

# Intellectual Property Matters

IPA Backgrounder

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## **From the Executive Director**

At the start of 2008 the Institute of Public Affairs established an Intellectual Property (IP) and Free Trade Unit to complete research and advocacy in both of these important policy areas. As part of the unit's work it will publish a series of papers to educate policy makers and the population-at-large on the important role IP plays in promoting innovation and economic growth and discuss the emerging issues surrounding IP.

This is the first in the series of papers addressing these topics. *Intellectual Property Matters* is designed to provide an introductory understanding of IP, why it matters and how it functions to promote innovation and economic growth.

Throughout 2008 further papers will be released to build on the foundations laid by this paper.



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## **About the Author**

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# Executive Summary

This paper is designed to provide an introduction to intellectual property and why it matters.

The paper provides a history of intellectual property, its roots and how it has come together through various international instruments to be the system we know today.

The history of intellectual property rights is amorphous and it has developed with different strains of intellectual property rights created over hundreds of years. Intellectual property has only recently been brought together under one banner following the establishment of a number of international treaties.

This paper also assesses the role that intellectual property plays and how it contributes to innovation, technological diffusion and economic growth. Importantly, intellectual property rights are identified as philosophically allied with physical property rights and they provide incentives to innovate.



Yet despite the substantial evidence to support otherwise, there has been much criticism of intellectual property and that it undermines innovation. Contrary to popular rhetoric, IP promotes innovation by both providing incentives to inventors and creators to innovate. IP does not stifle innovation, but instead encourages disclosure of inventions increasing the base body of knowledge for future inventions to be built on. The alternative would be to undermine innovation by encouraging inventors to keep their inventions secret.

IP is also vital in providing property rights that promote trade of the goods and services it delivers. Finally, IP promotes technological diffusion through the promotion of foreign direct investment or licensing of IP-dependent goods and services that assist, particularly, non-innovative economies.

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## 1.0 Glossary

<b>Benelux</b>	Belgium, Netherlands, Luxembourg
<b>EU</b>	European Union
<b>FDI</b>	Foreign Direct Investment
<b>GATT</b>	General Agreement on Tariffs and Trade
<b>GI</b>	Geographic Indicator
<b>PCT</b>	Patent Cooperation Treaty
<b>R&amp;D</b>	Research and Development
<b>TFP</b>	Total Factor Productivity
<b>TRIPS</b>	Trade-Related Aspects of Intellectual Property Rights
<b>UN</b>	United Nations
<b>WIPO</b>	World Intellectual Property Organisation
<b>WTO</b>	World Trade Organisation



## 2.0 Introduction

Intellectual Property (IP) is weaved into every aspect of our life, from the books we read, the design of the bottles we drink, to the technology in our personal computers. IP is also an important part of our economy. The current value of Australia's intellectual property is valued at more than AUD\$30 billion. Yet, despite the economic contribution and role IP plays in everyday life, the philosophical and policy grounding for IP rights is poorly understood.

Outside of specialists, there is a paucity of base knowledge on IP and why it matters. The absence of base knowledge ensures that public policy makers are often treating it as a secondary concern while trying to achieve other public policy objectives. Doing so is dangerous and undermines the important role it plays in creation and innovation.

IP also suffers from a lack of focus. IP sits in no single public policy space, but falls across innovation and international trade policy and the justice system. This can best be demonstrated in Australia in the government departments responsible. The Attorney-General's Department is responsible for policy related to copyright. IP Australia (an agency under the Department of Innovation, Industry, Science and Research) is responsible for the policy and registration of registered rights (i.e. patents, industrial designs and trademarks). Separately the Department of Foreign Affairs and Trade cooperates strongly with IP Australia because of the international trade and foreign policy dimension of IP.

Because of the particularly international focus of IP, it also has a significant foreign policy component. IP is primarily rooted in domestic law, but is increasingly driven by international treaties that seek to harmonise IP registration, rights and enforcement as economies integrate.

This paper addresses the roots of IP and why it matters to start the process of improving the base knowledge of IP.



## 3.0 What is intellectual property?

IP rights are government-mandated property rights for human ingenuity. Definitions of what IP protects vary; but a broad definition refers to ‘unique, value-adding creations of the human intellect that results from human ingenuity, creativity and inventiveness’.<sup>1</sup>

IP encompasses two major branches – copyright and industrial property. Industrial property includes patents, trademarks, geographic indicators (GI) and industrial designs. Copyright and industrial property has traditionally been separated because of the commercial applicability of industrial property, versus copyright which has traditionally related to artistic works. Further, industrial property is generally a registered right, whereas copyright is an automatically conferred right.

The term ‘intellectual property’ did not become widespread until the foundation of the World Intellectual Property Organisation (WIPO)<sup>2</sup>. The contemporary understanding of IP is not uniform and rests in the different tracts of IP that exist in contemporary law.



The history of patents can be found in Medieval Europe. Patents provide property rights associated with new inventions. The first patent law can be traced back to 1474 in Venice. Contemporary patent law can be traced back to the English Parliament’s passing of the *Statute of Monopolies* in the early 1600s. The Statute of Monopolies allowed the sovereign to grant monopolies of inventions for 14 years. At the time apprentices took 7 years to train, and it is widely understood that the time period was designed to allow for the training of two sets of apprentices. Despite the contemporary patent period being extended from 14 to 20 years, much of contemporary Australian patent law is rooted in the principles of the Statute of Monopolies.<sup>3</sup>

The history of trademarks can be sourced back thousands of years. Trademarks provide property rights for product identification. Craftsmen have traditionally used their signature or logo to assist consumers in identifying their creations. During the middle ages guilds started using the equivalent of collective marks to identify goods their craftsmen produced. In the thirteenth and fourteenth centuries the first trademark laws appeared in England, including laws requiring silversmiths and porcelain makers to date their work.

Copyright affords property rights for authored works, such as books, music and computer programs. The history of copyright can be sourced back to seventeenth century England and the challenges posed by the reproduction of books following the advent of the printing press. In the early eighteenth century the English Parliament passed the first Act dealing with copyright, following the previous passing of a law that required the registration of licensed books for reproduction.

Despite the international trade implications of IP law, IP law has been rooted in domestic laws. As each country’s IP legal system developed, frustrations emerged due to the variations in IP law and protection for IP right holders to have their property rights registered and respected in different markets.

<sup>1</sup> Kananje, C., “Role of intellectual property in innovation and new product development”, World Intellectual Property Organisation, 2008, p2, cited at [http://www.wipo.int/sme/en/documents/ip\\_innovation\\_development.htm](http://www.wipo.int/sme/en/documents/ip_innovation_development.htm) on 01/03/2008

<sup>2</sup> A specialised agency of the United Nations

<sup>3</sup> Ladas & Parry., “A brief history of the Patent Law of the United States”, 07/12/2003, cited at <http://www.ladas.com/Patents/USPatentHistory.html> on 01/03/2008

In the nineteenth and twentieth century's treaties were developed to promote harmonisation of IP laws, and to assist in international registration, enforcement and protection of patents and trademarks. More recently new treaties have been created to deal with the rising challenges posed by digital media. Details of select IP treaties can be found in Annex A. WIPO was founded in 1967 to administer these treaties and many of their obligations.

Many of the treaties remained voluntary for countries to participate in. This changed following the negotiation of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement founded in the World Trade Organisation (WTO) that has bound WTO members to implement obligations under many of the international IP treaties.<sup>4</sup>



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<sup>4</sup> Falvey, R. & Foster, N., "The role of intellectual property rights in technology transfer and economic growth: theory and evidence", United Nations Industrial Development Organisation, 2006, pviii

## 4.0 What are the different types of intellectual property?

Over the twentieth century IP has come to define a broad family of exclusive rights protecting the interests of inventors and artists. Traditionally IP is interpreted as meaning copyright, patents and trademarks. Industrial designs are also an often overlooked area of IP. The newest form of IP is GIs.

### 4.1 Copyright

Copyright traditionally refers to the exclusive right of a creator (literary, musical or artistic) of a work from the point that it is produced in a tangible form. However, the evolution of digital technology has resulted in the significant broadening of copyright to 'deal with particular forms of creativity, concerned primarily with mass communication'.<sup>5</sup>

As a form of IP, copyright is necessary to promote commercial incentive and a market for creators of copyrightable material. In the absence of copyright there would be no incentive for authors or artists to produce works, as it provides them with a property right to trade their creation which is ultimately how they make their livelihood.

Terms of copyright are awarded for different periods of time depending on the country. In Australia, copyright for literary, dramatic or musical works is generally awarded for an additional 70 years after the passing of the creator. Similarly artistic works (other than engravings) also lasts for 70 years commencing at the end of the year of the passing of the creator.<sup>6</sup> Sound recordings made after 1954 and films after 1969 are granted 70 years after they are first published. Broadcasted television and radio is given 50 years from the original broadcast.<sup>7</sup> Computer programs are granted copyright as a literary work. In some countries computer programs are treated as their own type of copyrighted work.<sup>8</sup>

To be a copyrighted work, the creator is merely required to demonstrate originality in their work. Copyright provides for the protection of the work itself, but does not provide protection for the idea underlying the work. Copyright is a non-registered right, which means it is conferred automatically to the creator of the work and does not require filing with a government agency.

Copyright is controversial both because of the extensive times awarded to copyright, and also for the extent works can be used before copyright is breached. Copyright protection is exempted under 'fair use' provisions, which allow persons to reproduce the work within a limited framework. For example a person may copy one chapter or 10 per cent of a book without infringing on copyright. In 2005 the Australian government conducted a review of 'fair use' provisions and introduced allowances for changes in digital technology, notably time-shifting and format shifting of recorded audio visual material.

<sup>5</sup> World Intellectual Property Organisation, "Fields of Intellectual Property Protection", Chapter 2 of the "World Intellectual Property Organisation Intellectual Property Handbook: Policy, Law and Use", e2, 2004, p40, cited at <http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch2.pdf> on 01/03/2008

<sup>6</sup> The copyright associated with photographs taken before 1955 has expired, but does not apply to photographs taken after 1955

<sup>7</sup> Attorney General's Department, "How long does copyright last?", Commonwealth of Australia, 2008, cited at [http://www.ag.gov.au/www/agd/agd.nsf/Page/Copyright\\_Howlongdoescopyrightlast](http://www.ag.gov.au/www/agd/agd.nsf/Page/Copyright_Howlongdoescopyrightlast) on 30/03/2008

<sup>8</sup> World Intellectual Property Organisation (WIPO), "Fields of Intellectual Property Protection", Chapter 2 of the "World Intellectual Property Organisation Intellectual Property Handbook: Policy, Law and Use", e2, 2004, p43, cited at <http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch2.pdf> on 01/03/2008

## 4.2 Patents

Patents are a registered right for a ‘device, substance, method or process’.<sup>9</sup> Patents provide the property right necessary to promote innovation for new inventions, particularly where significant capital is necessary for research and development (R&D) and the output is easily replicable. Patents allow a patent holder to prevent others from commercial use of a patented invention without the owner’s consent.

But the options afforded patent holders are not solely limited to stopping others from using their invention without their permission. Patent holders are also entitled to license their patented invention to third parties. Licensing is common and may occur when the inventor does not have the resources or desire to commercially produce their invention; or where the patented invention may be used as one component of a product that is made from a combination of patented and unpatented inventions.

Patents also afford the patent holder other important rights, notably the capacity to stop imports of their patented good into the countries where the patent is registered. This is of particular benefit for parallel importing. Parallel importing involves importing a good that is produced in the domestic economy from another economy at a cheaper price. For some IP goods limiting parallel importing is particularly important because a good may have a tiered pricing structure based on the capacity of a country’s consumers to pay. A good example is pharmaceuticals.

As required under the WTO’s TRIPS Agreement, patents are normally awarded for 20 years. Patents need to be filed with a national registry where it is assessed for patentability. While the rules vary from country to country, the common themes that appear in a patent’s assessment are its novelty (new assessed against the prior art base), utility (can have an industrial application) and includes an inventive step (is not obvious to a person who regularly practices that art). In the process of submitting a patent application there is a responsibility for disclosure, making the invention fully searchable by the interested public.

Patent registration is completed domestically, however many countries are contracting parties of the Patent Cooperation Treaty (PCT) that allows for the filing of patent applications through WIPO. WIPO then completes an assessment of the patentability of the product and facilitates a patent application for each country nominated by the filer based on the product’s patentability.

Not all inventions can be patented. Some commonly recognised exclusions include ‘artistic creations, mathematical models, plans, schemes or other purely mental processes’<sup>10</sup>. Additionally scientific theories, medical procedures for humans and animals, plants and animal varieties and inventions contrary to public order or morality are also unpatentable.<sup>11</sup>

Patents are also broken into two categories, ‘patents’ and ‘petty patents’. In Australia petty patents are referred to as ‘innovation patents’. Innovation patents are only awarded for 8 years and approval does not require examination and is therefore automatic. Innovation patents do not go through a full examination of patentability, making them more open to challenge against existing patents. Innovation patents also

<sup>9</sup> IP Australia, “What is a Patent?”, Commonwealth of Australia, 2008, cited at [http://www.ipaustralia.gov.au/patents/what\\_index.shtml](http://www.ipaustralia.gov.au/patents/what_index.shtml) on 20/03/2008

<sup>10</sup> IP Australia, “The Innovation Patent”, Commonwealth of Australia, 2008, cited at [http://www.ipaustralia.gov.au/patents/what\\_innovation.shtml](http://www.ipaustralia.gov.au/patents/what_innovation.shtml) on 20/03/2008

<sup>11</sup> Baechtold, P., “Patents”, Presentation delivered to the World Intellectual Property Organisation Academy Summer School on Intellectual Property on 19/07/2007

only require an innovative step. The requirements to substantiate an innovative step are much lower than an inventive step and tend to involve improvement of an existing technology, rather than the invention of a new technology. Innovation patents are also not recognised outside of Australia and are therefore not advisable for exported innovations.<sup>12</sup>

Other countries also have two-tiered patent structures. For example, the United States has ‘utility patents’, which bare a similarity to Australia’s ‘patents’, and ‘design patents’, which are similar to Australia’s ‘industrial designs’.<sup>13</sup>

### 4.3 Trademarks

Trademarks are a registered right and traditionally take the form of a symbol or word that is identifiable with a good or service. The recent advent of the internet has resulted in trademarks being expanded to domain names as well.

Trademarks assist individuals and businesses by providing them with an identifiable mark that they can use to trade their goods and services in the marketplace. The intent is that over time the mark will become sufficiently recognisable by consumers that they will identify the mark with that product.

Trademarks allow the trademark holder to exclude other persons to use the trademark in the same industry for commerce. While trademarks are a registered right, it is not compulsory to register them as traders have rights under trade practices and fair trading legislation against misrepresentation.<sup>14</sup>

Trademark durations are designated by national registry offices and are valid for the period of time outlined by that office. In Australia trademarks are initially registered for 10 years, and then for a further 10 years so long as the registration fees continue to be paid.<sup>15</sup>

International registration of a trademark can be achieved through the Madrid Protocol system. Information on the Madrid Protocol can be found in Annex A.

Trademarks are broken down into four categories – trademarks (marks related to a good or business), service marks (marks related to a service), certification marks (marks related to certification of a product by a certification body) and collective marks (marks that relate to the membership of a collective body). Not all countries have a service mark system.

Trademarks are not just words or symbols. In some countries sounds, colours or colour combinations, slogans, holograms, motion or multimedia signs, scents and even tastes are acceptable trademarks. For example, in the United States some companies have registered a company sound that is closely aligned

<sup>12</sup> IPA1, 2008

<sup>13</sup> Engstrom, H. C., & Hendrickson, J., “Primer on Intellectual Property”, Foley Lardner Attorneys at Law, Emerging Companies Primer Series, v3, 2002, p12

<sup>14</sup> IP Australia, “What is a Trade Mark?”, Commonwealth of Australia, 2008, cited at [http://www.ipaustralia.gov.au/trademarks/what\\_index.shtml](http://www.ipaustralia.gov.au/trademarks/what_index.shtml) on 19/03/2008

<sup>15</sup> IP Australia, “Frequently Asked Questions”, Commonwealth of Australia, 2008, cited at [http://www.ipaustralia.gov.au/trademarks/faq\\_index.shtml#registration](http://www.ipaustralia.gov.au/trademarks/faq_index.shtml#registration) on 02/03/2008

with its multimedia branding.<sup>16</sup> In the Belgium, Netherlands and Luxembourg (Benelux) IP area tastes are an acceptable trademark.

Trademarks are best designed to be distinctive to be registered. If a trademark is generic or descriptive it is not allowed to be registered to avoid confusion in the marketplace or hinder other persons from reasonably conducting business.

One of the most important restrictions on trademarks is that two companies may have the same trademark registered, but they cannot be within the same industry. The regularly cited example is Apple Computers and Apple Records. While both have similar trademarks, so long as they do not compete in the same industry they can maintain their trademark.

Under the trademark system there is also a category known as 'well known marks'. There is no international definition of a well known mark and definitions are left to each domestic competent agency. A well known mark attracts special benefits not afforded to normal trademarks because of its level of recognition. In particular it is not allowed to be used to provide goods and services outside of the industry the well known mark operates in. Coca Cola is a very clear example of a well known mark. Legal protection also applies to the well known mark without a formal process of registration.<sup>17</sup>



#### **4.4 Geographic Indicators**

GIs are a comparatively new form of IP that has, as a good, imbued in it an 'indication of source' or 'appellation of origin'<sup>18</sup>. 'Appellation of origin' is different from 'indication of source'. Appellation of origin requires a 'quality link between the product and its area of production'.<sup>19</sup> The regularly cited example of a GI is champagne – a sparkling wine from the champagne region of France.

GIs build on the principles of certification marks outlined in the Madrid Protocol and Agreement, and the Lisbon Agreement for the Protection of Appellations of Origin and their International Registration.

GIs are a new form of IP that only reached significant international standing after it was included as a type of trademark under the WTO's TRIPS Agreement, with additional recognition of GIs on wines and spirits. The inclusion of GIs in TRIPS was promoted by the European Union (EU) who instituted recognition of GIs in 1992. GIs are based on the principles of a French system, with its origins in the early part of the twentieth century, that required that a government-issued mark recognised the geographic source of a product.

GIs are a form of IP under construction. They can also be highly controversial because of the limitations they place on some well-established industries, such as dairy products.

In Australia GIs are a type of trademark. Currently there are efforts to expand GI recognition in TRIPS beyond wine and spirits by the EU. In the absence of agreement to expand GIs through TRIPS, the EU is attempting to achieve it through bilateral agreements.

<sup>16</sup> Friedli, M., "Trademarks: the legal framework and current challenges", Presentation delivered to the World Intellectual Property Organisation Academy Summer School on Intellectual Property on 18/07/2007

<sup>17</sup> *Ibid.*, 2007

<sup>18</sup> Article 1(2) of the Paris Convention

<sup>19</sup> WIPO, 2004, p120

## 4.5 Industrial designs

Industrial designs are an IP right granted not for ‘the visual appearance of the product but not how the product works’.<sup>20</sup> Industrial designs do not include the technical aspects of a product, which is covered by patents, nor the name of a product, which is covered by trademarks.

Industrial designs apply to products from furniture, packaging and containers to household goods. An industrial design must be ‘new’ and ‘distinctive’ to be awarded protection.<sup>21</sup> Both two and three-dimensional products are covered by industrial designs. However industrial designs cannot be protected if they are dictated by technical function or offend public order or morality.

In 2006 11 per cent of all internationally registered industrial designs were furnishings, 10 per cent packages and containers, 9 per cent measuring instruments, 7 per cent household goods, 6 per cent fluid distribution or heating equipment, 5 per cent means of transport, 5 per cent garments or textiles, 5 per cent decorative items and 4 per cent electronic goods.<sup>22</sup>



Industrial designs are a registered right with the relevant domestic registry. In Australia industrial designs are registered with IP Australia and protection is granted for an initial five years, but can be extended a further five years.

An industrial design can be registered domestically or the international registration process facilitated through the Hague Agreement. Details of the Hague Agreement are included in Annex A.

## 4.6 Trade Secrets

A lesser known form of IP is trade secrets. Trade secrets are both a type and strategy for protecting IP.<sup>23</sup> The status of a trade secret is automatically conferred on confidential information owned by an individual or organisation.

Often trade secrets are used as there is no other appropriate form of IP right that could be afforded to an invention, because it relates to a process or use of an existing technology. Sometimes inventors will use trade secret protection where the process and cost of a patent is prohibitive.<sup>24</sup> Occasionally an inventor may choose trade secrets to protect an invention because they do not want the obligations of public disclosure that patents require. Doing so enables them to have exclusive use beyond the 20 years provided by a patent. Doing so opens inventors to risk if another person creates a similar invention or another person can reverse engineer their invention.

<sup>20</sup> IP Australia, “Designs”, Commonwealth of Australia, 2008, cited at <http://www.ipaustralia.gov.au/designs/index.shtml> on 20/03/2008

<sup>21</sup> IP Australia, “What is a Design?”, Commonwealth of Australia, 2008 cited at [http://www.ipaustralia.gov.au/designs/what\\_index.shtml](http://www.ipaustralia.gov.au/designs/what_index.shtml) on 20/03/2008

<sup>22</sup> Head, D., “Industrial Designs”, Presentation delivered to the World Intellectual Property Organisation Academy Summer School on Intellectual Property on 18/07/2007

<sup>23</sup> IP Australia, “Confidentiality / Trade Secrets”, Commonwealth of Australia, 2008, cited at <http://www.ipaustralia.gov.au/ip/confidentiality.shtml> on 30/04/2008

<sup>24</sup> World Intellectual Property Organisation, “Patents or trade secrets?”, 2008, cited at [http://www.wipo.int/sme/en/ip\\_business/trade\\_secrets/patent\\_trade.htm](http://www.wipo.int/sme/en/ip_business/trade_secrets/patent_trade.htm) on 30/04/2008

Trade secrets largely operate on the basis of trust between parties. However, in many cases, particularly in the case of licensing of the trade secret, or an employer / employee arrangement where an employee is aware of a trade secret, confidentiality agreements are used by the owner of the trade secret to protect their property.

While Australia has provisions for Trade Secrets, respect for trade secrets varies from country-to-country. General standards for trade secrets provisions are also included in Article 39 of the TRIPS Agreement.



## 5.0 The role of intellectual property rights

IP rights' philosophical roots ally with the philosophical support for physical property rights. Physical property rights can be sourced back to the Lockean theory that property rights exist as an inherent right of a man and that government's role is to perpetuate property.<sup>25</sup> Similarly, Adam Smith advocated for property rights and their necessity for human progress and the need for government to recognise property rights to achieve this progress.<sup>26</sup>

IP rights are based in the same philosophical roots. IP is an exclusive right granted to individuals by government to assist in the promotion and trade of property. A core difference between physical property rights and IP rights is that IP rights allow the right holder to exclude others from using their rights and bears no responsibility for the right holder to exploit their property right.

Equally, it is recognised that in perpetuity, IP rights would hinder, rather than aid human innovation. As a result IP rights are limited with different time limitations afforded to different types of rights. As an example, in Australia patents are afforded a time limit of 20 years to balance the reward provided to the inventor for investing their labour or capital, and the cost to society if the patent never ended and undermined further innovation.

Ultimately property rights are valued because of the role they play in a working market economy by providing reward from productive activity that requires the investment of labour and/or capital. Property rights are also necessary to provide a mechanism to allow for trade between parties and also to provide the incentive to create assets. Both of these benefits can be applied to both physical and IP.<sup>27</sup>

A successful system of physical and IP rights requires government structures, including:

- Establishment: a legal framework that can establish the identity of the holder of rights of ownership of an asset
- Enforcement: a system for enforcing those property rights; and
- Exchange: a means by which those rights can be exchanged without great cost.<sup>28</sup>

### 5.1 Intellectual property promotes innovation

IP is designed to strike the appropriate balance between creating the incentive to innovate and promote technological progress for inventors and artists, and the cost of providing exclusive rights for an invention and the limitations it places on other inventors.<sup>29</sup>

IP rights exist to promote investment in science and art that would be unlikely to attract the necessary investment to promote their creation otherwise. Many critics argue it creates a monopoly right that

<sup>25</sup> Locke, J., "Two treatises of Government", Cambridge University Press, Cambridge, United Kingdom, 1991, [1691], pp329

<sup>26</sup> Smith, A., "Lectures on Policy, Justice, Revenue and Arms, Clarendon Press, Oxford, United Kingdom, 1896, p291

<sup>27</sup> Briggs, D., Gans, J. & Williams, P., "Clarifying the relationship between intellectual property rights and competition", Report prepared on behalf of the National Copyright Industry Alliance for submission to The Review of Intellectual Property and Competition, 04/2000, p4 cited at <http://www.ipaustralia.gov.au/pdfs/ipcr/78.pdf> on 25/03/2008

<sup>28</sup> Gans, J., Williams, P. & Briggs, D., "Intellectual Property Rights: a grant monopoly or an aid to competition?", Intellectual Property Research Institute of Australia Working Paper, n07/02, 05/12/2002, p4

<sup>29</sup> Executive Office of the President of the United States of America, "The Role of Intellectual Property in the Economy", Chapter 10 of the "2008 Economic Report to the President", 2008, p215

undermines innovation or inhibits artistic expression. Supporters of IP argue that it is absolutely vital to promote innovation and the creation of artistic works and plays a vital role in the workings of a market economy.<sup>30</sup>

The benefits of IP are numerous. Aside from conferring a property right, IP also promotes a market in trading of ideas due to the obligations of disclosure of inventions. There is often a poorly understand cost to not conferring rights – innovators are more likely to keep their ideas secret for the longest possible time period at the expense of broader innovation.

Too often critics of IP cite the argument that IP rights limit innovation by conferring an exclusive right to the holder. But in the process the property right gives cause for the owner to then promote and utilise their technology without fear of it being pirated. The result is owners promote their inventions or creations.

IP rights have also been criticised for undermining competition laws because they confer legal or economic monopolies. This argument is now widely disputed.<sup>31</sup> While IP laws do provide exclusive rights for the right holder, they do not grant a monopoly as they do not inhibit another inventor’s capacity to produce a competitor product. For example, with a patented medicine to cure a disease, while the medicine ingredients and method for application may be patented, the patent does not prohibit finding alternative cures with either different ingredients or methods that do not infringe the patent.



## **5.2 Intellectual property enforcement promotes innovation**

Failure to provide and enforce property rights results in only one outcome – a diminished capacity for innovators to utilise their property most efficiently and in the process achieve further growth. This principle was demonstratively proven by the Peruvian economist, Hernando de Soto, in the research compiled for his book *The Mystery of Capital: Why Capitalism triumphs in the West and fails everywhere else*.

De Soto demonstrates that in the absence of recognised and enforced property rights, persons who own property are less likely to engage in transactions with other parties who would otherwise be able to assist in capitalising on that property. Property rights require enforceable contracts to be properly utilised. Removing property rights, and the contracts to enforce them, results in trust being the only basis on which people are prepared to enter relationships. A requirement of trust limits the transactions that owners of property can then engage in. The result is that two parties who have no prior trust, but could assist each other in bringing their property together to create higher-value property, forfeit from doing so. Enforced contracts ensure two parties can come together and utilise their property to achieve their mutual benefit, and in the process the broader benefit of society.<sup>32</sup>

IP works similarly. In the absence of a working IP system cumulative innovation is undermined as inventors are discouraged from sharing their new invention widely outside of persons they trust.<sup>33</sup>

Further, the absence of IP protection simply allows inventors to rely on trade secrets. Doing so encourages them to keep as much detail of their invention secret as long as possible. It also means that the

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<sup>30</sup> Kananje, 2008, pp1-2

<sup>31</sup> Fels, A., “The role of competition principles in intellectual property”, Speech to the Intellectual Property Society of Australia and New Zealand Inc (Victorian Branch), 22/07/1999, p2

<sup>32</sup> De Soto, H., “The Mystery of Capital: Why capitalism triumphs in the West and fails everywhere else”, 2000

<sup>33</sup> Gans et al, 2002, p12

trade secret will only be shared with persons who are known and trusted by the owner of the invention. In the process it will undermine the capacity for two parties with no prior trust to come together to efficiently utilise a new invention within an existing technology; or stop two parties coming together with two inventions to develop a new technology.

Equally, by relying on trade secrets, inventors are not required to fulfil their obligations for public disclosure. Removal of this obligation ensures that any invention will not enter the public domain until it has been commercialised.

### **5.3 Intellectual property promotes technological diffusion**

IP rights also provide a property right to assist in the diffusion of technology. IP is also often criticised for having a negative impact on developing countries that are IP innovators. Yet the evidence suggests the reverse. Countries that are net-IP importers do not lose from having foreign companies protecting their IP within their borders. Instead IP promotes technological diffusion and transfer.<sup>34</sup>



Developing countries are increasingly relying on IP protected goods and services to develop their economies, improve living standards and maintain and/or improve their environmental standards. Licensing is particularly important for technology transfer in developing countries that have weak IP regimes where companies are reticent to use foreign direct investment (FDI) because of the risks associated with enforcement.<sup>35</sup> Studies have shown clearly the relationship between weak enforcement and reduced FDI.<sup>36</sup>

But there are benefits in developed countries as well. Businesses, particularly smaller businesses, are more likely to license their inventions and get them to market faster with property rights.<sup>37</sup> Licensing is a widely used method for defusing protected material to ensure that it accesses as wide a market as possible. Licensing is also important because many contemporary inventions are now built on the use of other protected material. For example, computers are a combination of IP-protected material and companies have licensing agreements to allow the use of protected materials in a value-added product on the basis of paying royalties from the final product's sale.<sup>38</sup>

Licensing can also ensure an efficient direction of capital. Many inventors lack the resources to take an invention to the marketplace. By allowing licensing inventors can license their ideas through contracts to others who are in a better position to achieve economies of scale and have the supply chains to bring the product to market.<sup>39</sup>

<sup>34</sup> Falvey et al, 2006, p40

<sup>35</sup> Maskus, K., "The role of intellectual property rights in encouraging foreign direct investment and technology transfer", Paper prepared for the Conference "Public-private initiatives after TRIPS: Designing a Global Agenda", Brussels, Belgium, 16-19/07/1997

<sup>36</sup> Maskus, K., Dougherty, S. & Mertha, A., "Intellectual property rights and economic development in China" Fink, C. & Maskus, K., "Intellectual Property and Development: Lessons from Economic Research", World Bank, 2005, pp325-327, cited at <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/TRADE/0,,contentMDK:20360014~menuPK:167375~pagePK:148956~piPK:216618~theSitePK:239071,00.html> on 01/02/2008

<sup>37</sup> Gans, J., "The value of IP protection in the markets for ideas", Paper for the Intellectual Property Research Institute of Australia, Occasional Paper n1/03, 09/2003, p4

<sup>38</sup> Gans et al, 2002, p11

<sup>39</sup> Gans, 2003, p2

## 5.4 Intellectual property promotes trade and growth

Having an IP regime is also important for promoting economic growth. A recent World Bank study demonstrates the cost of having weak IP rights.<sup>40</sup> The study demonstrated that a weak IP regime in China was undermining the ‘incentives to develop products and brand names, especially on the part of small and medium-sized enterprises’.<sup>41</sup> Ultimately the cost was borne by both consumers and producers who were unable to secure product loyalty.

But IP rights are not an end in themselves. To realise the full benefits of economic development that IP rights can provide an open economy is also vital. A study by the UN demonstrates that IP rights leads to higher economic growth in more liberalised economies, as outlined in Table A.

**Table A | Summary of research on IPRs and Growth**



Study	Sample and method	Results
Gould and Gruben (1996)	95 countries; cross section with data averaged over the period 1960-1988	IPR protection has a positive impact on growth, which is slightly stronger in more open economies
Thompson and Rushing (1996)	112 countries; cross section with data averaged over the period 1970-1985	IPR protection has a positive impact on growth only in countries that have reached a certain initial level of GDP per capita
Thompson and Rushing (1999)	55 countries; seemingly unrelated regression techniques on a cross-section of data over the period 1971-1990	IPR protection has a positive impact on total factor productivity (TFP) in relatively rich countries, which in turn impacts positively upon output growth
Park (1999)	60 countries; seemingly unrelated regression techniques on a cross-section of data over the period 1960-1990	IPR protection has no direct impact on growth. IPR protection has an indirect positive impact on growth through physical capital investment and R&D in the most advanced countries

Adapted from Falvey, R. & Foster, N., ‘The role of intellectual property rights in technology transfer and economic growth: Theory and evidence’, United Nations Industrial Development Organisation, 2006, p12

By creating a property right that can be licensed IP also promotes trade, particularly for lower-end technological inventions. The trade benefits are generally only diffused where importing countries have strong IP laws that encourage FDI. Though, in some cases IP protection is irrelevant to promoting trade. High end technological inventions rely less on IP because of the increased cost and scientific knowledge for their reproduction.<sup>42</sup>

<sup>40</sup> Maskus et al, 2005, pp295-331

<sup>41</sup> *Ibid.*

<sup>42</sup> Fink, C., & Braga, C. A. P., “How stronger protection of intellectual property rights affects international trade flows” in Fink, C. & Maskus, K., “Intellectual Property and Development: Lessons from Economic Research”, World Bank, 2005, p34, cited at <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/TRADE/0,,contentMDK:20360014~menuPK:167375~pagePK:148956~piPK:216618~theSitePK:239071,00.html> on 01/02/2008

Since its creation, the TRIPS Agreement has regularly been attacked by opponents of IP as placing burdensome requirements on developing countries to introduce an IP regime. Yet a study has sought to quantify the cost to developing countries of implementing TRIPs. While the study initially detected a cost to the countries that were required to accede to its obligations, in the long run the vast majority saw an economic gain as a consequence of improved levels of innovation.<sup>43</sup>

Ultimately the most important contribution IP can make to economies is to assist in economic development. Technology is vital for countries through different stages of economic growth. To move beyond agrarian and subsistence economies countries need the technology to develop a manufacturing capacity. Manufacturing economies rely heavily on FDI and IP-licensing. To move from a manufacturing economy to a services driven economy countries need the IP infrastructure to promote IP-driven and supported service industries. Almost all services are driven by the need for IP-dependent inputs or creating IP-output. Undermining IP would dramatically impact on the incentive for IP-output companies to innovate and every incentive to move to a country with a stronger IP regime. The ultimate result is that undermining IP undermines the process of economic development.



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<sup>43</sup> McCalman, P., "Who enjoys 'TRIPs' abroad? An empirical analysis of intellectual property rights in the Uruguay Round", Canadian Journal of Economics, v38, i2, 05/2005, pp474-503

## 6.0 Conclusion

IP rights are a controversial public policy area. But a necessary component of a free market economy that thrives on private property rights. IP is merely an extension of physical property rights and enables the exchange of ideas and promotes creation and innovation.

In particular creation and innovation is promoted by conferring property rights which results in promoting disclosure ensuring that any innovation or new authored work is brought into the public domain as quickly as possible.

IP also ensures technological diffusion and transfer aiding developed and developing countries to take maximum advantage of new technologies as quickly as possible.

But the most important role they play is in economic growth and assisting countries to go through different stages of economic development.



## 7.0 Annex A – Select international agreements

### ***The Paris Convention for the Protection of Industrial Property (1883)***

During the second half of the nineteenth century each country had its own industrial property right protection laws. It was identified that the patch-work of laws provided no uniform system of protection for inventors. To achieve full protection inventors were required to register their inventions in each country, individually, and at around the same time to ensure that they would secure protection for their invention. Failure to register an invention in each country at the same time could cause the ‘novelty’ of the invention to be undermined in non-registered countries. In 1878 an International Congress was formed in Paris to consider a convention to harmonise aspects of the registration of industrial property. The Congress established the Paris Convention.

The key benefits of the Paris Convention are that applicants for protection receive ‘national treatment’ in the country of each signatory; and a ‘right of priority’ for registration of industrial property in other countries within 12 months of the registration of the initial application. The convention also provides outlines of basic rules for industrial property amongst signatories.



### ***The Berne Convention for the Protection of Literary and Artistic Works (1886)***

Following the operation of a series of bilateral treaties dealing with mutual recognition of copyright, the Berne Convention was established to create a uniform system of copyright amongst ratifying parties. The treaty covers ‘any original production in the literary, scientific and artistic domain’.<sup>44</sup>

The key benefits of the Berne Convention are that creators of copyrightable works receive ‘national treatment’ in other ratifying parties’ borders, copyright is afforded automatically (no registration is necessary) and there is independence of protection whereby the right exists regardless of the protection afforded in the originating country. The convention also founded the concept of ‘moral rights’ which allows the copyright holder to stop other persons using their works in a manner that may be prejudicial to their honour or reputation.

### ***The WIPO Copyright Treaty (1996)***

The WIPO Copyright Treaty was developed to address copyright issues emerging from new technology (creation and reproduction) was not envisaged when the Berne Convention was established. Prior to the WIPO Copyright Treaty there were guiding principles developed by WIPO to address the identified challenges that new technology was having on the protection of copyright. The WIPO Copyright Treaty was developed to formalise a uniform approach to these new technologies; but is, in no way, designed to undermine the rights afforded to copyright holders under the Berne Convention.

The key benefits of the treaty include the establishment of norms of copyright caused by digital technology, particularly the internet, such as the rights of storage and transmission of copyrighted works.

The treaty also requires governments to provide mechanisms of legal protection and enforcement for copyrighted works that may be infringed as a result of new technology. The treaty also establishes computer programs as literary works.

### ***The Patent Cooperation Treaty (1978)***

The PCT was developed in response to the burdensome requirement of patent applicants to make individual applications for a patent in each country separately. The burden was also shared by each patent office that was required to assess the patentability of the application, resulting in significant repetition of work by patent offices.

The key benefits of the treaty include the establishment of a single international filing office and process of assessment for patent applications, removing unnecessary duplication and costs for the applicant and patent offices. Each international application is then entitled to an international search assessing the patentability of their application and a preliminary examination of its patentability. The Treaty also provides for a centralised system of publication for patent applications.



### ***The Madrid Agreement Concerning the International Registration of Marks (1891)***



The Madrid Agreement was developed to assist in the international registration of marks, primarily trademarks. The key benefit was the establishment of a system for international registration of marks following the registration of a mark in the applicant's country that allowed for protection in the countries that the applicant sought protection in.



### ***The Protocol Relating to the Madrid Agreement (1989)***

The Protocol was developed to make the terms of the Madrid Agreement (1891) more acceptable to a number of non-contracting parties, notably the United States, United Kingdom and Japan. The primary benefits result through allowing mechanisms for international registration, regardless of the success of the application of the registrant.

### ***The Hague Agreement Concerning the International Deposit of Industrial Designs (1928)***

The Hague Convention was developed to assist in the deposit of industrial designs at an international level. The key benefit of the Hague Agreement was the establishment of a depository in the International Bureau of WIPO, removing the need to make a deposit in each of the countries where protection is sought. The Hague Agreement particularly delivers efficiencies for export-orientated manufacturers.

The Hague Agreement is also complimented by 'The Geneva Act of the Hague Agreement' to engage countries that were not party to the Hague Agreement and assist industrial design registrants.

## ***The Trademark Law Treaty (1994)***

The Trademark Law Treaty was developed to assist in harmonising and simplifying the national registration process of marks. The treaty also requires countries to allow for the registration of services marks, not just goods marks.

## ***The Patent Law Treaty (2000)***

The Patent Law Treaty was developed to assist in harmonising and simplifying the registration of patents by national or regional bodies. The treaty establishes a standardised set of requirements for patent applications and allies as closely as practicable the requirements for PCT applications.

## ***The Agreement on the Trade-Related Aspects of Intellectual Property Rights***



During the Uruguay Round of General Agreement on Tariffs and Trade (GATT) negotiations developed countries promoted the need for an agreement that obliged WTO members to respect IP as a form of property right in line with the obligation for WTO members to be market economies. The result of negotiations was the TRIPS Agreement.

The TRIPS Agreement is designed to bind WTO members to numerous previously existing IP treaties and agreements. Under the agreement developing countries were given phase-in times to conform to TRIPS and technical assistance was required to be provided by developed countries to developing countries.

In addition to requiring WTO members to conform to numerous international IP treaties, TRIPS also outlines minimum standards for some aspects of IP, their duration and enforcement obligations. TRIPS also includes an obligation for member countries to give national treatment and most favoured nation status for IP goods and services.

Importantly, TRIPS also included, as part of the WTO system, a dispute resolution process for countries that were in violation of their TRIPS obligations.

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