well-known marks from abroad, see 391 F.3d 1088 (9th Cir. 2004).

# RESHAPING THE INTELLECTUAL PROPERTY SYSTEM WITH A DEVELOPMENT PERSPECTIVE

Carlos M. Correa

# INTELLECTUAL PROPERTY IS ONE BUT NOT THE ONLY MEANS TO PROMOTE INNOVATION AND CREATIVITY

Economists state that knowledge can be categorised as a public good because it has the two basic and fundamental particularities that differentiate public goods from private goods: non-rivalry and non-excludability. Knowledge is non-rivalrous since many people can enjoy it at the same time with no additional cost. It is also non-excludable because its enjoyment by one person does not exclude others from enjoying it too.

Economic analysis has highlighted the intrinsic problem that these two characteristics of public goods may bring about with regard to the incentives to produce such goods. The standard argument is that the very nature of knowledge makes it particularly difficult to stop free-riders from enjoying the good without paying for it, thereby affecting the creator's or producer's ability to obtain an economic reward for the use of their work or production. As a consequence, the argument follows that there is little or no incentive to provide public goods privately and some of them could end up in short supply.

Historically, governments have found two alternative paths to address this problem. One possibility was to finance the production and delivery of public goods either directly or through the granting of funds or subsidies to third parties that would produce or deliver the goods. A second option was to modify this natural situation by bestowing artificial proprietary rights on public goods producers as a way of allowing them to exert some control over the use of their creations. Thus, intellectual property rights (IPRs) provide one means to address the dilemma of public goods appropriability by granting creators exclusive rights over the use of their creations and introducing an artificial scarcity that permits the generation of a market for information goods.

However, IPRs are neither the only nor necessarily the most efficient means to promote innovation and creativity:

 Protection from imitation may result from several non-IPRs mechanisms, such as lead time, the innovator's capacity to move on the learning curve quicker than competitors, the customer loyalty derived from superior sales and services, and from the very structure of the market;

- An important part of innovation takes place as a result of routine production activities and learning, completely unrelated to the existence of IPRs protection (e.g., agricultural innovation);
- Non-appropriation mechanisms, such as 'open source' schemes, have proven to promote a vibrant process of innovation and are gaining importance in several areas;
- Information is both an output and an input in its production process; hence, the exclusionary rights conferred by IPRs can lead to under-utilisation of information, especially where cumulative forms of innovation prevail;
- IPRs create a monopoly over information or the expression thereof, which may collide with certain fundamental social needs and individual rights, such as public health or the right to freedom of expression.

# ADAPTING IP REGIMES TO SOCIO-FCONOMIC CIRCUMSTANCES

Different countries and sectors are affected differently by IPRs. The static-dynamic efficiency rationale (the sacrifice of efficiency today in order to get innovations in the future) often articulated to justify IPRs in developed countries, does not necessarily hold in countries with low scientific and technological capacity, limited capital to fund research and development (R&D), and a majority of people living with low income or in poverty. Obviously, the impact of any incentive crucially depends on the context in which it applies. While IPRs may not work as an incentive in a context of low level of development, they may have significant negative allocative consequences and retard development, for instance, by limiting access to medical treatment and education.

Today, industrialised countries adapt their IPRs regimes to their different stages of economic

and technological development. This was made possible under a flexible international system of IPRs protection. After the adoption of the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), developing countries did not have the same possibility. They are bound to apply standards of protection that may be suitable for advanced levels of development. The TRIPS Agreement has left, however, some areas of flexibility, for instance, in the definition of the concept of invention, the acceptance of parallel imports, the granting of compulsory licences, and in the provision, under certain conditions, of limited exceptions to exclusive rights. The Ministerial Declaration on the TRIPS Agreement and Public health recognised the existence of certain flexibilities in the Agreement in November 2001.

However, these flexibilities may not be sufficient in certain contexts. This is why least developed countries (LDCs) are still exempted from the obligations of the Agreement. In addition, many developing countries have not made use of the permitted flexibilities often because of external pressures, biased technical assistance or simply a lack of knowledge about their options. Moreover, recent Free Trade Agreements (FTAs) have substantially eroded such flexibilities, particularly in areas of interest that protect public health. A deliberated action is needed to preserve and expand the room countries have to pursue their national interests.

# IP IN THE CONTEXT OF DEVELOPMENT

The linkages between intellectual property and economic and social development are difficult to establish. In particular, it is extremely difficult to determine the causal relationship between certain levels of intellectual property protection and indicators of trade, investment, innovation, and technology transfer. Although several studies have explored the relationship between intellectual property and some of these variables, their results are far from being conclusive. Neither the economic theory nor the available evidence supports the current trend towards overprotection of IPRs. This is especially the case with the concept that "one size fits all", namely, that high standards of IPRs

protection are equally adequate for developed and developing countries. It seems clearly incorrect to assume that to promote intellectual property is automatically to promote innovation and development and the more rights the better. This is, however, the uncritical approach historically adopted by the World Intellectual Property Organization (WIPO). The proposed WIPO Development Agenda (WDA) offers an unparalleled opportunity to put on WIPO's agenda the question of development as a central issue and to examine, in a rational and balanced way, both the benefits and costs of IPRs in different contexts. More importantly, the WDA stresses the need for WIPO to acknowledge that the promotion of innovation and intellectual creativity cannot only be made through IPRs, and the need to discuss, for instance, matters relating to open collaborative models.

The main challenge facing the WDA is some governments' reluctance to engage in an open and objective debate, to rely on evidence rather than ideology, and to recognise that even within their jurisdictions there is a growing scepticism about the functioning of the IPR system and concern about the impact of overprotection on the public.

# IMPROVING GLOBAL GOVERNANCE OF IP

During the last 20 years, the international rules on IPRs have been essentially shaped by a small group of narrow industry interests, with little or no consideration of their likely implications on development and, particularly, on the poor. The role of the pharmaceutical, entertainment, software and semiconductor industries in influencing the negotiation of the TRIPS Agreement and, more recently, FTAs is well documented.<sup>1</sup>

WIPO's institutional framework allows for both informal and formal intervention of various lawyers and business associations that openly promote the interests of particular industries and right holders, which also decisively influence in many cases the position of some governments. In contrast, the current governance structure of IPRs allows for the limited participation of developing countries in decision-making processes regarding the development and implementation of the IPRs system. Often the

participation of developing countries in normsetting is distorted by expectations that they will obtain financial support in the context of WIPO's technical co-operation programmes. A de-linkage of norm-setting and technical cooperation could improve developing countries' capacity to pursue their long term interests in WIPO's decision-making processes.

WIPO remains the main multilateral provider of technical assistance relating to intellectual property. Many developing countries and LDCs that received WIPO's assistance have not taken advantage of the development-friendly policy spaces within the TRIPS. This raises concerns about the content of WIPO's technical assistance programmes. More transparency, especially regarding conflicts of interest of external consultants, and a development-sensitive orientation of technical assistance are urgently required. The following principles may be suggested for the supply of technical assistance:

- Development Focused Technical Cooperation: The provision of technical assistance should have as its objectives the fulfilment of the development goals of the recipient countries and broader development goals such as the United Nations Millennium Development Goals (MDGs);
- Comprehensive and Coherent Assistance
   Programmes: Technical cooperation
   should assist countries to devise coherent
   national IP policies that are linked to
   broader development and public policy
   objectives. The existence of such policies
   should be recognised as a necessary part
   of developing a coherent approach to the
   implementation of international IP-related
   commitments;
- Integrated Approach: In designing technical assistance programmes, there is a need to expand its coverage to include matters related to the use of competition law and policy to address abuses of intellectual property and practices that unduly restrain trade and the transfer and dissemination of technology;

 Neutral, Unbiased and Non-Discriminatory: The provision of technical assistance should be unbiased, neutral and developmentfocused. It should be of an advisory nature based on actual and expressed needs. The assistance should not discriminate among recipients or issues to be addressed and should not be perceived as being a reward system for supporting certain positions in international negotiations.

In sum, the current governance of IPRs does not seem to be adequate to respond to the needs of the 21st century. The processes for the design of international rules need to ensure that the interests of the public in both developed and developing countries are taken into account. IPRs should be dealt with as one of the means to promote innovation and creativity. Any international organisation dealing with IPRs should work on and actively promote alternative mechanisms for the production of knowledge as a public good.

<sup>&</sup>lt;sup>1</sup> For instance, the US Trade Representative (USTR) Functional Advisory Committee on Intellectual Property (IFAC-3) (which has provided advice on the IPRs chapters of Free Trade Agreements (FTAs)) is composed of representatives from the Biotechnology Industry Organization (BIO), Eli Lilly and Company, the Intellectual Property Owners Association (IPO), the International AntiCounterfeiting Coalition (IACC), the International Intellectual Property Alliance (IIPA), Levi Strauss & Co., Pfizer Inc., Pharmaceutical Research and Manufacturers of America (PhRMA), the Recording Industry Association of America (RIAA), Time Warner Inc., and The Gorlin Group.

# INTELLECTUAL PROPERTY AND DEVELOPMENT: VIEWS FROM THE UK PATENT OFFICE

**Ron Marchant** 

# ECONOMIC AND POLITICAL CONSIDERATIONS

# A. Developed Economies

As traditional manufacturing moves to lower cost economies and new technologies assume greater importance in global economic trade, developed countries look to the intellectual property (IP) system to support businesses in levering economic value from creativity and encouraging greater investment in innovation. In doing so, a number of related issues arise. Firstly, businesses need to understand the nature of IP, the goods that they have to exploit and ways of exploiting them. At the same time, the inventions made in university- and publiclyfunded research need to be brought to the market place. Thus, training for businesses in both the use of IP and product and service development become imperative as does the use of licensing for transferring technology between firms and between research and commerce. The exchange of information inherent in the patent system is also promoted as an innovation enabler, although problems arise in relation to research exemptions for patented processes and materials/devices.

Business is also concerned by the compliance cost of the IP system and looks to government for simplification and harmonisation, firstly in the regional setting (e.g., Europe) and then globally. In the global context, business also looks to robust IP enforcement regimes to protect investment and provide a predictable environment for joint ventures.

Of course, government have other policy objectives. Domestically, consumers look to limit the impact of monopolies on prices and availability and this leads to the development of competition policies and an increased role for competition authorities. At the same time, business looks for strong domestic enforcement regimes to prevent pirated and counterfeited goods affecting the market.

In trade policies, governments are looking for markets for their companies and they will, thus, act to strengthen global IP systems, which ensure appropriate rates of return in trade.

# B. Developing Countries

Developing countries need to take advantage of the shift of manufacturing from developed countries but also to grow their own capacity to innovate, either in improving existing products or in creating new ones. This causes a tension. Inward investors want IP regimes which prevent local companies from appropriating technology used in manufacturing. At the same time, host countries want room to support expansion of their own manufacturing and this often implies weakening the effectiveness of IP regimes. Often these countries do not have the infrastructure to administer either the IP regime or the related competition, enforcement, and educational systems. This tension seems to be the root of dissension at the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO).

Regarding least developed countries (LDCs), there is usually a complete lack of an effective infrastructure to support either IP systems or the emergence of a manufacturing economy without considerable external investment. The quick route, namely, piracy and counterfeiting, is seemingly an attractive option. But this very option then acts against the growth of legitimate business and inward investment. In this context, developing countries are in danger of heading into a dead-end of illegitimate activity rather than expanding their potential for economic growth.

# IP AND DEVELOPMENT

The IP agenda has largely been driven by the developed countries seeking harmonisation, stronger regimes, and IP based trading agreements. Governments of developed countries recognise that the world trading system and global stability require an increase in self-sufficiency and economic strength in developing countries, both as markets and trading partners. However, IP offices have been slow to adapt their approach and are largely focused on the harmonisation and deepening agenda. This is partly because of the need to reach agreement on the harmonisation debate that is being carried out amongst like-minded developed country groupings, and partly through frustration and distrust with the debate as conducted

by those promoting the development agenda. These arise from their imperative to protect the domestic manufacturing base. At the same time, developing countries mistrust the motives of developed countries that insist on fully-fledged IP regimes within economies that are unable to benefit from them.

The WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) does allow tailoring but, without fundamental change in the trust between parties, the mechanisms for this will be hard to find. For example, although the European Union (EU) has proposed a mechanism for access to medicine the whole issue of reverse imports is still far from settled. In other areas there is little or no agreement as to what would justify compulsory licensing if voluntary agreements were to fail.

It is said that there is currently one size being made to fit all. The difficulties in solving harmonisation arguments between developed countries show that this is not wholly the case. The debate may prove sterile. Perhaps we should rather discuss where specific exceptions are called for when developing local IP systems, and the notion of impact assessments during both preparatory and delivery phases may be a way forward. This seems appropriate given the diverse range of circumstances across developing countries where few are completely alike. It looks ever more the case that few countries have the power to develop totally independent approaches. The world is much more closely connected than in the days when countries could with impunity switch their approach to IP on and off to suit their planned economic growth.

This takes us straight to how the WIPO Development Agenda (WDA) can be given substance. That it be given substance is imperative. We are unlikely to develop the most appropriate IP regime if we do so by means of trade-offs in trade talks, either bilaterally or at WTO.

# **GOVERNANCE OF IP MATTERS**

It cannot be persuasively argued that the existing architecture is fully fit for purpose. It is still too focused on the internalities of IP systems

and does not integrate IP into commercial, innovation, social, and international policy. Too often, national offices are isolated from policymaking, sometimes even in relation to IP, and cannot think broadly about IP. Where regional groupings exist there is tension between the operational function allocated to them and the need for a coherent regional approach to policy. This confusion between roles and competences weakens debating power and credibility.

In addition, there is a lack of clarity of vision and of accountability in delivery at the international level. This comes to the fore in relation to WIPO where programmes and objectives can overlap and contradict one another. Various international bodies also address IP-related issues (e.g., the World Health Organization (WHO), United Nations Economic Commission for Europe (UNECE), and the Group of Eight (G8)), which can also lead to inconsistency, which in turn feeds mistrust.

The presence of conflicting and antagonistic lobby groups further complicates matters, especially as they often tend to work in differing areas. Each lobby group has a valid and distinct message, although that message may or not be in sympathy with governmental policy. The prime foundation for developing policy which reflects conflicting and competing interests must be at the political level - either national or regional, as only at this level is there a democratic accountability to all. Debate must start there and be carried to international bodies based upon national competent decisions. All governments must listen to their industrial and commercial lobbies if they are to maintain the well-being of their economies and hence their citizens. But they must take a balanced view so that the benefits of IP supported innovation are shared within society. This is a difficult task requiring open and honest debate, open eyes about special interest, and open minds about compromise.

Regarding "technical assistance" this is all too often focused on technical issues such as building document collections, IT systems, and training IP staff. This is a valid and essential component, but more is needed. If we are to build capacity, we must take the broad view and develop an understanding of IP within local

business communities and societies, facilitate the development of the necessary infrastructure to maintain the position, and build competition and legal regimes to control the whole process. This requires a comprehensive rethink in programme design and delivery.

Such a rethink and its implementation will lead to a reassessment of the role of WIPO and we should take the opportunity to improve the governance of the organisation and its relationship to Member States. This is not a quasi-technical notion of interest only to those with an eye for organisational process and structure; it is a significant aspect of creating an organisation that can design and deliver effective programmes, can operate significant international systems, such as the Patent Co-operation Treaty (PCT), the Madrid System for the International Registration of Marks (MADRID), and the Hague System for the International Registration of Industrial Designs (Hague), as well as develop the IP norms appropriate to the digital age.

In the short-term, the following seem priorities:

- Encourage the wider consideration of IP in the context of other policy objectives;
- Identify and agree a subset of the issues on the current development agenda;
- Agree the form and nature of development impact assessments;
- Work through Programme and Budget and with the Audit Committee to improve decision-making and accountability within WIPO.

For its part the UK Government will be looking at its policies in the light of the Coalition for Intellectual Property Rights (CIPR) and seeking partnerships to deliver those recommendations agreed by the Government.

NOTE: Since this paper was first written, the UK Government has published the independent Gowers Review of Intellectual Property (to be found at www.hm-treasury.gov.uk). The report highlights the importance of flexibility and balance within the IP system and, amongst its many recommendations relating to the whole field of IP, there are three of direct relevance to this paper:

- **A. Recommendation 5:** The UK Patent Office (UKPO) should undertake joint work with African Patent Offices from mid-2007 with the aim of:
- Helping them to take advantage of the flexibilities currently existing in the WTO/ TRIPS architecture, where appropriate; and
- Encouraging them to make positive use of IP rights through dissemination of information in patents;
- **B. Recommendation 6:** Encourage the international community under the auspices of the WTO to review the TRIPS status of the least developed countries prior to 2016 and consider whether further extension for reaching TRIPS compliance would be appropriate;
- **C. Recommendation 7:** Government should encourage WTO Members to ratify the amendments to TRIPS to make importation of drugs easier and cheaper.

The UK Government has accepted those recommendations for which it is responsible and the UKPO (to be renamed the UK Intellectual Property Office) is considering how to take these three recommendations forward.

### SELECTED ICTSD ISSUE PAPERS

### Trade and the Environment

Technology Transfer Issues in Environmental Goods and Services:

An Illustrative Analysis of Sectors Relevant to Air-pollution and Renewable Energy.

Issue Paper No. 6 by Lynn Mytelka. 2007.

Building Supply Capacity for Environmental Services in Asia: The Role of Domestic and Trade Policies.

Issue Paper No. 5 by Aparna Sawhney, 2007.

An Overview of Key Markets, Tariffs and Non-tariff Measures on Asian Exports of Selected Environmental Goods.

Issue Paper No. 4 by Rokiah Alavi, 2007.

Trade in Environmental Services: Assessing the Implications for Developing Countries in the GATS.

Issue Paper No. 3 by Colin Kirkpatrick, 2006.

Options for Liberalising Trade in Environmental Goods in the Doha Round.

Issue Paper No. 2 by Robert Howse and Petrus von Bork, 2006.

Defining Environmental Goods and Services: A Case Study of Mexico.

Issue Paper No.1 by Enrique Lendo, 2005.

### International Trade in Agriculture and Sustainable Development

South-South Trade in Special Products.

Issue Paper No. 8 by Christopher Stevens, Jane Kennan and Mareike Meyn, 2007.

The ACP experience of preference erosion in the banana and sugar sectors:

Possible policy responses to assist in adjusting to trade changes.

Issue Paper No. 7 by Paul Goodison, 2007.

Special Products and the Special Safeguard Mechanism: Strategic Options for Developing Countries Issue Paper No. 6 by ICTSD, 2005.

Methodology for the Identification of Special Products (SP)

and Products for Eligibility Under Special Safeguard Mechanism (SSM) by Developing Countries.

Issue Paper No. 4 by Luisa Bernal, 2005.

Special Products: Options for Negotiating Modalities.

Issue Paper No. 3 by Anwarul Hoda, 2005.

Tariff Reduction, Special Products and Special Safeguards:

An Analysis of the Agricultural Tariff Structures of G-33 Countries.

Issue Paper No. 2 by Mario Jales, 2005.

The New SSM: A Price Floor Mechanism for Developing Countries.

Issue Paper No. 1 by Alberto Valdés and William Foster, 2005.

## Trade in Services and Sustainable Development

Opportunities and Risks of Liberalising Trade in Services: Case Study on Bangladesh.

Issue Paper No. 3 by Ananya Raihan and Mabroor Mahmood, 2007.

Opportunities and Risks of Liberalising Trade in Services: Case Study on South Africa.

Issue Paper No. 2 by Ian Steuart and Rashad Cassim, 2005.

Subsidies, Services and Sustainable Development.

Issue Paper No. 1 by Marc Benitah, with David Vivas-Eugui, Alexander Werth and Mahesh Sugathan, 2005.

### Fisheries, International Trade and Sustainable Development

Fisheries, International Trade and Sustainable Development.

Policy Discussion Paper, by ICTSD, 2006.

Aquaculture: Issues and Opportunities for Sustainable Production and Trade.

Issue Paper No. 5 by Frank Asche and Fahmida Khatun, 2006.

Market Access and Trade Liberalisation in Fisheries.

Issue Paper No. 4 by Mahfuz Ahmed, 2006.

Trade and Marketplace Measures to Promote Sustainable Fishing Practices.

Issue Paper No. 3 by Cathy Roheim and Jon G. Sutinen, 2006.

Fisheries Access Agreements: Trade and Development Issues.

Issue Paper No. 2 by Stephen Mbithi Mwikya, 2006.

### Trade and Sustainable Energy

Linking Trade, Climate and Sustainable Energy.

Selected Issue Briefs, 2006.

These and other ICTSD resources are available at http://www.ictsd.org/pubs/series.htm.

www.ictsd.org www.iprsonline.org

The International Centre for Trade and Sustainable Development (ICTSD) has been active in the field of intellectual property since 1997, amongst others, through its Programme on Intellectual Property Rights (IPRs) and Sustainable Development. One central objective of the Programme has been to facilitate the emergence of a critical mass of well informed stakeholders in developing countries including decision makers, negotiators as also the private sector and civil society who will be able to define their own sustainable human development objectives in the field of IPRs and effectively advance them at the national and international levels.

The Programme has generated an Issue Paper Series on Intellectual Property Rights and Sustainable Development with the intention of offering a clear, jargon-free synthesis of the main issues to help policy makers, stakeholders and the public in developing and developed countries to understand the varying perspectives surrounding different IPRs, their known or possible impact on sustainable livelihoods and development, and different policy positions over the TRIPS Agreement and other relevant international intellectual property arrangements.

This Issue Paper Series is the consequence of a participatory process involving trade negotiators, national policy makers, as well as eminent experts in the field, the media, NGOs, international organizations, and institutions in the North and the South dealing with IPRs and development. Previous publications under this Series include:

- Maintaining Policy Space for Development: A Case Study on IP Technical Assistance in FTAs. Issue Paper No. 19 by Pedro Roffe and David Vivas with Gina Vea, 2007.
- New Trends in Technology Transfer: Implications for National and International Policy. Issue paper No. 18 by John H. Barton, 2007
- Exceptions to Patent Rights in Developing Countries. Issue paper No. 17 by Christopher Garrison, 2006.
- · Protecting Traditional Knowledge: Pathways to the Future. Issue paper No. 16 by Graham Dutfield, 2006.
- The International Copyright System: Limitations, Exceptions and Public Interest Considerations for Developing Countries.
- Issue Paper No. 15 by Ruth L. Okediji, 2006.
- Intellectual Property and Economic Development: What Technical Assistance to Redress the Balance in Favour of Developing Nations? Issue Paper No. 14 by Michel Kosteki, 2006.
- · Utility Models and Innovation in Developing Countries. Issue Paper No.13 by Uma Suthersanen, 2006.
- Intellectual Property Provisions of Bilateral and Regional Trade Agreements in Light of US Federal Law. Issue Paper No.12 by Frederick M. Abbott, 2006.
- Technical Assistance for the Formulation and Implementation of Intellectual Property Policy in Developing Countries and Transition Economies. Issue Paper No.11 by Tom Pengelly, 2005.
- Intellectual Property and Computer Software, A Battle of Competing Use and Access Visions for Countries of the South. Issue Paper No.10 by Alan Story, 2004.
- Development in the Information Age: Issues in the Regulation of Intellectual Property Rights, Computer Software and Electronic Commerce. Issue Paper No. 9 by Ruth L. Okediji, 2004.
- The Socio-Economics of Geographical Indications, A Review of Empirical Evidence from Europe. Issue Paper No. 8 by Dwijen Rangnekar, 2004.
- Encouraging International Technology Transfer. Issue Paper No. 7 by Keith E. Maskus, 2004.
- Nutrition and Technology Transfer Policies. Issue Paper No. 6 by John H. Barton, 2004.
- Non-Voluntary Licensing of Patented Inventions: Historical Perspective, Legal Framework under TRIPS, and an Overview of the Practice in Canada and the United States of America. Issue Paper No.5 by Jerome H. Reichman and Catherine Hasenzahl, 2003.
- Geographical Indications: A Review of Proposals at the TRIPS Council, Extending Article 23 to Products other than Wines and Spirits. Issue Paper No.4 by Dwijen Rangnekar, 2003.
- Indicators of the Relative Importance of IPRs in Developing Countries. Issue Paper No.3 by Sanjaya Lall, with the collaboration of Manuel Albaladejo, 2003.
- Technology Transfer and Intellectual Property Rights: Lessons from Korea's Experience. Issue Paper No.2 by Linsu Kim, 2003.
- Protecting Traditional Knowledge and Folklore: A Review of Progress in Diplomacy and Policy Formulation. Issue Paper No.1 by Graham Dutfield, 2003.

## **ABOUT ICTSD**

Founded in 1996, the International Centre for Trade and Sustainable Development (ICTSD) is an independent non-profit and non-governmental organisation based in Geneva. By empowering stakeholders in trade policy through information, networking, dialogue, well targeted research and capacity building, the Centre aims to influence the international trade system such that it advances the goal of sustainable development.